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## **WP6.4 External Evaluation Report (M36)**

March 2024

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### Disclaimer

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## 1. INTRODUCTION

This report includes the external annually review of project progress taking into account the results from the quality evaluations done in the third year of the Eco-Car project (April 2023 to January 2024), the Quality and Monitoring Report (M30 and M36), the fifth and sixth progress reports of the different work packages (WP), the Work Plan, the Logical Framework Matrix and the information about each WP provided in the project and during the meeting held with the General Coordinator of the project.

To evaluate the progress of each WP, the progress reports, the evidence provided by the project through Google Drive, ECO Car website and the information of the project proposal have been analysed.

This report has been drafted taking into consideration the following 5 aspects: relevance, efficiency, effectiveness, impact and sustainability.

## 2. PROJECT OBJECTIVES

The general objective of the project is to enhance the competencies and skills in the field of Electrical and Hybrid Vehicles and promote the socio-economic development in Jordan.

According to the logical matrix the following specific objectives are expected to meet:

1. Satisfying industry and economical needs by empowering engineers.
2. Increase the employability of Engineers in Local and International Market through training the mon the needed skills in the field of EV and HEV
3. Enhance the quality of provided vocational training provided in the vocational training centers, through employing the trained engineers in those centers, this could be achieved within the project through signing cooperation agreements with these training centers.
4. Improve the level of provided services for repairing and maintaining electric and Hybrid vehicles in Jordanian enterprises.
5. Helping to move Jordan forward to become a host for Electrical and Hybrid vehicles industry in future.
6. Supporting the University Enterprise cooperation through doing internships in vehicles companies.
7. Develop a new culture of working relationships among HEIs and enterprises to allow HEIs better integration within the larger society.
8. True collaborative efforts with enterprises to provide student support from practical placement, entrepreneurship and employability that should allow graduates to develop capacities that guarantee greater success when joining the labor market.

9. Implement new and innovative learning and pedagogical approaches to offer high quality education.

10. Graduates with a cultural, environmental and social identity to mitigate climate change impacts.

### 3. ASSESSMENT OF PROGRESS OF WORK PACKAGES

#### WP1. Establishing university-enterprise cooperation

##### Aims and objectives

The objectives are to establish strong and lasting cooperation between universities, enterprises, and vocational training centers. This type of cooperation will help universities better understand what the expertise and qualifications for their students in HEV/EV issues should be in order to succeed and get hired once graduating. Another goal is to understand what steps and tools to be implemented in order to further advance the adoption of clean technologies in Jordan.

1.1 Establishing EV/HEV Vehicles Network	
<b>Type</b>	Event/Report
<b>Due date</b>	14/07/2021
<b>Description:</b>	
<p>The partners from Jordan will compile a list of enterprises, vocational training centers, authorities and organizations that are involved or interested in EV/HEV training, servicing, management and development. These will be the basic members of the Network.</p> <p>Official invitations with registration form and document clarify network's purpose, responsibilities and obligations will be sent to the potential members of the Network.</p> <p>Those that accept will be part of the Network that should operational in (July 2021) and function until the end of the project.</p> <p>The network will be invited to a workshop in the beginning of the project (July 2021) to agree on the courses list and content. In addition, they will be invited to tester workshops during the second year of the project to evaluate the developed courses and their relevance, list their priorities and give recommendations for improvements.</p> <p>In addition, policy-makers will be invited to join project activities.</p> <p>Long-term agreements between universities and enterprises will be created for internships, hiring graduates, lecturing in university etc. to achieve the benefit for both parties.</p>	
<b>Target groups</b>	Teaching staff, technical staff, enterprises and policy makers.
<b>Current status</b>	
Full compliance	
Partially compliance	

Not compliance  
Not started yet

Due to the pandemic there was a delay in some tasks, at the time so it has not fulfilled the scheduled as expected in the project.

There has been established a network with more than 60 partners, with different profiles, as indicated in the project. 81 from Jo partners and 14 from EU partners. A registration form, in English and Arabic, was developed and distributed among the contacted members to inform about the aims and benefits of the project.

Three workshops have been carried out with good results.  
Agreements have been signed.

### Conclusions and recommendations

It has to be taken into account that there was some delay in the performance of some tasks and the way in which there have been carried out due to the pandemic. Although the pandemic affected 2021, in 2022 no progress was made on the pending tasks to fully comply with expectations.

Although the network has been made up, the expected outcome of this WP was that those that accept would be part of the Network that should operational in (July 2021) and function until the end of the project. Given that the network was almost entirely managed in the last year of the project, the expected outcome could not be fully achieved.

## WP2. Baseline Study

### Aims and objectives

This WP aims prepare and publish a guiding report that summarizes the list of needed competencies needed in the market in the field of EV/HEV in Jordan, the potential lean technologies in the field of transportation and their regulations. The report will be prepared based on previous studies and a questionnaire to be prepared by the WP leader.

A workshop with enterprises will be conducted on (July, 2021) to review the reports and agree on the final list of courses for the professional diploma.

### 2.1 Summary of the key competencies needed by employers in Jordan in the field of EV/HEV

Type	Report
Due date	14/05/2021

#### Description:

A guiding report that summarizes the list of needed competencies needed in the market in the field of EV/HEV in Jordan, the potential clean technologies in the field of transportation and their regulations. The report will be prepared with close collaboration with concerned institutions (Energy ministries, Research centers and enterprises).

The report will be prepared based on previous studies and a questionnaire to be prepared by the WP leader. The report will raise the awareness regarding employability issues.	
<b>Target groups</b>	Trainees, administrative staff, enterprises and policy makers
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>A survey was design by the WP leader and co-leaders and discussed in the kick off management meetings. With the information gathered a report summarizing the list of needed competencies in the market in the field of EV/HEV in Jordan, the potential clean technologies in the field of transportation and their regulations were issued and presented in a face-to-face meeting. No information about who was in the meeting has been provided so, it has not been possible to check if the institutions concerned were involved.</p>	
<b>Conclusions and recommendations</b>	
The expected outcomes have been achieved and the schedule has been met.	

<b>2.2 Workshop with enterprises and vocational training centers</b>	
<b>Type</b>	Report
<b>Due date</b>	14/07/2021
<b>Description:</b>	
A workshop with enterprises in Jordan will be conducted to review the reports and agree on the final list of 8 courses.	
<b>Target groups</b>	Trainees, administrative staff, enterprises and policy makers
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>The results of the report were presented in a face-to-face meeting in Mu'tah University with the attendance of Erasmus + office. The results and methodology were approved.</p> <p>There has been produced a paper about the results of the analysis about the market needs in a recognized journal, including results from the sustainability work package which it is published in the ECO-Car website. A second journal paper-initiate collaboration has been established in January 2024.</p>	

## Conclusions and recommendations

The expected outcomes have been achieved and the schedule has been met.

It 's worth noting the extra activities planned, such as the two publications about the results, which were not expected as project deliverables.

### WP3. Capacity Building

#### Aims and objectives

WP3 aims to build the capacities of professors who will teach the diploma in partner universities on different topics of EV/HEV, modern teaching methodologies, and how to actively collaborate with enterprises. Also a group of students will have the opportunity to attend a two-week workshop in one of the participating European Countries. The students will be selected during the piloting phase of the diploma and courses integration in existing programs. Selection will be based on prepared selection criteria.

The capacity plan will be prepared in the beginning of the project. Workshops for professors will be conducted within the first and second year before piloting the diploma.

**Five** training workshops will be conducted by European partners (TH-OWL, RWTHAachen, UD, BME, NTUA). At least, **two staff members** from each partner university will participate in these workshops. The target is to train at least **85 academic and technical staff** (Laboratory engineers).

