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# Master Degree in Industry 4.0

Ind4.0 (610455-EPP-1-MY-EPPKA2-CBHE-JP)

AGRICULTURE

AUTOMOTIVE

MANUFACTURING

HEALTH

## DELIVERABLE OF ERASMUS+IND4.0 WP3

**D3.2 Capacity Building Training Workshops to Asian HEIs**

**D3.3 Online Training of Asian HEI academic personnel**



Master Degree in Industry 4.0  
610455-EPP-1-2019-1-MY-EPPKA2-CBHE-JP

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### Projection Information

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## Abstract

This report describes the actions undertaken and the results of the workshop that took place in Medan in University of Sumatera Utara in July 2022. The main objective of the training was to transfer knowledge from the European partners to Asian partners and to finalize the WP3 objectives.

Supporting material used during the workshop is presented in the Annexes.

## 1 Medan workshop

### 1.1 Basic information

The training took place between **18-22 July 2022** at the University of Sumatera Utara premises in Medan (Indonesia). All partners participated with at least 2 representatives from the European partners and all 9 representatives from each of the Asian partners except UniKL, UHST and MoEYs. The others were connected remotely to the meeting. It had an attendance of more than 40 representatives for the five days of the workshop. Some images from the meeting are presented in Annex II.

### 1.2 Programme

In order to define the most attractive and interesting programme, three days were focused on topics related to the most recent innovations in the education methodologies in Europe and speeches regarding national university processes on Industry 4.0, ISO standards for innovation management and University-industry connections/expectations. The first day was focused on the finalization of the curriculum and the VET courses presentation. Finally, the internship programme has been discussed together with AKM partner from Greece (D3.4)

According to the main scope of the D3.2, USGM decided to focus on two main aspects, part of the presentations and discussions were focused on the best academic experiences and the latest technologies related to the educational methodologies; the other part had the scope to the presentation of innovative practices in Europe and the internship programme to be developed.

Due to the severe limitations posed by the time difference and the fact that the meeting was in part virtual, especially for the European panellists, partners used also online tools (ZOOM) for facilitating discussions and reaching decisions.

The Programme of the Medan workshop is presented in Annex I.

### 1.3 Aims and methodology

This activity involved an intensive training workshop for a) teaching staff intended to deliver the academic programme, b) scientific and technical staff intended to produce and “run” the MOOC and c) administrative staff intended to administer the delivery of the programme.

The workshop aim was to improve the quality of teaching methodology and modify it into an even more effective educational mediation element.

With this Workshop, we tested and discussed the management and the implementation of chosen approaches to include innovative methods and improve different learning styles.

There was also an overview of contents developed by the project partners so far:

1. The VET curriculum, and courses teaching materials and assessment in the VLE, activated and offering the VET courses by the end of August 2022;
2. The teaching materials and assessment of the Master Science courses which have been prepared and completed will be improved with innovative ideas acquired in this workshop and be completed by end of September;
3. After this workshop with our Europeans partners sharing the teaching and learning techniques and good practices, the Asian partners who are participants in Medan, will be trainers for their colleagues.

This will allow to wrap up Work Package 3 to meet the deadline of our schedule.

Study visit was the occasion to exchange ideas, to discuss on different perspectives, to share different strategic visions in order to design the most effective and innovative IND 4.0 Curriculum and course structure. Each Asian partner has benefited from different experiences in order to assess what could be easily transferable, what could be a benefit in its regional and national academic environment. Knowledge transfer was accomplished by both describing similar curriculum but emphasising on teaching methodologies as well.

## 1.4 First day

WP2 – Presentation of the VET developed - Erini Aggeli – AKMI/Margaret Chan – UiTM

The progress of the development of the VET Course curriculum and structure including the PLO and LO were presented. The relevant and useful Information and instruction to register for the course were shared. Some recommendations were also shared on how to offer the course.

