



WP05 Dissemination and Exploitation of Project Results

5.1. DISSEMINATION, EXPLOITATION & SUSTAINABLE PLAN- DESP

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List of documents

Code	Name	Annexes
DESP-v7	Dissemination, Exploitation & Sustainable Plan - DESP	1. Activities Reporting Template
		2. Publications Activities Reporting Template



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1 Executive Summary

Activities serving the Dissemination, Exploitation and Sustainability (DES) of results are a way to showcase the work that has been done as part of the Erasmus Plus CBHE project. Sharing results, lessons learned, outcomes and findings beyond the participating organizations will enable a wider community to benefit from a work that has received EU funding, as well as to promote the organization's efforts towards the objectives of Erasmus Plus, which attaches fundamental importance to the link between Erasmus Plus programme and policies.

This document provides an overview of the projected DES activities of the MSIE4.0 project – *Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry*. It explains the rationale behind chosen strategies and communication tools. The strategies developed here are in line with the Erasmus Plus programme requirements. The Dissemination, Exploitation & Sustainable Plan (DESP) conceived to be updated as the project evolves and the additional activities implemented by the project partners will be reflected in the successive versions of the DESP.

An overview is given of all DES opportunities identified through traditional communication channels such as event attendance (e.g. conferences, seminars, workshops, etc.), project publications (e.g. brochures, posters, press releases as well as conference papers, articles in professional journals, etc.) and project presentations (e.g. to local stakeholders, etc.), complemented also by online activities based around the project website, and through the main social platforms (e.g. Facebook, etc.).

The dissemination activities have been designed to target the key audiences, stakeholders and the general public in order to maximize awareness of MSIE4.0 objectives and training activities and to receive support in fulfilling project's objectives.

The MSIE 4.0 project's partnership acknowledges that the dissemination activities are an essential and pervasive endeavour throughout the project's entire life and integrated within all its work packages.

Exploitation of the project outcomes is also performed through an active involvement programme of the target groups and promotion on the use of the new curricula as well as the innovative teaching methods at Thai universities. Short course trainings will be conducted for Thai engineering professionals to help exploit the application of the project results in various industry sectors.

The institutional and financial sustainability is a part of the DESP and will be developed after the completion of the WP1, WP2 and WP3 by the correspondence package leaders. In principle, the new master programme will be financed through the student fees and sponsored grants just like other existing master programmes. This plan will be presented to the university authorities at various Thai HEIs with the aim to persuade them to include the new master programme developed in this project into their university programs and to adopt the new teaching methods for other courses which are not considered directly in this project.

Dissemination of the project result is the responsibility of all project partners not only during the lifetime of the project but also after the project closure so as to sustain the project impact in the long run.

2 Introduction

The great objectives of MSIE 4.0 project are:

- Modernization of the education of industrial engineering discipline in Thailand by the development of a curriculum for Master's degree in industrial engineering to support sustainable smart industry;
- Development of courses, learning and teaching tools, delivery processes and platform for student-centred learning of the curriculum;
- Implementation of modern ICT tools and methodologies for effective student-centred learning of the curriculum;
- Introductions of quality assurance and of the EQF approach for the delivery of the curriculum meeting international accepted education requirements;
- Establishment and continuation of partnerships among partner universities.

The foreseen actions are: a modernized MSIE curriculum containing 15 new courses that will be developed for student-centred learning and equipped with teaching and learning materials. The course will also be prepared for online learning. 9 courses will be pilot tested in order to fine tune the curriculum. Laboratory with remote access will be built to support student learning. More importantly, teaching and technical staffs will be trained by experts in the fields from EU partners. Improving the knowledge related to Industry 4.0 and use of innovative teaching methods (e-learning, simulation, etc.).

All dissemination exploitation and sustainability activities have to support the objectives which the project aims to fulfil and this is why those activities are a core part of the MSIE 4.0 project. The scope of possible dissemination exploitation and sustainability actions has been evaluated in terms of effective communication channels and tools to create a broad awareness amongst different target groups and to ensure a wide-reaching impact uptake and use of project deliverables among these groups.

