

**ERASMUS+ PROGRAMME**

**Project Number: 618509-EPP-1-2020-1-JO-EPPKA2-CBHE-JP**

**ECO-CAR:**

**Vocational Training Diploma on Electrical and Hybrid Vehicles**

**Minutes of  
11th Online Management Meeting**

**The University of Jordan  
Amman-Jordan**

**Thursday, May 12th, 2022  
15:00 – 17:00  
(Amman time)**



## Participant List

No.	Participant Name	No.	Participant Name
<b>The University of Jordan</b>			
1.	Prof. Ahmed Al-Salaymeh	2.	Prof. Mohammad Hamdan
3.	Dr. Hussam Khasawneh	4.	Eng. Mohammad Masad
5.	Dr. Bashar Qawasmeh	6.	Eng. Sara Al Twassi
7.	Eng. Rasha Al-Beek	8.	Ms. Hanan Hasan
<b>Jordan University of Science and Technology</b>			
9.	Eng. Salaheddin Abu Yahya		
<b>Mutah University</b>			
10.	Prof. Hussein Al-Majali		
<b>Tafila Technical University</b>			
11.	Dr. Ahmed Mostafa	12.	Dr. Wai'l Adaileh
<b>Al-Balqa Applied University</b>			
13.	Prof. Rebhi Damseh	14.	Dr. Mamoun smadi
<b>Al-Hussein bin Abdullah II Technical University</b>			
15.	Dr. Tarek Tutunji	16.	Dr. Abdallah Abdallah
17.	Eng. Yousef Okour	18.	Eng. Radi Al-Rashed
19.	Eng. Waleed Sunjuq		
<b>Applied Science University</b>			
20.	Dr. Mohammad Bani-Khaled	21.	Prof. Ayman Abu Baker
22.	Dr. Hanan Saleet		
<b>Al-Zaytoonah University of Jordan</b>			
23.	Dr. Loai Dabbour	24.	Dr. Nabeel Abushaban
25.	Eng. Eman Abdelhafez		
<b>Technische Hochschule Ostwestfalen-LIPPE</b>			



26.	Timo Broeker		
<b>University of Deusto - UD</b>			
27.	Sara Goitia	28.	Ivan Dyukarev
29.	Elena Arrate	30.	Izaskun Liñero
<b>National Technical University of Athens - NTUA</b>			
31.	Dr. Clio Vossou		
<b>Universita of L'Aquila - UNIVAQ</b>			
32.	Prof. Michele Anatone		
<b>Budapesti Muszaki es Gazdasagtudomanyi Egyetem</b>			
33.	Dr. Máté Zöldy		
<b>Rheinisch-Westfaelische Technische Hochschule Aachen</b>			
34.	Florian Ringbeck	35.	Stephan Bihn

## Minutes of the Meeting

The 11<sup>th</sup> management meeting was conducted via ZOOM video conferencing due to the global crisis, Corona Virus.

The meeting started by a welcome speech from the Project Coordinator and viewing the agenda of the meeting by Prof. Ahmed Al-Salaymeh.

### ECO-CAR Project in Brief

Prof. Ahmed Al-Salaymeh presented ECO-CAR project in brief. He outlined the project objectives, indicators, progress of work packages and their expected results. Prof. Al-Salaymeh has underlined the achievements of each WP up to date and what is expected from each WP to be achieved in the upcoming months. The overall plans are as follow:

#### WP1: Establishing university-enterprise cooperation

**Duration: M1 to M36**

**Lead University: Jordan University of Science and Technology (JUST)**

**Co-Lead University: Mutah University (MU), Al-Hussein bin Abdullah II Technical University (HTU) & Universidad de la Iglesia de Deusto Entidad Religiosa (UD)**

### Overall Plan:

Number	Plan	Duration
1	Proactively identify and seek out network members from different locations.	M1
2	Provide the network members with the needed information about the project aims and activities.	M1
3	Prepare a registration form.	M1
4	Creating a Network of Community Support professionals, potential funders and investors and other stakeholders. The Network members will be involved in different activities of the project.	M5
5	Conduct meetings with enterprises to include them in the design and implementation of the project, to understand stakeholders' interests, concerns and culture.	M5
6	Organise workshops and seminars to exchange information.	M6-M36
7	Sign collaboration agreements with enterprises and training centres to let the students make their internships.	M6