A **two-week training** workshop will be conducted for students in partner European universities. At least, **three students from each partner** university will participate in these workshops. The target is to train at least **24 students** in Europe.

#### **3.1 Workshop with enterprises and vocational training centers**

<b>Type</b>	Report
<b>Due date</b>	14/07/2021
<b>Description:</b>	
A long-term capacity building plan with selection criteria will be prepared. The plan aims to update and upgrade the skills and capacities of university professors, and technical staff, and students, in order to deliver the desired objectives.	
The plan will include a programme for the proposed trainings in European partner's institutions, and a quality and impact assessment prepared in cooperation with the Quality committee.	
<b>Target groups</b>	Teaching staff, technical staff and enterprises
<b>Current status</b>	
<b>Full compliance</b> Partially compliance Not compliance Not started yet	



The report for the capacity building plan has been written and submitted in 08/2021, a few dates after the deadline. No access to the plan has been provided. The quality and impact assessment have been drafted in cooperation with the Quality Committee and include some items that could demonstrate the success of the trainings.

### Conclusions

The expected outcomes have been achieved and the schedule has nearly been met.

### 3.2 Developing Training Materials

<b>Type</b>	Training material
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<b>Due date</b>	14/08/2022
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#### Description:

The training material will be developed by EU partners. Special techniques and formats will be used in developing training material such as learning activities, exercises, examples and case studies. Training goal, learning objectives, learning methods/activities, documentation / evidence of learning will be specified for each training. Evaluation and assessment on quality of training will be conducted. A report documenting each workshop will be prepared by the hosting partners.

Teaching material will be prepared for staff and students' workshops.

The training for faculty members will cover many issues regarding EV/HEV, based on priorities of Jordan.

<b>Target groups</b>	Teaching staff, technical staff and students
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#### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

As stated in the report provided about the tasks developed within the WP3, the subjects of each workshop were selected according to the expertise of each European University in the field of EV / HE vehicles. A survey was sent to the EU University and according to that the subjects were selected.

Within this activity, six 2-hours online workshops have been prepared and presented by the EU Universities according their expertise.

Furthermore 2-hours workshops have been prepared also by the Jordanian universities. Until the 14/08/2022, 4 workshops have been accomplished as it is said in the progress report.

The reports documenting the workshops and training material are in the google drive.

## Conclusions

The report that documents each workshop has been prepared at the end of activity 3.3 and not at the end of each workshop as established, in any case it has not affected the proper development of the project.

## 3.3 Training Workshops in Europe for staff and students

<b>Type</b>	Report
<b>Due date</b>	14/10/2023

### Description:

The selected staff from all partner countries will visit European partners to learn from their experience on best practices in EV/HEV issues.

Six training workshops will be conducted by European partners (TH-OWL, RWTH Aachen, UD, BME, NTUA, and UNIVAQ). Two staff members from each partner university will participate in these workshops. According to project work plan they will be conducted in (M7, M10, M13, M16, M19, M21). The target is to train about 90 academic and technical staff (Laboratory engineers).

A two-week training workshop will be conducted for students in European universities during the last year (M30-M33). 24 students from Jordan will participate in these workshops. Each EU university will host 4 students to train them in their labs and conduct visits to enterprises and manufacturers. Participants will be selected based on the prepared selection criteria.

<b>Target groups</b>	Teaching staff, technical staff and students
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### Current status

#### Full compliance

Partially compliance

Not compliance

Not started yet

As indicated in the 6<sup>th</sup> progress report, a program of the workshops for the academic and technical staff has been set up.

6 workshops were conducted (BME, RWTH, UD, TH-OWL, UNIVAQ, NTUA).

Three training workshops for the students have also been conducted in UNIVAQ, TH-OWL and BME.

Furthermore, within this workpackage, European partners from all European universities are organizing short workshops for students and staff in Jordan.

In accordance with the capacity building plan (3.1), the dates of the workshops were rescheduled, so the workshops will be held on the following dates:

Dates	Host University
January 2023	TH-OWL
January 2023	UD
May 2023	UNIVAQ
February 2023	NTUA

At the time of issuing this report evidences about the expected workshops have been provided.

### **Conclusions and recommendations**

Among the evidence provided there is information about the workshops carried out, and the number of academic and technical staff trained (90).

A two-week training workshop has also been carried out with good results as indicated in the reports prepared for each workshop developed

Workshops of more than 1.5 hours would have been desirable to ensure that the staff acquired the planned skills.

In any case, the activity has been completed.

## **WP4. Establishment of EV/HEV labs**

### **Aims and objectives**

The aim of this work package is to establish 8 EV/HEV labs at each partner university to support the diploma teaching for students. The aim of this work package is to set up the needed scientific labs and smart classrooms to be used by the students during their study.

The established laboratories will bring on the following activities:

- 1) Assisting teaching of ECO-CAR diploma Students;
- 2) Research, in collaboration with the other faculties and/or industry;
- 3) Vocational training for external experts
- 4) External services: advices for industries and final users

The acquired equipment will be utilized within the project to achieve project objectives. A server will be acquired by the University of Jordan to host the project website and virtual learning platform. Smart classrooms equipped with Smart Board will be established for students in partner universities.

The lab will give the students the opportunity to develop various diagnostic strategies involving measurements on an actual EV/HEV system with real voltages under the most stringent safety conditions.

A "Hybrid and Electric Vehicles" Training system will be acquired by each university; this training system provides a safe work environment and allows students and trainees to fully focus on the task at hand. Trainees can become familiar with all the key theoretical background by means of an interactive e-learning course. Each of the theoretical sections is accompanied by practical exercises and tests of knowledge, which also help to advance vital diagnostic skills. These skills are further boosted by the built-in diagnostic system and the scrupulously selected fault scenarios. The system gives the students the opportunity to develop various diagnostic strategies involving measurements on an actual HV system with real HV voltages under the most stringent safety conditions. The system will include the following:

- CarTrain "Hybrid and Electric Vehicles" system
- Integrated WIFI measurement interface
- Experiment trolley

- Electric Service Gloves Class
- Insulation and Electrical Resistance Meter (Automotive)
- Personal Protective Equipment (PPE) for diagnostic work on high-voltage vehicles
- (helmet, insulating mat, Face protection screen)
- Two-pole voltage tester
- Charging Station for PEV and PHEV
- Diagnostic System include PC, software, display screen
- Emission measurement Equipment
- High precision automotive measurement units

The students will have the chance to be trained on real vehicles during their internships at enterprises.

<b>4.1 Lab design and equipment list</b>	
<b>Type</b>	
<b>Due date</b>	14/09/2021
<b>Description:</b>	
<p>The equipment list will be refined and detailed specification of the equipment will be prepared for the tender. The tendering process will be centralized to ensure best quality/price ratio. The process will be initiated in the beginning of the first year, so that the labs will be ready to be used in (M21) by students.</p> <p>The equipment will include EV/HEV training system, in addition to smart classroom equipped with smart board and data show.</p>	
<b>Target groups</b>	Teaching staff, technical staff and students
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>A plan for the period M1-M20 was prepared by WP Leader. A list of Lab equipment and components for the Jordanian partners was prepared based on WP2. A template for collecting data of the ECO-CAR centers/labs that will host the equipment in each university was sent by BAU. Also, BAU provided each partner by the equipment list they will receive. In the evidences provided by the project, there is information about the 8 EV/HEV labs as expected. From June 2021 until October 2021 the detailed specification of the equipment was tendered by UJ.</p>	
<b>Conclusions</b>	
<p>Taking into account the evidences provided the WP 4.1 is fully compliance. The recommendation done in the first external evaluation report about having more accurate information of the outcomes achieved was taking into account.</p>	

The last progress report 15/03/2023, is more clear about what has been done and what is still pending.