The present Dissemination, Exploitation & Sustainable Plan:

- identifies the target groups;
- describes measures taken in order to ensure the largest possible awareness of project objectives and results within such target groups;
- identifies a schedule for dissemination exploitation and sustainability activities;
- lists different opportunities and methods to be taken or implemented, including dissemination tools such as a project website, presentation modules, etc.

3. Project Dissemination Exploitation and Sustainability Management

The leader of the Work Package 5 is Khon Kaen University (KKU) and the POLITEHNICA University of Bucharest is co-leader. The MSIE4.0 management structure includes the position of a of WP5 leader filled by Dr. Kanchana Sethanan.

The WP5 leader is responsible for leading all important decisions regarding the dissemination and exploitation of each outcome of the project and will work closely with the Project Partners ensuring up-to-date and effective communication and interaction with targeted audiences, so that the project results can be optimally exploited. The overall mission will be to keep track of the project's achievements and to ensure its aims, in terms of dissemination and exploitation, are reached.

They set the objectives and frames for the communication activities. Participants of the project are all obliged to take part in the dissemination, exploitation and sustainability activities to the extent defined under this Dissemination, Exploitation and Sustainability Plan (DESP).




Local dissemination of results will be carried out by the local dissemination responsible. The project partner dissemination responsible should also contribute to the overall activities. The structuring of dissemination will primarily be the responsibility of the WP5 leader. The WP leader is furthermore responsible for common dissemination documents.






Each separate activity within the project WP’s run by the project partners are responsible for their respective communication activities and for reporting and co-operating with WP5 dissemination responsible on common communication activities. This means that writing reports, synthesizing results and preparing presentations will be done within each project activity and WP respectively.


Project results may influence priorities, and therefore the DESP will need to be revised on a continuous basis. The DESP is a “living” document which will be reviewed continuously by the project co-ordinator and WP5 leader throughout the programme period.

The project will stay updated about time tables in order to achieve maximal impact of project results. The time table of DESP activities may therefor change as more information becomes available.

Table 1. Partnership and Responsibilities

Project Partner	Logo	Person in-charge
Chiang Mai University		Wichai Chattinawat <chattinw@gmail.com>
Khon Kaen University		Kanchana Sethanan <ksethanan@gmail.com>
King Mongkut's University of Technology North Bangkok		Athakorn Kengpol <athakorn.kengpol@gmail.com>

Project Partner	Logo	Person in-charge
Częstochowa University of Technology		Anna WIŚNIEWSKA-SAŁEK <anna.wisniewska-salek@wz.pcz.pl>
Prince of Songkla University		Thanate Ratanawilai <thanate.r@psu.ac.th>
Thammasat University		Wuthinan Nunkaew
University of Minho	 Universidade do Minho	Rui Lima <rml@dps.uminho.pt>
POLITEHNICA University of Bucharest		Andrei Dumitrescu <dumiandrei@yahoo.co.uk>

Project Partner	Logo	Person in-charge
Asian Institute of Technology		Pisut Koomsap <pisut@ait.asia>

All partners listed in Work Package 5 are main contributors to the DES activities under management of WP5 leader - KKU.

In order to perform efficient and coordinated the dissemination exploitation and sustainability activities, every partner should actively contribute by:

- Promoting and disseminating the project and its results (deliverables and other results);
- Using their network to support the dissemination of project information;
- Presenting the project at relevant conferences, workshops and other events;
- Helping to promote MSIE4.0 training events, in particular engaging key stakeholders to act as multipliers and to motivate participants.
- Providing the logo of their own organisation to be used in the dissemination materials;
- Including the logos of Europe Union funding body and make proper reference to this body in all dissemination materials (printed or electronic);
- Developing a Partner Dissemination Exploitation and Sustainability Time Plan (PDESTP) with the same structure as project DESTP who are updated at each 6 months meeting of Project Executive Committee. The project Dissemination Exploitation and Sustainability Time Plan (DESTP) is based on the individual Partner Dissemination Exploitation and Sustainability Time Plan (PDESTP) of the partners.
- Identifying and informing about dissemination opportunities (e.g. events, publications, etc.) – by updating the PDESTP document in the project on a regular basis;
- Reflecting its contribution to the Dissemination Exploitation and Sustainability Strategy.
- Submitting to the dissemination WP5 leader the dissemination materials used in all occasions in order to contribute to different project reports;
- Submitting to the dissemination WP5 leader the proofs of dissemination activities (Dissemination Exploitation and Sustainability Time Plan, Dissemination Reports, Activity Reports, Presence sheets, Photos, Videos, etc.);
- Submitting to the dissemination WP5 leader the feedback obtained in all dissemination events for reporting reasons and for further improvement and development of Dissemination, Exploitation & Sustainable Plan (DESP);
- Drafting and submitting the periodical Dissemination Reports at each 6 months meeting of Project Executive Committee.