Eng. Salaheddin Abu Yahya (JUST) presented the progress of this work package, registration form as two versions are prepared (Arabic and English) to accommodate with the mother language of the target sector, and the number of registered members in the network since the collected responses are stated below:

Jordanian Partners	Number of network members registered	Remained number of network members to be registered	European Partners	Number of network members registered	Remained number of network members to be registered
UJ	13	0	TH-OWL	2	2
JUST	10	0	UD	3	1
TTU	10	0	NTUA	5	0
BAU	8	2	RWTH-Aachen	1	3
MU	9	1	UNIVAQ	2	2
HTU	10	0	BME	0	4
ASU	5	5	<b>Total</b>	<b><u>13 members</u></b>	<b><u>12 members</u></b>
ZUJ	10	0			



<b>Total</b>	<b><u>75 members</u></b>	<b><u>8 members</u></b>
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And agreed on the following:

No.	Task	Responsibility	Deadline
2	BME has to provide at least 2 members for ECO-CAR Network. Also, RWTH-Aachen, TH-OWL, and UNIVAQ still have to provide at least 1 more member.	BME, RWTH-Aachen, TH-OWL, and UNIVAQ	<b>Last deadline 31.03.2022</b>
3.	Sign collaboration agreements with enterprises and training centres for internships, hiring graduates, lecturing in university etc. to achieve the benefit for both parties.	All Jordanian partners	Continuous progress
4.	Update the “Networking Report” with the outcomes of the networking workshop at UJ and UNIVAQ workshop	Wp Leader and Co-Leader	Continuous progress

## WP 2: Baseline Study

**Duration: M1 to M6**

**Lead University: Applied Science University (ASU)**

**Co-Lead University: Tafila Technical University (TTU), Al-Balqa Applied University (BAU) & Universita Degli Studi Dell'Aquila (UNIVAQ)**

**Overall Plan:**

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M1
2	WP leader will design the four surveys in coordination with WP5 leader and submit them to be approved by Technical Committee.	M2
3	Partners will circulate the surveys to the target groups.	M2
4	Co-leaders will analyze the responses under the leader supervision and generate one report.	M4
5	Other WP's will be based on generated results of this surveys.	M5
6	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	M6

**Prof. Ayman Abu Baker (ASU)** presented the progress of this work package and the action plan, and agreed on the following:

No.	Task	Responsibility	Deadline
1.	Final version of the report has been submitted and approved by all partners and stakeholders	WP leader and scientific committee	submitted
2.	The scientific paper has been submitted finalized and submitted to the International Journal of Integrated Engineering	UJ, ASU, BAU, TTU	submitted
3.	ASU should start preparing a new paper based on the survey results.	ASU	May, 2022

### WP 3: Capacity Building

**Duration: M5 to M33**

**Lead University: National Technical University of Athens (NTUA)**

**Co-Lead University: Applied Science University (ASU), Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH Aachen) & Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)**

**Overall Plan:**

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M5
2	WP leader will set selection criteria for the workshops.	M5
3	Workshop topics will be matching the hosting university expertise (Topics in electrical and hybrid vehicles and how to prepare and teach e-courses): <ol style="list-style-type: none"> <li>(6) Training workshops in 5 EU countries for (90) academic and technical staff, (M7, M10, M13, M16, M19, M21).</li> <li>(1 or 2) Training workshop in 3 or 4 EU countries for (24) students in Europe, (M30-M33).</li> <li>(8) Technology-enhanced (In-house) teacher training for (600) staff member.</li> </ol>	M7-M33



<b>4</b>	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	
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**Dr. Clio Vossou (NTUA)** presented the progress of Capacity Building Plan work package and the action plan. The selection of online workshops and physical workshops (conducted by EU) dates and subjects and the online workshops by Jordanian Partners and were presented as following:

*Table 1: Physical Workshops*

Dates	Host Universities
2 <sup>nd</sup> week of May 2022	TH-OWL
30 May- 4 June 2022	BME
4 – 8 July 2022	UD
5 – 9 September 2022	UNIVAQ
26 – 30 September 2022	NTUA
7-11 November 2022	RWTH

*Table 2: Online Workshops by EU*

Universities	Subject	DATES
RWTH	Battery Technology, charging safety and Recharge infrastructure - COMPLETED	June 2021
UNIVAQ	Internal combustion engines in hybrid vehicles / Well to wheel LCA Calculation - SCHEDULED	13 September 2021
NTUA	Dynamics of Vehicle, active and passive safety	5 <sup>th</sup> of November 2021
BME	Internal combustion engines in hybrid vehicles / Dynamics of vehicle, active and passive safety	17 <sup>th</sup> of November 2021
UD	Vibroacoustic Comfort in Road Vehicles	2 <sup>nd</sup> of December 2021
TH-OWL	Charge Transport in Batteries and Hydrogen Vehicles	20 <sup>th</sup> of December 2021

*Table 3: Online Workshops by Jordanian Partners*

Universities	Subject	DATES	Presenter Name
UJ	High Voltage System	JUNE 2022	Eng. Moh Masad
JUST	Not selected yet	--	--

MU	Not selected yet	--	--
TTU	Not selected yet	--	--
HTU	Estimating the Impact of Topography and Traffic on Vehicle's Energy Consumption	April 2022	Dr. Muhannad Al-Tarifi
BAU	Not selected yet	--	--
ASU	The importance of using modern technology such as Scan Tools and smart electronic equipment in the diagnosing and maintenance of Electrified Vehicles and the percentage of its prevalence in vehicles workshops and maintenance centres in Jordan.	14/3/2022	Eng. Alaa AL-Ajlouni
ZUJ	Not selected yet	--	--

Following were agreed on:

No.	Task	Due Date
1.	Next online workshop will be by JUST	07.03.2022
2.	Update the "Capacity Building Plan" report to include the physical training workshops and their topics.	15.03.2022
3.	Start preparing for the teaching material for staff workshops (Set outlines, objectives, goals, teaching methods, etc.)	To be set upon finalizing courses outlines
4.	Circulate the physical workshops schedule and topics to the partners	March, 2022

#### WP 4: Establishment of EV/HEV labs

**Duration: M6 to M21**

**Lead University: Al-Balqa Applied University (BAU)**

**Co-Lead University: The University of Jordan (UJ), Jordan University of Science and Technology (JUST) & National Technical University of Athens (NTUA)**

#### Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP.	M2
2	Prepare a list of main components in ECO-CAR centers.	M2
3	WP leader and co-leaders will set the list of needed equipment based on WP2.	M4
4	Central Tender is published.	M10
5	Center is fully equipped and operational.	M18
6	Center establishment.	M21





7	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	
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**Prof. Rebhi Damseh (BAU)** presented the progress of this work package and the action plan. And was agreed on:

No.	Task	Responsibility	Due Date
1.	The equipment are purchased and to be delivered to local partners	UJ	May, 2022
2.	A committee will be responsible for start preparing for the manual by selecting the experiments titles, objectives and main theoretical part before receiving the equipment.	BAU, HTU, TTU	March, 2022
3.	UJ is in the final levels of hosting the server	UJ	April, 2022
4.	BAU has sent a template for collecting data of the ECO-CAR centers/labs that will host the equipment in each university. Responses are missing from MU and JUST.	MU and JUST	20.03.2022
5.	Provide each partner by the equipment list they will receive	BAU	20.12.2021

## WP5: Developing ECO-CAR Professional Diploma

**Duration: M4 to M34**

**Lead University: Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)**

**Co-Lead University: The University of Jordan (UJ), Technische Hochschule Ostwestfalen-LIPPE (TH-OWL), Rheinisch-Westfaelische Technische Hochschule Aachen (RWTH Aachen) & Universita Degli Studi Dell'aquila (UNIVAQ)**