#### 4.2 Implementation of labs and prepare manuals

<b>Type</b>	Event/Report/Service/Product
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<b>Due date</b>	14/09/2021
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##### Description:

The labs will be ready for training in (M21). Manual of experiments will be prepared for the labs.

The equipment will include EV/HEV training system. In addition to smart classroom equipped with smart board and data show will be established to teach the diploma.

<b>Target groups</b>	Teaching staff, technical staff and students
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##### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

8 labs are ready for training. The equipment training has been carried out as expected.

Final technical reports have been produced for each university as expected in the project.

##### Conclusions

Although the expiration date, in the description of each WP, was 09/14/2021, no activities were carried out in the first year, but in 2022, as specified in the project work plan.

In this WP the activities have been carried out as planned. The evidence that has been provided has been clear and structured

The latest progress report, 11/01/2024, indicates that two activities have been done since the last evaluation:

- Review and update the lab manual for the Experiments based on the received Equipment.
- Final report for WP4

## WP5. Developing ECO-CAR Professional Diploma

### Aims and objectives

WP5 aims to develop and pilot ECO-CAR Professional Diploma in each partner university in Jordan; the activities will start by developing the study plan with courses descriptions to be submitted for accreditation purposes. The accreditation will be done according to the national accreditation system and the specific instruction in each university. The diploma will consist of 8 courses in (24 Credit Hours= 40 ECTS) that will be implemented in each participating university. The courses will be developed by establishing committees consisting from representatives from European universities, partner universities, and Enterprises. During the period of preparing the study plan, the workshop with enterprises in WP2 will be conducted with enterprises to get their feedback on the study plan and courses list.

A virtual learning platform will be established on the project website. The courses will be prepared as e-courses, and uploaded on a virtual learning platform created specifically for the project purposes, so the partners will have a full access to its content. The courses will consist of different modules.

A tuning workshop will be conducted within this WP for professors to agree on the teaching methods, assessment procedures and delivery methods so that a consistent quality is achieved among partners.

The next activity within this WP will be the courses piloting which will start by (M21). Different courses will be piloted in the Partner Country Universities, an Assessment Report will be written on the results of the delivery of the courses, a list of participants, description of the admission criteria, learning outcomes, assessment and quality assurance. After passing the diploma exam, a certificate will be given to the student. European professors will travel to Jordan for one week to teach some lectures for the students during the diploma implementation. The milestones will be the participants' list, official documents, assessment and piloting of the courses. The indicators will be the enrolment of the students and the participation in the courses. Also, the integration of selected modules within existing programs will be achieved and impact will be evaluated. The Virtual Learning Portal will be created by the project coordinator (UJ) that will be hosted on the Project website (milestone). The Portal will be in English with at least 100 users. Different roles will be allocated to different type of users (lecturers, students, visitors). The platform will allow anyone with a user name and password to have access to the material, so this platform could also be used for distance learning. In addition, new pedagogical tools will be used to be more interactive that will include many pictures, videos and interactive activities. This will be done in order to attract the students' attention and also make the learning experience pleasant and different than the typical teaching experiences. The Virtual Learning Portal will also be the main repository of the learning materials.

### **5.1 Develop Diploma Study Plan and course description**

<b>Type</b>	Report
<b>Due date</b>	14/07/2021
<b>Description:</b>	
The detailed study plan with courses descriptions will be prepared early for accreditation purposes. The accreditation application will be done during the first year to avoid the delays and risks. The accreditation will be done internally within the university system or externally depending on the specific instructions in each	

university. The diploma will consist of 8 courses in (24 Credit Hours= 40 ECTS) that will be implemented in each participating university.

<b>Target groups</b>	No information given
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**Current status**

**Full compliance**

Partially compliance

Not compliance

Not started yet

The activities carried out had been, a courses selection based on WP2 report results; clustering; preparing a study plan template with learning outcomes and preparing a course outline template include ECTS component and learning outcomes. There has also been draft a course evaluation form.

**Conclusions**

All expected activities have been done. A Diploma study plan has been designed and a course description. There are evidences of all the outputs generated.

**5.2 Create Virtual Learning Portal**

<b>Type</b>	Teaching material/Report
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<b>Due date</b>	14/10/2021
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**Description:**

A virtual learning platform will be established on the Project website. The courses will be prepared as online courses, and uploaded on a virtual learning platform that is created specifically for the project purposes, so the partners will have a full access to its content. The courses will consist of different modules.

The Virtual Learning Portal will be created by the Project coordinator (UJ) that will be hosted on the Project website. The Portal will be in English with at least 100 users. Different roles will be allocated to different type of users (lecturers, students, visitors). The platform will allow anyone with a user name and password to have access to the material, so this platform could also be used for distance learning. In addition, new pedagogical tools will be used to be more interactive that will include many pictures, videos and interactive activities. This will be done in order to attract the students' attention and also make the learning experience pleasant and different than the typical teaching experiences. The Virtual Learning Portal will also be the main repository of the learning materials.

<b>Target groups</b>	Teaching staff, technical staff and students
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**Current status**

**Full compliance**

Partially compliance

Not compliance

Not started yet

The virtual learning portal has been created on the Project website.

Despite the virtual learning platform has been created some of the functionalities that where planned are not in place. This is the case of the access with different roles.

On the other hand, the virtual platform was expected to be used with new pedagogical tools to be more interactive and to include pictures, videos and interactive activities but there are no evidences of this kind of activities. The Virtual Learning Portal appears to have been used simply as the main repository of the learning materials.

### Conclusions and recommendations

Despite the virtual learning platform has been created some of the functionalities that where planned are not in place. On the other hand, the virtual learning platform has been created in the second year of the project not in the first one as expected.

It would be convenient to provide more structured and accurate information on the progress report, there wasn't third progress report on the activities carried out in 2023, so there wasn't follow-up on the activities. In the fourth one, dated the 31/03/2023 the información was very confuse and inaccurate.

It would be desirable, to have a virtual learning platform with all the information and functionalities expected in the project proposal. At the time of drafting this report there were some information missing, such as the last Newsletter, on the other hand, it has not been possible to verify that accesses with different roles exist beyond the student role.

Finally, the virtual platform was expected to be used with new pedagogical tools to be more interactive and to include pictures, videos and interactive activities but there are no evidences of this kind of activities. The Virtual Learning Portal appears to have been used simply as the main repository of the learning materials.

### 5.3 Accreditation of the diploma/courses

<b>Type</b>	Event
<b>Due date</b>	14/01/2022

The accreditation application will be submitted during the first year to avoid any delays and risks. The accreditation will be done according to the national and institutional instructions and regulations in each university. The diploma will consist of 8 courses in (24 Credit Hours= 40 ECTS) that will be implemented in each participating university.

Also, some modules will be integrated in the existing courses of bachelor and master programmes in Mechanical, Mechatronics and Electrical Engineering.

<b>Target groups</b>	Teaching staff and students
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#### Current status

**Full compliance**  
Partially compliance  
Not compliance  
Not started yet



The latest progress report, 18/01/2024, indicates this activity was finished in January 2022. In the second external evaluation report was already pointed that there were no evidences about the full fulfillment of the activity.