4. Definitions

Table 2

Terminology adopted in this document	Explanation and meaning
Results of activity	Are achievements of the project that received EU funding. Results can be classified as either (a) outputs or (b) outcomes.
Output	A tangible product which is produced by a given project and which may be quantified; outputs can be accessible products like curricula, studies, reports, materials, events, or websites.
Outcome	An intangible added value achieved through the achievement of the project objectives and targets. Ordinarily, such added value defies quantification, whether it covers concrete events and actions such as training, training platforms, content or methodology, or more abstract consequences such as increased awareness, increased skills or improved abilities. knowledge and experience gained by participants, partners or other stakeholders involved in the project.
Dissemination	A planned process of providing information on the results of programmes and initiatives to key actors. It occurs as and when the result of programmes and initiatives become available. In terms of the Erasmus+ Programme this involves spreading the word about the project successes and outcomes as far as possible. Making others aware of the project will impact on other organisations in the future and will contribute to raising the profile of the organisations carrying out the project. To effectively disseminate results, an appropriate process at the beginning of the project needs to be designed. This should cover why, what, how, when, to whom and where disseminating results will take place, both during and after the funding period.
Exploitation	Is a planned process of transferring the successful results of the programmes and initiatives to appropriate decision-makers in regulated local, regional, national or European systems, on the one hand, and (b) a planned process of convincing individual end-users to adopt and/or apply the results of programmes and initiatives, on the other hand. For Erasmus+ this means maximising the potential of the funded activities, so that the results are used beyond the lifetime of the project. It should be noted that the project is being carried out as part of an international programme working towards lifelong learning and supporting European policies in the field of education. Results should be developed in such a way that they can be tailored to the needs of others; transferred to new areas; sustained after the funding period has finished; or used to influence future policy and practice. Consists of mainstreaming and multiplication.
Mainstreaming	Is the planned process of transferring the successful results of project and initiatives to appropriate decision-makers in regulated local, regional, national or European systems.

Terminology adopted in this document	Explanation and meaning
Multiplication	Is the planned process of convincing end-users to adopt and/or apply the results of project. This can happen at both project and programme level.
Valorisation	Means both: dissemination and exploitation of results.
Sustainability	Is the capacity of the project to continue and use its results beyond the end of the funding period. The project results can then be used and exploited in the longer-term, perhaps via commercialisation, accreditation or mainstreaming. Not all parts of the project or results may be sustainable and it is important to view dissemination and exploitation as a progression that extends beyond the duration of the project, and into the future.
Impact	Is the effect that the activity carried out and its results have on people, practices, organisations and systems. Dissemination and exploitation of results plans can help to maximize the effect of the activities being developed so that they will impact on the immediate participants and partners for years to come. Benefits to other stakeholders should also be considered in order to make a bigger difference and get the most from the project
Dissemination, Exploitation and Sustainability Strategy	Refers to the identification of crucial project objectives, activities, results, expected impact, milestones, suitable for dissemination, main audience and target groups, dissemination tools and finally implementation of all these goals.
Dissemination, Exploitation and Sustainability Plan	Is based on the dissemination strategy, more specifically it places all activities of the dissemination strategy into the time frames, responsibilities and as such serves as the timeline of the whole dissemination strategy.
Good Practice	Is an exemplary project (including results or processes and procedures-approaches implemented) which has positively influenced systems and practices through its activities and results. Consequently, these good practices are worth transferring and exploiting in different contexts and environments by new users or entities.