In the afternoon, there was Prof. Domenico Morreale, USGM - Italy, that presented an interesting topic: Transmedia Storytelling and innovative educational technologies for e-learning. The speech presented an integrated approach adopted by Università degli Studi Guglielmo Marconi to integrate methodologies, media design, storytelling, and technologies in order to create augmented environments and experiences in the educational field.

Finally, Eliza Giannaki, Skybridge - Greece, as the leader partner in the development of the Virtual Learning Environment (VLE) presented the platform and explain its use and possibilities to partner organizations. In particular, she pointed out:

1. The main characteristics and tools of the platform
2. The steps required to create a course and upload the material
3. A live presentation of the platform and its features

## 1.5 Second day

The second day, Mr Arturo Lavalle, head of R&D at USGM, presented a panel titled “Developing and implementing innovation projects: Why innovation can't happen without standardization”. It focuses on the importance of certain levels of innovation in HEIs nowadays and especially related to the Italian scenario. This gave a perspective on the possible changes Asian partners could achieve in the next future.

After the visit at the USU laboratories that gave an immersive idea of the new technologies used in the campus, in the afternoon Prof. Francesco Ugolini, USGM - Italy, connected remotely to the meeting. He presented a workshop on learning support, competence development, e-didactics, collaborative learning, e-learning 3.0

## 1.6 Third day

On the third day, Prof. Alberto Garinei, USGM - Italy, presented a very interesting topic titled “Identification of research methodologies and selection of contents of research theses, following the requests of companies facing digital transformation 4.0 in Manufacturing, Agriculture/Aquaculture, and Pervasive Health/ Health”. His speech was meant to show the latest research methodologies on theses applied to the new digital era, especially regarding the European frame.

Moreover, Prof. Ioannis Chatzigiannakis, La Sapienza - Italy, introduce a specific speech on “Teaching methodology of Industry 4.0 in Industrial and Management Engineering Curriculum”, considering the project main goals. In the afternoon, Eliza Giannaki, Skybridge - Greece, connected remotely to the meeting presenting a speech on “Microlearning, professional courses, MOOCs-Virtual Learning Environment”, as the project includes also an online specific didactic section.

## 1.7 Fourth day

During the fourth day the Consortium discussed about the Establishing of new study program – Erasmus+ DSAI Experience - under the coordination of Dr. Erna Budhiarti – DSAI USU, Indonesia.

There was also an interesting, recorded speech on the effective implementation of an internship in Asian partners, made by Ms Eirini Aggeli – AKMI international.

Finally, Prof. Bill Vassiliadis, Hellenic Open University, Greece, presented the teaching method in the postgraduate courses: the open and distance education model.

## 2 Conclusions

Over 40 participants have attended each day of the workshop (both remotely and physically). It has been a very profitable occasion to transfer knowledge and expertise among European experts and the Asian Higher Education representatives. The variety of the programme allows attendees to acquire knowledge on the best academic experiences in Ind. 4.0 Curricula and also on the possible



advantages come from the synergy and cooperation with the IND 4.0 Industry sector. Best practices concerning academic Master curricula, joint solutions and VET experiences have been presented and discussed. All the tasks of the D3.2 Workshop have been achieved.

## ANNEX I – Programme of the Medan Workshop



**Universitas  
Sumatear Utara**



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**Transformation  
Towards the Ultimate**

**Kampus  
Merdeka**  
INDONESIA JAYA



### Training Agenda

#### WP3.2 - Capacity building of Asian HEI staff (Leader: USGM)

Kampus USU, Medan -Indonesia 18th-22nd July 2022

#### Day 1 - 18th July, Monday

09.30-10.00	Opening Remarks/Agenda Presentation	USGM/USU
10.00-10.30	USU's Presentation	USU
10.30-10.45	<i>Coffee Break</i>	
10.45-12.30	WP2 - Presentation of the VET developed	Eirini – AKMI/Prof. Margaret Chan Kit Yok - UiTM
12.30-14.00	<i>Lunch break</i>	
14.00-15.00	Transmedia storytelling	Prof. Domenico Morreale –USGM –online presence
15.00-15.15	Group Picture	USU