In the information provided through Google drive to the external evaluator in February 2024, there are evidences about the accreditation of three programmes as follows:

*Vocational Diploma Accreditation of 8 out 8 universities.*

*Professional Diploma Accreditation of 1 of 2 universities. There is no evidence about JUST.*

*Community College Accreditation of 1 University.*

Within the evidence provided in February 2024 there is information about the accreditation about the Comununity College Accreditation of BAU.

### Conclusions

There are not evidences of the accreditation of the courses in all participating universities as expected. This activity was expected to be finished during the first year of the project, to avoid risks, accreditation be requested in accordance with national legislation in each case.

In the second year of the project, not all the accreditations have been obtained, according to the evidence provided.

Finally, many of the evidences are in Arabic so it is quite difficult to determine the content of the information in order to analyze it.

### 5.4 Develop diploma courses content

<b>Type</b>	Teaching material/learning material
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<b>Due date</b>	14/09/2022
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The courses will be developed by establishing committees consisting of representatives from European universities, partner universities, and Enterprises.

The courses will be prepared as online courses (i.e. power point videos, quizzes) and uploaded on a virtual learning platform created specifically for the project purposes, so the partners will have a full access to its content. The courses will consist of different modules. The electronic material of courses will be developed according to EU guidelines. A template for course outline that include ECTS component and learning outcomes will be prepared. The courses will contain the description of the course; rationale and philosophy, the pedagogical approach and methods, the learning outcomes including knowledge, skills and social competences, the course structure and course integration methodology, the learning materials for each course, the assessment methodology, the guidance for implementation, the integrated delivery method including ECTS, and how the courses will be incorporated by partner country institutions.

<b>Target groups</b>	Teaching staff and students
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<b>Current status</b>	
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**Full compliance**

Partially compliance  
Not compliance  
Not started yet

The progress report indicates that activities have been carried out regarding this activity.

Among the evidence provided, it has been possible to verify that the course material has been generated, is adequate, and meets expectations.

Recorded material, manuals and a description of 8 out of 9 clusters have been generated with detailed information about the course. A full report of each cluster (9) has been generated.

### Conclusions

This activity was expected to finish in September 2022. At the time of issuing this report most of the planned activities have been done.

### 5.5 Tuning Workshop

<b>Type</b>	Event
<b>Due date</b>	14/04/2022

Professors from each university will meet to agree on the teaching methods, assessment procedures and delivery methods so that a consistent quality is achieved among partners. WP Leader and Capacity Building in the field of higher education – EAC/A02/2019 – Joint Projects Vocational Training Diploma on Electrical and Hybrid Vehicles / ECO-CAR representatives from European partners will attend the workshop. The workshop will be conducted in M15.

This will be further enhanced through a teaching tuning workshop that will be organized in Jordan where representatives from each of the partners will work together to agree on the teaching methods, assessment procedures and delivery methods so that a consistent quality is achieved among partners. This will allow partners to have common teaching methods, procedures, assessments and quality assurance. Finally, a plan for the best exploitation of the courses by other will also be conducted.

<b>Target groups</b>	Teaching staff
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### Current status

**Full compliance**  
Partially compliance  
Not compliance  
Not started yet

The tuning workshop took place on November 14th and 15th, 2023, at the Applied Science Private University on the first day and at Al Hussein Technical University on the second day. Experts from the University of Deusto participated in delivering the tuning workshop. 34 participants attended the workshop in total for the two days.

<b>Conclusions and recommendations</b>
<p>The evidences provided, course material, the tuning workshop report and the Agenda it can be concluded that the Tuning Workshop was aim to enhance teaching quality for professors across partner universities and develop degree programs collaboratively. The workshop focused on agreeing upon teaching methods, assessment procedures, and delivery methods to ensure a consistent level of quality among the partners.</p> <p>The activiy is considered to be fully compliance and meets the expectations of the project despite having been carried out outside the planned deadline.</p>

<b>5.6 Piloting and implementation of ECO-CAR Professional Diploma</b>	
<b>Type</b>	Event/Teaching material/Learning material
<b>Due date</b>	M21-M34
<p>The diploma piloting will start by (M21). Each university will accept students in the diploma and start teaching the courses. Different courses will be piloted in the Jordanian Universities, an Assessment Report will be written on the results of the delivery of the courses, a list of participants, description of the admission criteria, learning outcomes, assessment and quality assurance.</p> <p>After passing the diploma exam, a certificate will be given to the student. European professors will travel to Jordan for one week to teach some lectures for the students during the diploma implementation.</p> <p>The milestones will be the participants' list, official documents, assessment and piloting of the courses. The indicators will be the enrolment of the students and the participation in the courses.</p>	
<b>Target groups</b>	Teaching staff , students, trainees, technical staff
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>Until Janury 2024, according to sixth progress report the evidence provided, only the University of Jordan has carried out the implementation of the professional diploma with 29 assistants. Among the evidence, no report on the course was found as planned.</p> <p>On the other hand, there are some announcements about the program in other universities but no information about its development or the attendees, key indicators for the compliance review.</p> <p>Finally, the assessment reports don't meet the expectations as established in the project: <i>...an Assessment Report will be written on the results of the delivery of the courses, a list of participants, description of the admission criteria, learning outcomes, assessment and quality assurance.</i></p>	

Not in all cases there is an evaluation report and in those that do exist, there is no information about the results of the delivery of the course, the description of the admission criteria, learning outcomes, assessment and quality assurance.

### Conclusions and recommendations

Different courses have been announced but there are no evidences about the development of all of them.

It has not been possible to verify how the courses were carried out. It was expected to produce an assessment report of each course. Not in all cases there is an evaluation report and in those that do exist, there is no information about the results of the delivery of the course, the description of the admission criteria, learning outcomes, assessment and quality assurance as established in the project.

It can be concluded that these reports don't meet the expectations as established in the project: *...an Assessment Report will be written on the results of the delivery of the courses, a list of participants, description of the admission criteria, learning outcomes, assessment and quality assurance.*

Despite this, this information is included in different documents that have been prepared throughout the project, so despite not having met exactly the expected, the information is there.

### 5.7 Integrating some new modules in existing programmes

<b>Type</b>	Event/Teaching material/Learning material
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<b>Due date</b>	M21-M34
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To ensure a greater impact for the gained knowledge from European Partners, many courses modules will be integrated within existing bachelor and master programs (i.e. Mechanical, Mechatronic, Electrical Engineering).

These tasks will be documented through reports indicating the Course selected for implementation, Course title at university, Number of Credit hours, school – program – department, Number of students registered, Start and end date of the semester, Percentage of ECO-CAR Module integrated in the course.

<b>Target groups</b>	Teaching staff, students, trainees, technical staff
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#### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

An Institutional commitment letter has been signed by 7 Jordan Universities to integrate some modules in existing programmes.

### Conclusions

The progress report indicates that there is a commitment from 8 universities. On the other hand, there is no evidence beyond the commitment letters and an Excel file with some information about the integration of the modules that has been carried out.

## WP6. Quality Plan

### Aims and objectives

This work package aims to assure the optimal quality, structure, processes and results of the project.

Quality assurance (QA) is a powerful tool to improve the effectiveness of the project. Its key principle is to let main actors in education such as staff and students be responsible for improving educational performance.

A Quality Assurance and Evaluation Plan will be elaborated by the Quality Committee, that will be established during the Kick-Off meeting. The plan will investigate the quality standards of the different partner universities and standardize them in a shared approach.

The detailed plan will be a reference to manage the project effectively and to assess the performance. Quality control for all work packages will be applied. Evaluation surveys will be developed within this work package to guarantee a high level of quality at the different universities.