5. Project’s dissemination exploitation and sustainability tasks

In order to achieve the DES objectives, the following tasks were established in WP5 of the MSIE4.0 project:

Task 5.1. Development of a dissemination, exploitation and sustainability plan

Task 5.2. Creating a project website to support the dissemination strategy and communication and collaboration among partners

Task 5.3. Production and dissemination of project materials

Task 5.4. Publications in professional journals, newspapers, magazines, brochures, and social media

Task 5.5. Developing joint short-term courses in the field of Industrial Engineering in cooperation with industry for professionals

Task 5.6. Organizing dissemination events with relevant stakeholders

Task 5.7. Organizing the final dissemination-sustainability conference

Task 5.8 . Sustainable network between project partners and IE enterprises

6. Dissemination strategy

The dissemination strategy defines clear guidelines for the dissemination activities including all operational elements of dissemination. Project results will be disseminated to the relevant target groups with appropriate content and on time. The content, timing and frequency of the various dissemination activities are defined in this plan. Dissemination strategy of the MSIE4.0 project consists of the following core components:

- **Objectives of dissemination:** identify the project dissemination objectives;
- **Target groups:** identify crucial target groups and bodies that are interested in the project;
- **Key messages:** identify core project messages for specific target groups;
- **Dissemination levels:** identify dissemination levels, tools and activities;
- **Dissemination methods:** identify dissemination methods, tools and channels;
- **Dissemination time plan:** identify a plan of dissemination activities.

The partnership approaches towards dissemination and exploitation of results are focused on:

- **A clear and dynamic focus on user needs** – the project is based on a clear and well-argued presentation of the analysis of end-users and actual needs for the target group concerned and the results proposed are a response to those needs.
- **Shared responsibility across all partners** - responsibility for the dissemination and exploitation of results lies with the whole partnership in their capacity as the owner of those results thus each partner has a role to play.
- **A continuing process** - activities are conceived and planned from the beginning of the implementation.
- **Life after the end of the project** - include activities designed to ensure the continuing visibility, accessibility and use of the results after the end of the project, to ensure maximum impact and sustainability.

The principal messages to communicate within the Dissemination, Exploitation and Sustainability Plan (DESP) are conceived to:

- Aware internal members of the consortium to build an identity and profile for the project and its outcomes within the communities belonging to the Program Erasmus Plus;
- Understand the methods applied to target groups and beneficiaries for deep involvement in the project and future transfer to other Thai HEI's;
- Involve the overall actors to settle on a common language and shared behaviour to facilitate the achievement of all the objectives of the project;
- Support stakeholders and partners to better understand the main purposes of the project;
- Act via networks and informal channels to transfer, capitalize and value best-practices.

6.1. Objectives of the dissemination activities

The main aim of the dissemination strategy is the dissemination and exploitation of knowledge among the project partners and knowledge transfer to the interested stakeholders in Thailand. The dissemination objectives of MSIE4.0 project are to:

- Promote and raise awareness about the MSIE4.0 project contents, developments and results;
- Successfully transfer the results to appropriate decision-makers to achieve their continued and sustained promotion and support;
- Convince other Thai HEI end-users to adopt and/or apply the results of MSIE4.0 project, after the projects lifetime;
- Reach the maximum number of stakeholders and key actors at a local, national and European level;
- Provide important information to key actors (institutions, organisations, individuals, etc.);
- Disseminate the activities and obtained results;
- Ensure the effective and successful exploitation of the innovative learning methodology developed in MSIE4.0;
- Achieve both mainstreaming and multiplication of the products;
- Give visibility to the funding body (EACEA - Erasmus Plus - CBHE) and its offered opportunities also beyond MSIE4.0.

While defining the purpose of the dissemination, the first step is to decide on the audience, message, method and timing of the dissemination. The main purpose of MSIE4.0 dissemination activities is to achieve involvement of all relevant stakeholders and to provide updated information of project results. The dissemination activities will be therefore focused on :