#### Day 2 - 19th July, Tuesday

09.30-09.45	Welcome	
09.45-11.00	Workshop on “Developing and implementing innovation projects: Why innovation can't happen without standardization”	Mr Arturo Lavallo –Head of the R&D department –USGM
11.00-11.15	<i>Coffee Break</i>	
11.15-12.30	Integrated Laboratory Visit	USU
12.30-14.00	<i>Lunch break</i>	
14.00-15.00	Workshop on learning support, competence development, e-didactics, collaborative learning, e-learning 3.0	Prof. Francesco Ugolini –USGM –online presence





## Training Agenda

### WP3.2 - Capacity building of Asian HEI staff (Leader: USGM)

Kampus USU, Medan - Indonesia 18th-22nd July 2022

#### Day 3 - 20th July, Wednesday

09.30-09.45	Welcome	
09.45-11.00	Identification of research methodologies and selection of contents of research theses, following the requests of companies facing digital transformation 4.0 in Manufacturing, Agriculture/Aquaculture, and Pervasive Health/ Health	Prof. Alberto Garinei - USGM
11.00-11.15	Coffee Break	
11.15-12.30	Teaching methodology of Industry 4.0 in Industrial and Management Engineering Curriculum	Prof. Ioannis Chatzigiannakis - La Sapienza
12.30-14.00	Lunch break	
14.00-15.00	Microlearning, professional courses, MOOCs-Virtual Learning Environment	Eliza Giannaki - Skybridge

#### Day 4 - 21th July, Thursday

09.30-09.45	Welcome	
09.45-10.30	Sharing Session on Establishing New Study Program - Erasmus+ DSAI Experience	Dr. Erna Budhiarti - DSAI USU
10.30-10.45	Coffee Break	
10.45-11.30	The effective implementation of an internship in Asian partners	Eirini Aggeli - AKMI international
11.30-12.30	Information Technology Laboratory Visit	USU
12.30-14.00	Lunch break	
14.00-15.00	Teaching postgraduate courses: the open and distance education model	HOU
15.00-16.00	Reflection on the Training Workshop	USGM

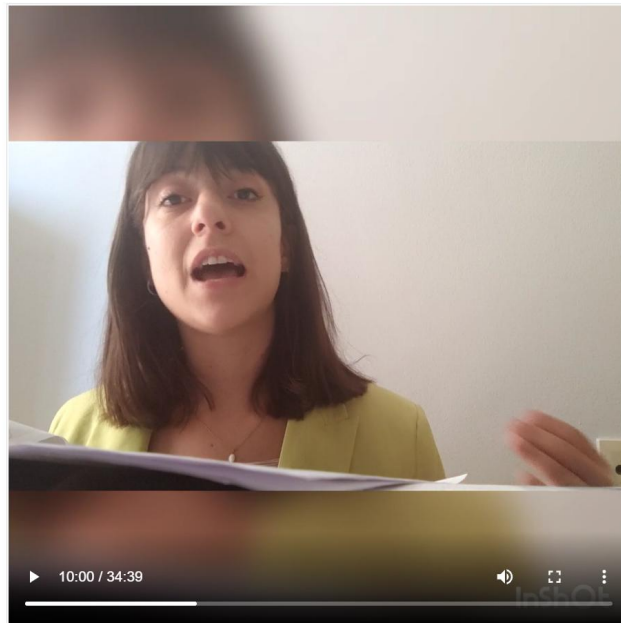
#### Day 5 - 22nd July, Friday

09.30-09.45	Welcome	
09.45-12.00	Steering Meeting	UiTM

## ANNEX II – Photos and Screenshots

The photos and videos are also available at <https://www.ind4-0-eu.my/index.php/activities> for the project websites.





**The Effective Implementation of an Internship in Asian Partners.mp4**