### Overall Plan:

Number	Plan	Duration
1	WP leader will set a detailed plan for the WP with due dates.	M4-M6
2	Courses selection based on WP2 results.	M7
3	WP leader will prepare a course outline template with learning outcomes.	M8
4	Creation of committees responsible to develop the selected courses.	M9
5	Diploma accreditation.	M12
6	Tuning Workshop.	M15
7	Courses are developed.	M20
8	Piloting phase.	M16-M34



<b>9</b>	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	
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**Prof. Ahmed Al- Salaymeh** briefly discussed the progress of this work package and the action plan for the courses clustering and the clusters committees. Each committee will be responsible to review, modify, enrich and integrated the European experience to the received courses outlines. And followed were agreed on:

#	Task	Responsibility	Due Date
1.	Accreditation of the diploma/courses will be done during the first year to avoid the delays and risks	Local partners	May, 2022
2.	The courses outlines are received for all the courses	Local partners	Accomplished
3.	A total of 9 clusters were created and distributing the courses among the clusters with the responsible team members.	UJ	Accomplished
4.	A leader and co-leader were selected for each cluster. Their responsibility is to manage and organize the online meetings, distribute the work between the committee members, collecting the courses materials, and etc.	all partners	Accomplished
5.	Each cluster committee will name the responsible member by each university	Local partners	Accomplished
6.	Submit the final version of courses outlines by clusters committees	clusters committees	28.01.2022
7.	Submit the 1 <sup>st</sup> draft of course material by clusters committees	clusters committees	31.03.2022
8.	Provide the clusters committees with ECO-CAR template for preparing the courses content as PPT	UJ	01.02.2022
9.	TTU team was added to cluster 6: Vehicle dynamics. On the other hand, TTU was removed from Cluster 7: Health and Safety.		

The courses in all focus groups are 16 weeks (which means a total of 48 hours). However, each cluster committee can modify the number of weeks based on their full study of the courses. The attached excel file has the full details for the courses clustering (team for each cluster, clusters classification). Also, you can reach it online through this link:

[https://docs.google.com/spreadsheets/d/1JDJ4ox4911dxQ\\_GF7DD75UINwTEBC5\\_v/edit?usp=sharing&oid=103480218674595258682&rtpof=true&sd=true](https://docs.google.com/spreadsheets/d/1JDJ4ox4911dxQ_GF7DD75UINwTEBC5_v/edit?usp=sharing&oid=103480218674595258682&rtpof=true&sd=true)

Also, the members' allocation per cluster from each university can be reached via this link:

<https://docs.google.com/spreadsheets/d/1HNXmpywoUcFZhWVfY--KKcUagqo5E4Zk IOBGBRejX4/edit?usp=sharing>

## WP6: Quality and Impact Evaluation

**Duration: M1 to M36**

**Lead University: Universidad de la Iglesia de Deusto Entidad Religiosa (UD)**

**Co-Lead University: Tafila Technical University (TTU), Al-Zaytoonah University of Jordan (ZUJ) & Budapesti Muszaki es Gazdasagtudomanyi Egyetem (BME)**

### Overall Plan:

Number	Plan	Duration
1	Quality committee will be formed during the kick off meeting.	M1
2	WP leader will set a detailed plan for the WP with due dates.	M2
3	WP leader will prepare online evaluation links for all meetings, workshops and circulate them to partners after each event, and the results will be analyzed by the co-leaders.	M2
4	WP leader will prepare the Quality assurance tools.	M5
5	WP leader will prepare online evaluation links for all piloted courses, and circulate them to partners, and the results will be analyzed by the partners.	M10
6	Courses will be peer reviewed against a developed checklist.	M12
7	External evaluator will be appointed by WP leader.	M12
8	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders.	