- Identify target groups at different Thailand territorial levels: national, regional, local and also in EU;
- Identify the communication needs of the target groups;
- Establish core messages of the project, to be disseminated to the target groups;
- Identify dissemination methods and tools;
- Disseminate the results, solutions and knowledge collected within the project to the general audience;
- Define timing of dissemination activities;
- Define partners' responsibilities in dissemination activities;
- Raising awareness by informing general audience about the MSIE4.0 project results;
- Dissemination of understanding by educating the target audience about the project work. The dissemination will be focused on target audience, which can directly benefit from the project work.
- Ensuring a good communication between the project consortium and the target groups;
- Intensively use the project deliverables (events and materials) for project's promotion;
- Enhancing visibility and raise attention towards the need of introduction of Industry 4.0 and related concepts and principles in the higher education system;
- Sharing the knowledge and experience gained; thus encouraging universities in the introduction of Industry 4.0 in their curricula and industrial companies to collaborate with universities on this particular subject;
- Enhancing the discussion and spread of expertise on relevant issues leading to scientific progress in this domain;
- Offering provision for sustainability.

All the work and effort invested, and the results gained by the project consortium will achieve limited success, if students, technical universities, industrial companies and ultimately the general public are not aware about the achievements of MSIE 4.0 project. That is why the work-in-progress (during the project’s lifetime), the experiences gained and the final results (after the project’s completion) should be actively disseminated through the dissemination processes and materials.

The internal objective of Dissemination, Exploitation & Sustainable Plan is to provide the partners of the consortium with an effective and efficient blueprint to follow in disseminating the MSIE 4.0 project.

6.2. Target groups

Target groups are entities and/or individuals that can potentially benefit from the MSIE4.0 project results. For productive and effective dissemination and exploitation of the project outcomes, it is essential that target groups are identified at an early stage of the project.

The scope of the project and the importance of mentioned activities results in a variety of target groups. According to the application and to subsequent research, the following target groups have been identified in Table 3:

Table 3. Target groups

<i>Group</i>	<i>Components</i>
Group 1	Teaching Staff
Group 2	Students
Group 3	Trainees
Group 4	Administrative Staff
Group 5	Technical Staff
Group 6	Librarians
Group 7	Other
Subgroup 7.1	technical universities from Thailand, but also from Europe
Subgroup 7.2	companies from industry
Subgroup 7.3	decision makers at regional and national level
Subgroup 7.4	consortiums network of contacts
Subgroup 7.5	media organisations

Attention is paid to all the target groups mentioned, but special attention is focused on the target groups 2, 3 and 7. They can support the dissemination activities and help to spread the information to very extensive networks and to the public both in direct and indirect ways.

Dissemination activity related to new master curriculum will involve students and teaching staff. Promotion of new master curricula will be done using promotional leaflets for master curricula, student guide for master curricula and spreading information by website and social networks. Promotions will be organized for Thai non-partner HEIs in order to promote master studies in the field of Industrial Engineering. Promotions in HEIs will be aimed at teachers and students. All events will be documented and displayed on the project website. Leaflets for training promotion in Thailand will be used to promote educational trainings for the public sector and citizens. At local level, all target groups will be reached by dissemination

tools such as delivering promotional materials, the project website, social and digital media. This kind of informing will raise the awareness about the importance of improving knowledge and skills in MSIE4.0. Teaching staff will be in direct contact with the representatives of local public sector in Thailand to analyse their needs for improvement of current system, transfer acquired latest knowledge and sign protocols for students' internships. Students will be reached through the call for enrolment at newly developed master programmes. At institutional level each of the Thai partner HEIs will enrich their educational potential by implementation of new master study programs, improved teaching staff skills through acquiring up-to-date knowledge and adopted new pedagogical methods in teaching and learning, upgraded laboratories with appropriate hardware and software infrastructure. At Thailand national level, the cooperation will be settled between HEIs and representatives of national bodies to impact on national efforts.

6.3. Database with target groups

A database with target groups will be developed by the project's partnership. The database will be used for dissemination and sustainability activities like sending newsletters, invitation to project's workshops and events, etc.

Each entry in database will be composed by:

- target group type (student, university professor, etc.);
- name of recipient;
- organisation;
- contact information (Email, Line ID, Facebook ID).

Each partner will contribute to the database with at least:

- 50 students;
- 20 university professors;
- 10 representatives of industrial partners;
- 5 representatives of public authorities.

The WP5 leader will collect entries from all partners and will maintain the database.