The quality assurance plan uses an agile approach to quality assurance related to providing acceptance criteria and specifications for all project outputs. The key end user outputs for each work package in the project are assessed through the production of a quality checklist (i.e. Quality Criteria Checklists, Dissemination WP Checklist, Social Science Checklist, Training and meetings evaluation checklist, Lab Design checklist) of suitable acceptance criteria overseen and verified.

Impact Evaluation Reporting is a part of WP6 related to the impact evaluation of all training and teaching outputs. Impact Evaluation Surveys using Kirkpatrick's four-step model will be implemented to gather evidence from participants of the project trainings and evaluate their effectiveness on their teaching practices.

External Evaluator (EE) will be responsible to provide constant and independent information about the development and implementation of project activities. The EE has to provide updated and independent evaluations about the realization of tasks and the achievement of aims to the Project Coordinator and the steering committee members. This allows an optimization of the resources and redirection of the activities, which can be affected by problems or delays. External Evaluator will conduct constructive evaluation by working according to the terms of reference and 'rules of engagement' set by the project Quality Manager and the manager of the project. The External Evaluator will advise and train partner universities to use suitable tools of evaluation for the sustainability of the program quality. The expert will submit a periodic evaluation reports for the project.

Corrective actions must be considered if needed.

6.1 Quality Assurance and Evaluation Plan	
<b>Type</b>	Report
<b>Due date</b>	14/04/2021
<b>Description:</b>	
<p>A Quality Assurance and Evaluation Plan that outlines the quality assurance processes, tools, measures, procedures, and methodologies will be designed and prepared by the Quality WP leader. The Quality Assurance Tools and surveys will be annexed to the plan.</p> <p>The quality assurance plan will use an Agile approach to quality assurance related to providing acceptance criteria and specifications for all project outputs.</p> <p>Quality committee will provide guidance, standards and procedures that will ensure that the project produces relevant, trustworthy, rigorous and useful outputs and outcomes for partners, beneficiaries and users.</p>	
<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff
Current status	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>According to the progress report and the evidences provided, all activities have been carried out to fulfill with planned activities in this WP.</p> <p>The <i>Quality Committee</i> has been elected and its role is to provide guidance, standards and procedures that ensure that the project produces relevant, trustworthy, rigorous and useful outputs and outcomes for partners, beneficiaries and end users.</p> <p>The <i>Quality Assurance and Evaluation Plan</i> has been elaborated (Deliverable 6.1). This plan establishes the quality standards and serves as a reference to manage the project effectively and to assess its performance. It describes the processes, tools, measures, procedures and methodologies to ensure that the activities and the results of the project meet the required quantity standards. This plan includes as annexes the necessary templates (Task 6.2) to monitor the quality of the project, both internally and externally.</p> <p>The Quality Plan has been updated on the 1st September 2023 (versión 4). It has been updated a list of key project deliverables for peer review, the list of reviewers per deliverable and the Annex 6C Course impact evaluation form.</p>	
Conclusions and recommendations	
<p>All expected activities have been carried out. Good monitoring and updating of the Quality Assurance and evaluation Plan has been done in order to improve the process carried out in this WP.</p> <p>It is worth noting the detailed information provided both in the progress report and in the evidences through the Google drive.</p>	

6.2 Applying Quality Assurance Tools	
<b>Type</b>	Report
<b>Due date</b>	14/01/2024
<b>Description:</b>	
<p>Specific quality checklists of suitable acceptance criteria overseen and verified will be prepared. Examples of these checklists include Quality Criteria Checklists, Dissemination WP Checklist, Social Science Checklist, Training and meetings evaluation, and LabDesign checklist.</p>	
<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff
Current status	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>Specific quality checklists, templates and evaluation forms have been prepared and included as annexes of the Quality Assessment and Evaluation Plan (Deliverable 6.1).</p> <p>A set of evaluation and monitoring tools has been designed and produced:</p> <ul style="list-style-type: none"> <li>- Project evaluation questionnaire: M12, M18, M24 .</li> <li>- Meeting evaluation survey: 13<sup>th</sup> management meetings evaluation; TH-OWL Steering Committee Meeting - July 2022 WP7-Dissemination and Sustainability Work Event-.</li> <li>- Deliverable template.</li> <li>- Deliverable evaluation form.</li> <li>- Event evaluation form.</li> </ul> <p>During the last year of the project the following quality evaluations have been done:</p> <p><i>Project performance evaluation for the first half of third year (M30) performed and included in the Quality and Monitoring Report (M30)</i></p> <p><i>Project performance evaluation for the second half of third year (M36) performed and included in the Quality and Monitoring Report (M36)</i></p> <p><i>Meetings' evaluation:</i></p> <ul style="list-style-type: none"> <li>- 14th Management Meeting Evaluation - January 2023</li> <li>- 4th Steering committee Meeting Evaluation – April 2023</li> <li>- Online Management Meeting Evaluation – May 2023</li> <li>- 16th Management Meeting Evaluation – June 2023</li> <li>- 17th Management Meeting Evaluation – October 2023</li> <li>- 18th Management Meeting Evaluation – November 2023</li> <li>- 5th Steering Committee Meeting Evaluation – September 2023</li> <li>- Final Conference Evaluation –January 2024</li> </ul>	
Conclusions	

According to the progress report and the evidences provided, all activities planned for this period have been carried out. The information gathered have meet the expectations of the project.

It is worth noting the detailed information provided both in the progress report and in the evidences through the google drive.

### 6.3 Impact Evaluation Reporting

<b>Type</b>	Report
<b>Due date</b>	14/10/2023

#### Description:

The impact evaluation questionnaires will be prepared for Staff and students to gather evidence about the effectiveness of project activities (Training workshops, courses, services, etc.).

Kirkpatrick's four-level model of evaluation will be used for the evaluation of training and courses.

The analysis plan for these questionnaires involves identifying descriptive statistics of individuals who have taken part with project activities.

A learning analytics tool to measure and assess the courses learning outcome will be adopted within the e-learning platform, to easily organize assessment efforts and generate meaningful data quickly.

<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff
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#### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

An *Impact evaluation questionnaire* has been prepared following the Kirkpatrick's four level model of evaluation to gather evidence about their effectiveness and the teaching practices applied. These questionnaires will be filled in by the staff and students attending to them.

There have been produced the following impact evaluation so far:

4th Management Meeting Evaluation - May 2021

5th Management Meeting Evaluation - July 2021

6th Management Meeting Evaluation - September 2021

7th Management Meeting Evaluation - October 2021

8th Management Meeting Evaluation - November 2021

SC Meeting and Workshop Evaluation - June 2021

Discussion Session Evaluation

Networking Workshop Evaluation



'Talk on Batteries' Workshop Evaluation - June 2021  
 'Introduction on Internal Combustion Engines in Hybrid Vehicles and Well to Wheel LCA Calculation' workshop Evaluation - September 2021  
 'Vehicle Dynamics Fundamentals' workshop Evaluation – November 2021  
 'Vibroacoustic Comfort in Road Vehicles' Workshop Evaluation - November 2021  
 Charge Transport in Batteries and Hydrogen Vehicles Workshop by TH-OWL – December 2021  
 EV Charging Systems & Charging Infrastructure Workshop – March 2022  
 Modern Technology in the Diagnosing and Maintenance of Electrified Vehicles - March 2022  
 ECTS Workshop by UD – March 2022  
 Estimating the Impact of Topography and Traffic on Vehicle's Energy Consumption Workshop - April 2022  
 Budapest Training - June 2022  
 TTU - Lithium Sulfur Batteries in Automobiles – July 2022  
 Piloting ECO-CAR Professional Diploma at UJ Online event – September 2022  
 ECO-CAR Launch Ceremony and Tester Workshop at UJ – October 2022  
 Battery storage and its applications in EV and ESS – October 2022  
 BAU staff training (BME) – October 2022  
 HTU staff training (BME) – October 2022  
 TTU staff training (BME) – November 2022  
 Training in Germany RWTH Aachen – November 2022  
 Workshop in UD - January 2023  
 Training in Hoxter – May 2023  
 Eco-Car Sustainability Workshop – June 2023  
 - NTUA Staff Workshop Evaluation - September 2023  
 - UNIVAQ Staff Workshop Evaluation - September 2023  
 - UNIVAQ Student Workshop Evaluation - September 2023  
 - BME Student Workshop Evaluation - October 2023  
 - Tuning Workshop Evaluation November 2023  
 University Visits Evaluation  
 - AACHEN: ASU University Visit Evaluation - August 2023)  
 - AACHEN: HTU University Visit Evaluation - August 2023  
 - AACHEN: MU University Visit Evaluation - August 2023  
 - AACHEN: ZUJ University Visit Evaluation - August 2023  
 - BME: JUST University Visit Evaluation - December 2023  
 - BME: UJ University Visit Evaluation - December 2023  
 - NTUA: Online Lecture Evaluation - December 2023  
 Diploma and Courses Evaluation  
 ASU Vocational Diploma Evaluation – December 2023

BAU Associate Degree Diploma  
Evaluation – December 2023  
BAU Vocational Diploma  
Evaluation – December 2023  
HTU Vocational Diploma  
Evaluation – December 2023  
JUST Vocational Diploma  
Evaluation – December 2023  
MU Vocational Diploma  
Evaluation – December 2023  
TTU Associate Diploma  
Evaluation – December 2023  
TTU Vocational Diploma  
Evaluation – December 2023  
UJ Vocational Diploma Evaluation  
– December 2023  
ZUJ Vocational Diploma  
Evaluation – December 2023  
Key Deliverables Evaluation  
D2.1 Key competencies needed  
by employers in Jordan in the  
field of EV/HEV - November 2023  
D3.1 Capacity Building Plan -  
November 2023  
D5.2 Virtual Learning Portal -  
November 2023  
D7.1 Dissemination and  
sustainability plan - November  
2023  
D7.2 Project Website and Social  
Networks - November 2023

There has also been design, at the beginning of the third year, a pre-course evaluation that it was not expected in the project but has been requested by the partners.

### Conclusions

According to the progress report and the evidences provided, all activities planned have been carried out.

It is worth noting the detailed information provided both in the progress report and in the evidences through the Google drive.

### 6.4 External Evaluation

<b>Type</b>	Report
<b>Due date</b>	M6-M37
<b>Description:</b>	

The external evaluator role is to assess the project in its progress toward agreed objectives and indicators and to contribute at an intermediate and final stage of the project, which will support the EU standard for the project implementation.

Terms of reference for External Evaluation will be prepared by WP6 leader. Technical and financial offers will be gathered from different potential evaluators. Selection criteria and needed qualifications will be identified to select the most suitable evaluator.

Quality committee will study the provided offers and appoint the evaluator. External evaluator will be appointed during the end of the first year of the project.

**Target groups**

Teaching staff, students, trainees, technical staff, administrative staff

**Current status**

**Full compliance**

Partially compliance

Not compliance

Not started yet

The terms of reference for external evaluation were drafted and published. The document defined the selection criteria, needed qualifications, evaluation process, etc. that will enable the selection of the most suitable candidate.

The external expert has been appointed.

**Conclusions**

Although the external evaluator is already appointed, it was not at the end of the first year but in at the beginning of the second one. The administrative procedures of the project should be more agile.

It is worth noting the detailed information provided both in the progress report and in the evidences through the google drive.

**WP7. Quality Plan**

**Aims and objectives**

The aim of this work package is to effectively disseminate information of the activities of the project and to communicate its outcomes to multiple audience including the media and the public. A variety of dissemination activities will be conducted that include webpage, social networks, courses video presentation, electronic and printed material, dissemination seminars (2 in each partner university), participation in events to promote the diploma.

An effective dissemination and communication strategy will be developed. The dissemination and communication strategy will define a consistent approach to key target groups and will be based on a target group analysis with support of key stakeholders, including also language adaptation and content translation by the local partners.

Tester course workshops with enterprises will be conducted to test the modules and provide feedback in order to further improve their utility and usefulness. The participation in these activities will be the indicators of their success.

Sustainability can be envisaged as being composed of various elements. They comprise visibility, networking, policy consensus, users' feedback, funding (public or external), official recognition, competent staff, human resources commitment, achieved sustainability of related output.

The project website will be established and designed by the project coordinator (UJ) and WP7 leader. To reach the public effectively; project accounts on social media will be created. These social accounts will continuously be updated with information about the project and other relevant information to promote equity and inclusion in universities and society.

The dissemination material and communication activities (i.e. Project logo, Brochures, Folders, Rollups, e-newsletter, and Flyers) will be designed and prepared by the WP 7 leader in cooperation with other partners. Dissemination activities (i.e. Publication in scientific Journals, and documentary film) will be considered in the plan.

Seminars, info days, workshops for staff and students will be conducted in each partner universities.

The final conference will be conducted at the end of the project. The objective will be to disseminate the project outcomes and recommendations to university staff, students and society.

7.1 Dissemination and sustainability plan	
<b>Type</b>	Report
<b>Due date</b>	14/04/2021
<b>Description:</b>	
An effective dissemination, communication and sustainability plan will be developed by the WP leader to promote the developed diploma and its sustainability. The dissemination and communication strategy will define a consistent approach to key target groups and will be based on a target group analysis with support of key stakeholders, including also language adaptation and content translation by the local partners. The guideline for organizing and implementing the dissemination activities will be defined. All project documents must indicate that the project has received European Union funding, and carry the Erasmus+ logo and mention: "Co-funded by the Erasmus+ Programme of the European Union".	
<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres
Current status	
<b>Full compliance</b> Partially compliance Not compliance Not started yet	

Several Dissemination/Sustainability Plans were drafted. The final version (V04) was released on 26.01.2022. Will be officially adopted in Athens 09.03.2022.

Electronic copies were sent to partners.

### Conclusions

Although the indicators of this WP have meet met, the deadlines not. There has been a delay according to the planned.

It has to be noting that the recommendation in the first external evaluation report was taking into account and evidences have been provided through Google drive.

## 7.2 Project Website and Social Networks

<b>Type</b>	Service/product
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<b>Due date</b>	14/04/2021
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### Description:

The project website will be established and designed by the project coordinator and WP7 leader in the first three months of the project. Project account on social networks will be created as well.

The website will be in English, and has three main services: a) the main portal for dissemination where its material will be posted on, to increase awareness in regard to the project and its topic; b) the main portal for accessing the Educational Platform where all course materials will be stored; c) the exploitation of results and in ensuring its continuation.

<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres
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### Current status

#### Full compliance

Partially compliance

Not compliance

Not started yet

Website and Social Networks (Facebook; LinkedIn; YouTube) were developed and maintained by JU.

### Conclusions

The website is accessible, friendly and intuitive.

Like any web page, it requires uploading content regularly to keep the information updated and this is being done.

The activities planned have been achieved.

On the other hand, having social media is a strong point but it is needed to get users, otherwise the social networks do not meet the dissemination purposes.