Also, **Dr. Ivan Dyukarev** presented the progress of Quality and Impact Evaluation Plan work package and the action plan for the next stages, and following were agreed on:

No.	Task	Responsibility	Due Date
1.	Evaluate the meeting	UJ	During the meeting
2.	A confirmation has been received from the project officer for the selected EE.	UD, UJ, Quality committee	Accomplished
3.	A subcontract will be prepared by UJ for three parties for the EE.	UJ, UD	March, 2022



4.	Submit the Quality Assurance and Evaluation Plan after collecting the feedback	co-leaders, Quality and Scientific Committee	Submitted
5.	Submit Monitoring Report that evaluating the 1 <sup>st</sup> year of ECO-CAR	UD	March, 2022
6.	Check the quality of the submitted courses outlines	UD	Once the courses outlines are finalized

## WP7: Dissemination and Sustainability

**Duration: M1 to M36**

**Lead University: Al-Hussein bin Abdullah II Technical University (HTU)**

**Co-Lead University: Mutah University (MU), Al-Zaytoonah University of Jordan (ZUJ) & Technische Hochschule Ostwestfalen-LIPPE (TH-OWL)**

### Overall Plan:

Number	Plan	Duration
1	Dissemination committee will be formed during the kick off meeting.	M1
2	Project website will be designed, hosted and managed by University of Jordan.	M1
3	Facebook page will be created and managed by University of Jordan.	M1
4	Promotional Materials will be designed by Work Package leader.	M2
5	WP leader will set a detailed plan it will include plans for Dissemination, Sustainability and Networking.	M3
6	E-Learning platform will be created and managed by University of Jordan.	M12
7	Tester courses workshops and will be organized in Jordan.	M18
8	A three-day Final dissemination conference will be held at University of Jordan.	M35
9	Progress report to be provided by WP leader every 6 months based on collected feedback from Co-Leaders, the report will cover all Work packages.	

**Dr. Tarek Tutunji** discussed the progress of Dissemination and Sustainability Plan work package and the action plan for the next stages, and following were agreed on:

No.	Task	Responsibility	Due Date
1.	HTU will prepare the 2nd newsletter and will distribute it to the partners to collect their feedback	HTU	15.03. 2022



2.	Submit the Dissemination and Sustainability plan after collecting the feedback	Co-leaders, Quality and Scientific Committee	31.03.2022
3.	HTU will update the website content in cooperation with UJ	HTU and UJ	Continuous progress
4.	Start preparing for marketing plan in cooperation with other co-leaders	HTU and Co-leaders	May. 2022

## WP8: Project Management

**Duration: M1 to M36**

**Lead University: The University of Jordan (UJ)**

### Overall Plan:

Number	Plan	Duration
1	A Steering Committee (SC) will be established during the kick-off meeting part 2 with 1 representative from each partner.	M1-M36
2	A Technical and Scientific Committee (TSC) will be established during the kick-off meeting part 2.	M1-M36
3	6 coordination meetings will be conducted in Amman (KOM), Budapest, Aachen, Athens, Deusto and Amman (FC).	M1-M36
4	Monthly virtual status meetings via web-conferencing.	M1-M36
5	Regular communication will be conducted by e-mail and shared electronic database.	M1-M36
6	Progress report will be prepared every six months.	M1-M36

**Prof. Ahmed Al-Salaymeh** presented the progress of each work package and what is needed from partners, as tasks and activities of Project Management work package and the action plan for the next stages, and was agreed on:

No.	Task	Responsibility	Due Date
1.	Schedule the 11th online management meeting.	UJ	Wednesday, 02.03.2022 4 pm Amman time
2.	WPs 2 <sup>nd</sup> progress report	WP leaders	28.02.2022
3.	Next steering committee meeting at NTUA - Greece	UJ	10 <sup>th</sup> of March -12 <sup>th</sup> of March, 2022.



Finally, Prof. Ahmed Al-Salaymeh thanked all participants in the conducted online meeting.

**Meeting Evaluation Link:**

[https://docs.google.com/forms/d/e/1FAIpQLSeEM9UmlhwCZ-gs9LUaXIUb\\_gvxYVlg4LPjrUrvXrGf5mnUw/viewform?usp=pp\\_url](https://docs.google.com/forms/d/e/1FAIpQLSeEM9UmlhwCZ-gs9LUaXIUb_gvxYVlg4LPjrUrvXrGf5mnUw/viewform?usp=pp_url)