6.4. Key messages

Once the purpose and audience of the dissemination are clear, the key messages can be defined. The principle guidelines of key messages are to:

- **be clear, simple and easy to understand.** The language should be appropriate for the target audience, and non-technical language will be used wherever possible;
- **tailored to the target groups.** It is of paramount importance to carefully consider what they should know about the project. It is possible to send the same message to different audiences, but the relevance of the message to the target group should be revised each time;
- **information should be correct and realistic.**

The key messages are:

- Industry 4.0 has grasped attentions of industry, academic and research institutes as well as governments all over the world, including in EU countries and Thailand and became one of the greatest global challenge and an indispensable requirement for sustainable development;

- New educated professionals in the field of digitization of industry are vectors of technological progress;
- Trained engineers cope efficiently to value-based economy (Thailand 4.0).

There are three main fields of action:

- The use of dissemination materials;
- The use of communication channels;
- The use of events for dissemination activities.

The use of dissemination materials of the MSIE4.0 project will range from a website, brochures, and posters to PowerPoint presentations. These materials will be available to the project partners via a depository. The partners will use them at the dissemination events and also at all proper events and activities.

The communication channels will include the website , newsletters, interviews and articles in mass media and specific internet portals and social networks.

The event opportunities refers to events organised especially for the dissemination of MSIE4.0 project (like dissemination events and short-term courses in the field of Industrial Engineering for professionals), but also to scientific and educational sessions, workshops, conferences, etc. where project partners can make presentations about MSIE 4.0 project and its achievements.

6.5. Dissemination levels

The dissemination levels for different tools and activities are presented in Table 4.

Table 4. Dissemination levels for different tools and activities

Dissemination tool or activity	Department/ Faculty	Dissemination level				
		Institution	Local	Regional	National	International
Dissemination, Exploitation & Sustainable Plan	x	x	x	x	x	x
Logo	x	x	x	x	x	x
Presentation template	x	x	x	x	x	x
Website	x	x	x	x	x	x
Printed materials	x	x	x	x	x	x
Electronic materials	x	x	x	x	x	x
Publications in professional media			x	x	x	x
Social media	x	x	x	x	x	x
Joint short-term courses			x	x	x	
Dissemination events		x	x		x	x

Dissemination tool or activity	Department/ Faculty	Dissemination level				
		Institution	Local	Regional	National	International
Final conference	x	x	x	x	x	x
Sustainable network	x	x	x	x	x	x

6.6. Dissemination Methods, Tools and Channels

6.6.1. Materials & Contents

6.6.1.1. Project logo

A graphic identity is composed of visual elements that aim to represent the organisation (in this case the project’s partnership). It is important to follow the graphical identity, since good use of it will help to consistently communicate and disseminate the project. The main graphic element of the MSIE 4.0 project is the logo (Figure 1).



Figure 1 – MSIE4.0 Project Logo

The project logo was designed and proposed by the coordinator organisation and it was conceived according to the visibility rules of the Erasmus Plus Programme. This project logo, the EU emblem and the disclaimer "Co-funded by the European Union" will be posted on every single publication, poster, and brochure released during the project lifetime.

6.6.1.2. PowerPoint Master Slides

PowerPoint slide masters were created for the MSIE 4.0 project’s purposes. It is a general slide master for the overall project (Figure 2) and, also, each partner has its own slide master. Each work package has its own PowerPoint slide master.

The language used in the presentations is English. Each partner can, when necessary, translate the presentation into his own national language (using national characters). The ready-made PowerPoint slide master serves as a basis for the successful presentation of the project at conferences, workshops and other events where the project will be presented. The presentation can and should be adapted to the respective context and audience.