### 7.3 Printed and Electronic dissemination material

<b>Type</b>	Service/Product
<b>Due date</b>	Over Project life. Newsletter every 6 months
<b>Description:</b>	
The dissemination material and communication activities (i.e. Project logo, Brochures, Folders, Rollups, promotional material e-newsletter every six months, press releases to newspapers, and Flyers) will be designed and prepared by the WP 7 leader in cooperation with other partners. The material will present the purpose and accomplishments of the project.	
<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres

### Current status

#### Full compliance

Partially compliance

Not compliance

Not started yet

Several dissemination materials have been produced:  
Brochure, leaflet, folder, notebook, roll-up delivered and mouse pad.

The first newsletter was delivered on 30<sup>th</sup> November 2021, a few months later than planned. The second one was issued on the 1<sup>st</sup> January 2022, and the third one on the 15<sup>th</sup> July 2022. On May 2023 the fourth newsletter was delivery and the fifth one on August 2023.

At the time of issuing this report the first draft of the sixth newsletter was drafted, January 2024.

As regards the dissemination of the newsletter they have been published in the ECO/Car website.

### Conclusions

The activities of this WP have been carried out nearly accordingly to plan. Despite the fact that there has been a slight delay in the publication of the newsletter, it is considered that the plan is being fulfilled.

On the other hand, it is recommended to disseminate the newsletter as soon as it is finished and not wait so long to publish on the website or send it to the partners, this was the case of the second newsletter.

#### 7.4 Seminars, Workshops, and info days

<b>Type</b>	Event/Report
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<b>Due date</b>	Over Project life.
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**Description:**

Seminars, info days, workshops for staff and students will be conducted in each partner university. One workshop in each partner university with at least 30 participants will be conducted.

The goal of the workshops is to increase the awareness of the project and the employability issues.

Those activities will be conducted to disseminate the Project objectives in raising awareness on clean technologies for transportation, promote their usage, and to encourage the cooperation between universities and enterprises, and vocational training centres. At least one annual activity per partner university in Jordan. In addition; the project idea and outcomes will be presented in different events and conferences organized by other entities outside the consortium.

During these events, the printed dissemination material will be distributed to participants.

<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres
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#### Current status

**Full compliance**

Partially compliance

Not compliance

Not started yet

According to the progress report 12 online workshops have been held during the project, 11 in person workshops in Jordanian universities, six at EU partners and three student w at EU, 13 Information Days and 8 Lab inauguration were held at each JJO partner campus.

As per the proposal, one workshop in each partner university should be held with at least 30 participants. It has been achieved.

#### Conclusions and recommendations

Evidences in the website about the event details of each activity carried out under this WP have been provided. The list of participants of each activity has also been provided.

Photos of each of the activities carried out are included, which shows the effective participation in the different activities and the good organization of the different events. This aspect is valued positively.

### 7.5 Tester course workshops

**Type**

**Due date**

14/07/2022

**Description:**

Tester workshops will be conducted in Jordan with the participation of enterprises (employers), this will be prior to the diploma implementation and during the preparation phase of teaching material. At least 25 members from the network will participate. The participants will be informed on the content, structure, assessment regime, entry requirements and job prospects. The participants will test the modules and provide feedback in order to further improve their utility and usefulness. The plan for the implementation of the diploma and integration of modules in existing programs will also be presented so that potential beneficiaries are aware of the existing support. Finally; the participants will also express their opinions on what modifications need to be done so these courses could be best exploited by other organizations.

**Target groups**

Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres

**Current status**

**Full compliance**

Partially compliance

Not compliance

Not started yet

According to project this activity should be carried out the second year of the project.

A launch ceremony and tester workshop was held at University of Jordan on 22.09.2022. A report about the event has been drafted. Participants recommended to increase the hours of the trainings for students at the three diplomas.

There were 75 participants so the objective of this activity was achieved. Among the participants there was representation of all stakeholders as expected.

**Conclusions**

The activity has been carried out according to the Project.

### 7.6 Final Conference on Sustainable technologies in transportation

**Type**

Event

**Due date**

14/12/2023



<b>Description:</b>	
<p>An International Final Conference that will present ECO-CAR diploma, project outcomes and achievements while also promote the, lifelong learning, knowledge of innovation in transportation, innovation in educational programmes, environment and climate change issues. Network members will be invited to the conference. The conference will be conducted at the end of the project in Jordan and hosted by (UJ).</p>	
<b>Target groups</b>	Teaching staff, students, trainees, technical staff, administrative staff, enterprises and vocational training centres
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>According to project this activity was carried out at the end of the project on the 9<sup>th</sup> January 2024 and the ECO/CAR diploma was presented as well as the development of the project.</p>	
<b>Conclusions</b>	
The planned activities were carried out as scheduled.	

## WP8. Management

### Aims and objectives

The coordinator of the project (UJ) in cooperation with partners will be responsible to manage the project and coordinate between different partners. The project coordinator will be responsible for the financial and administrative management including the reparation of budget and reports, timeliness and accomplishment. To achieve the project aims, the coordinator will form the right committees with suitable members for different Work packages of the project, define the project milestones, establish Clear Communication, and Manage Project Risks.

The kick-off meeting will be held at The University of Jordan to establish common aims and purposes of the project. Along the project duration, another five management meetings will be conducted on periodic bases in different European partner universities. Enterprises, public authorities, research centre, will be invited to the opening ceremony of the project.

Steering Committee, Quality Committee and Dissemination Committee, will conduct face to face and online meetings periodically, to create internal regulations, take decisions, distribute roles, monitor progress. The minutes of these meetings will be elaborated in occasion of all meetings and published on the web platform. They will have a documental value keeping all decisions taken and will be elaborated by the project coordinator.

Management and Operational Structures will be formed during the kick-off meeting, and the responsibilities will be determined. Different leading committees will be formed including Steering Committee, Technical Committee, Quality Committee, Dissemination Committee, and Sustainability Committee. Partnership agreements will be elaborated during the first stages of the project.

Project Progress Reports will be produced every six months of the project, this will be prepared by WP leaders based on the received progress reports from each partner university. It will give a detailed overview of the activities and outcomes of the project to date and a clear account of the budget. Its production is led by UJ and is based on partners' reports. Intermediate reports and final reports will be delivered by the coordinator in cooperation with partners.

At the end of the project, according with Erasmus Plus guidelines, an External Auditor will be appointed for the analysis and certification of financial documents.

8.1 Kick-off Meeting and other Consortium Meetings	
<b>Type</b>	Event
<b>Due date</b>	M1, M7, M13, M19, M26, and M35
<b>Description:</b>	
<p>The kick-off meeting will be held during M1 at The University of Jordan to establish common aims and purposes of the project at the beginning of the project. Meetings will be parallel to workshops.</p> <p>The second meeting will be during M7 with a training workshop in Europe, the third meeting will be during M13 with a training workshop in Europe, the fourth meeting will be during M19 with a training workshop in Europe, the fifth meeting will be during M26 in Europe, and the sixth meeting will be during M35 with the final conference in UJ.</p> <p>The project's meeting is combined with the training workshops, to minimize the travel costs. As the contact persons will be participating in both activities.</p> <p>Periodic online meetings will be conducted between the conducted as well to review objectives, and monitor the progress.</p> <p>Steering Committee, Quality Committee and Dissemination meetings will create internal regulations establishing representation of partners, decision mechanisms, roles and products, as well as a main calendar for meetings. The minutes of these meetings will be elaborated in occasion of all meetings and published on the web platform. They will have a documental value keeping all decisions taken and will be elaborated by the coordinator.</p>	
<b>Target groups</b>	Teaching staff, technical staff, administrative staff.
<b>Current status</b>	
<p><b>Full compliance</b></p> <p>Partially compliance</p> <p>Not compliance</p> <p>Not started yet</p>	

According to the progress report and the evidences, 18<sup>th</sup> management meetings, four Steering Committee meetings, two Quality Committee meetings and the kick off meeting and a local meeting have been held.

### Conclusions

The activities of this WP have been carried out accordingly to planned. The evidences demonstrate that info about meeting is available in the website of the project.

It is worth noting that the information provided in the progress report is well organized and complete and the evidences well organized.

The minutes of the meetings have been provided through the website.

## 8.2 Establishment of Management and Operational Structures and running the project

<b>Type</b>	Service/product
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<b>Due date</b>	Over Project life
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### Description:

The project coordinator (PC) will be responsible for the overall planning and monitoring of the work of the consortium and will track deliverables and be responsible for the management and progress reports, cost statements and for the reports. PC will maintain the plan and produce reports against the plan, and provide revisions of the plan (if necessary) as agreed by the project's management committee. Management reports and cost statements will be made by the partners individually on the basis of EACEA templates. These reports will form the basis of the management, progress and cost reports made by the project manager to be sent to the EACEA regularly. The PC, in conjunction with work package leaders, will organize technical meetings where necessary to provide a forum for regular review of the work in progress in particular work packages. The project manager will maintain an online archive of project documents and information, continuously accessible for the partners.

The Management and Operational Structures will be formed during the kick-off meeting, and the responsibilities will be determined. Different leading committees will be formed including Steering Committee, Technical Committee, Quality Committee, Dissemination Committee, and Sustainability Committee. Partnership agreements will be elaborated during the first month of the project.

The committees will be responsible for:

- To provide high-quality management and coordination for
- the project consortium
- To ensure implementation of projects tasks as planned
- To ensure delivery of results as planned
- To oversee financial expenditure of project funds
- To resolve possible unexpected issues during the project

<b>Target groups</b>	Teaching staff, technical staff, administrative staff.
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### Current status

#### Full compliance

Partially compliance

Not compliance

Not started yet

In the agendas of the kick off meetings, it is established that the operational structure has been determined.

The Steering Committee was formed during the kick-off meeting, and the regulations were determined. It is necessary to point out that the said regulation was drafted in March 2021, in this document several meetings were scheduled during 2021, but two of the members signed the regulations when, at least, 7 meetings had already been held.

The Technical and Scientific Committee was formed during the kick-off meeting, and the regulations were determined. As it has happened in the Steering Committee, three of the members signed the regulations when, several meetings had already been held.

### Conclusions

The operational structured has been determined.

### 8.3 Financial Management

<b>Type</b>	Service/product
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<b>Due date</b>	Over Project life
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#### Description:

Accounting and control of the budget will be realized by the project coordinator and the responsible person for the financial management at each partner university and is controlled by the coordinator of the project. For transparency provision of financial activity, accuracy of financial documentations is required.

<b>Target groups</b>	
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#### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

According to the progress report and the evidences the following activities have been done:

- Sessions about financial management for partners have been conducted during kick-off meetings and StC meetings.
- Regulations and rules have been defined through partnership agreements.
- In addition, every 9 months financial reports with supporting documents are submitted by partners all uploaded in the drive.
- A Financial Sustainability for training and diplomas excel sheet with how to use it were also prepared.

### Conclusions

The information about the financial issues are allocated in a different google drive. The external evaluator has had access to this information but an audit of the information contained has not been carried out because it does not have exact information on the planned expenses and because it is considered that this is the task of the financial auditor.

#### 8.4 Reporting (Progress, Intermediate and Final Reports)

<b>Type</b>	
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<b>Due date</b>	Every Six Months, Middle of the project, End of the Project
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#### Description:

Project Progress Reports will be produced every six months of the project, this will be prepared by WP leaders based on the received progress reports from each partner university. It will give a detailed overview of the activities and outcomes of the project to date and a clear account of the budget. Its production is led by UJand is based on partners' reports. Intermediate reports and final reports will be delivered by the coordinator in cooperation with partners.

<b>Target groups</b>	Teaching staff, technical staff, administrative staff, trainees, students
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#### Current status

##### Full compliance

Partially compliance

Not compliance

Not started yet

There have been submitted six progress reports from each WP leader one every six months and one intermediate report. According to the project a final report must be submitted by the coordinator in cooperation with partners, but this report has not been drafted at the time of issuing this report.

On the other hand, the WP5 didn't produced the third progress report. In this regard as there are information about the other five progress report an analysis could be done about the progress of this WP.

#### Conclusions

Most of the monitoring reports at the beginning didn't provide detailed information, but following the recommendations of the external evaluation reports the information in the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> progress reports has improved.

It would have been desirable for the final report indicated in the project to have been prepared.

8.5 Hiring Financial Auditor	
<b>Type</b>	Report /Service / product
<b>Due date</b>	M33-M36
<b>Description:</b>	
<p>During the last year of the project and according with ERASMUS Plus guidelines, an External Auditor will be appointed by the University of Jordan for the analysis and certification of all financial documents.</p>	
<b>Target groups</b>	Administrative staff
<b>Current status</b>	
<p><b>Full compliance</b> Partially compliance Not compliance Not started yet</p> <p>An announcement has been published in order to hire an auditor. There is no information on the date it was published or where. The Terms of Reference have been drafted in June 2023 and a study of the three offers received has been done. The three offers (Crowe, Omar Abu-Hijleh Public Accountants and Talal Abu-Ghazaleh &amp; Co. International (TAGI)) have been evaluated according to the selection criteria established in the ToR: cost, experience and team. The Crowe enterprise was the one with the highest score, 86.</p> <p>The contract agreement was signed in October 2023, but there appears to be an error in the contract as it states that the first report should be drafted in March 2023, before the contract is signed.</p>	
<b>Conclusions</b>	
<p>Although it is considered that the provisions of the project have been complied with regarding the hiring of an auditor, there has been no access to the three offers received nor to the means by which the call has been publicized.</p> <p>Overall the activity has been done according to the project proposal.</p>	

## 4. OVERALL CONCLUSION

The overall development of the project can be considered adequate. Although on some occasions there have been delays, **in general the objectives set are being met.**

The final status of the project is as follows:

CURRENT STATUS			
WP1		WP6	
1.1	Accomplished	6.1	Accomplished
WP2		6.2	Accomplished
2.1	Accomplished	6.3	Accomplished
2.2	Accomplished	6.4	Accomplished
WP3		WP7	
3.1	Accomplished	7.1	Accomplished
3.2	Accomplished	7.2	Accomplished
3.3	Accomplished	7.3	Accomplished
WP4		7.4	Accomplished
4.1	Accomplished	7.5	Accomplished
4.2	Accomplished	7.6	Accomplished
WP5		WP8	
5.1	Accomplished	8.1	Accomplished
5.2	Accomplished	8.2	Accomplished
5.3	Accomplished	8.3	Accomplished
5.4	Accomplished	8.4	Accomplished
5.5	Accomplished	8.5	Accomplished
5.6	Accomplished		
5.7	Accomplished		

In the last year of the project, there has been an improvement in internal communication and monitoring, although it is still not optimal. It is notable that certain activities have been carried out in the last year, when they were planned to be carried out earlier, as is the case of some workshops or the involvement of network partners since the beginning of the project. Another activity that could have been improved, due to the impact it has, is the website, as it is designed and with the information it contains, it does not meet the initially planned expectations. The preparation of reports on the activities carried out is also an aspect that should have been improved. Beyond justifying the activities carried out with images, the activities should have focused on specifying their development and impact. In any case, it can be indicated, as has been said before, that the project as a whole has been completed.