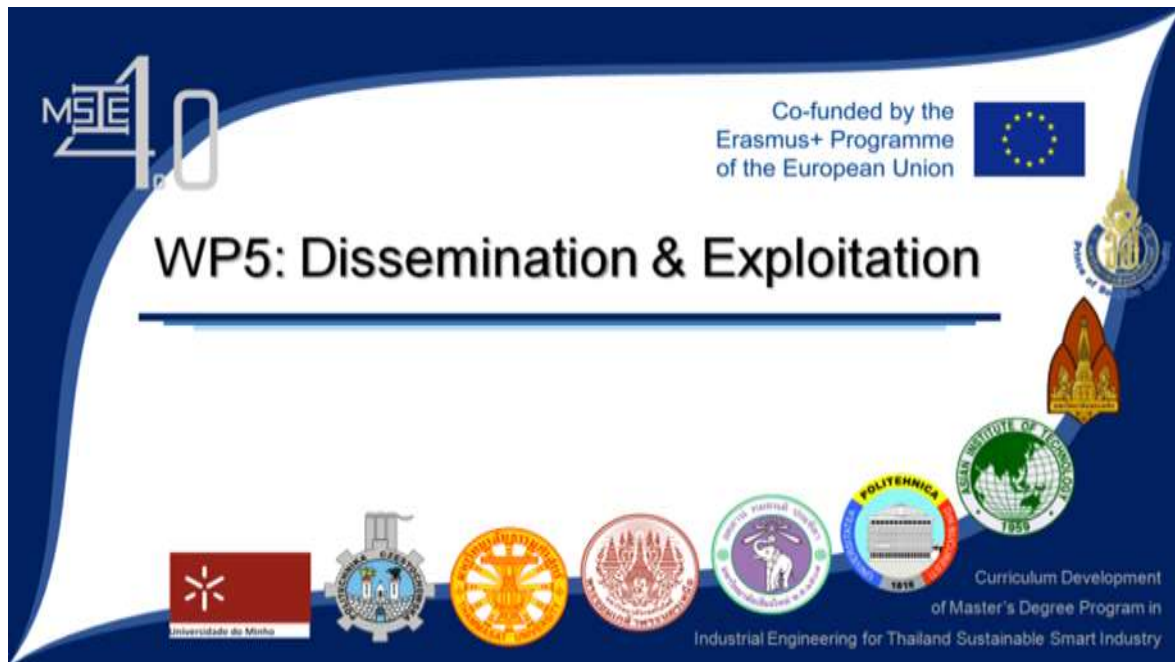


Figure 2 – MSIE4.0 Project Slide Master

6.6.2. Document and media sharing tools

6.6.2.1. Project website

An official website of the project serving as a main dissemination tool was designed and established and will be regularly updated. Links to the MSIE 4.0 project website should be inserted at partners' websites wherever possible.

The project address is:

<http://msie4.ait.ac.th>

The website (Figure 3) of the project will be the public image of the project. The site will allow users to readily collect on-line information about the project and about issues, which might be of interest to stakeholders.

The website will be updated during the project and at least 2 years after its end. The website will include all relevant information about the project, links, gateway to the data base etc. The deliverables /analysis, developed in the framework of MSIE4.0 will be made available on the website. The website will be designed to present the scope and objectives of MSIE4.0, and will be updated as key milestones are reached.

The project web site will be linked to the project partners websites and all uploaded material will be freely-downloadable.



Figure3 – Snapshot of the MSIE4.0 Website

The website is and will be the main interface of the online infrastructure of the project which will also include:

- a) Section of news and events related to the project activities;
- b) Social networks accounts that support the creation of a group on LinkedIn and community page on Facebook to help disseminate the MSIE4.0 project.

AIT will be in charge of the regular website updating, preparation of regular newsletters that provide information to the consortium members as well as to the wider community in such a way that the project website is not only useful for academic and research community but for businesses and society as well. After each Project Executive Committee meeting, the project coordinator will be responsible for uploading the activity report onto the project website.

The MSIE4.0 website will be used both for internal usage and external information dissemination.

Public section

The list below includes proposals for items to be published on the website:

- Description of the project including a summary, a standard MSIE4.0 presentation;
- Project partnership (with links to partners' websites);
- Work Packages;
- Publications /Analysis, etc.;
- Database;
- Events;
- Contacts;
- Links;
- Private Area.

Private section

The website has also a password-protected area for use by project partners for internal communication, along with confidential project information. The password-protected area allows the partners to use some extra-features such as asynchronous communication (i.e., web-based forum, group mailing, file sharing, etc.). The main project website will also function both as a promotional tool for project dissemination and as a channel for internal project communication. It will be developed and maintained by AIT with the consultation from UPB and the provision of materials from all other partners.



6.6.2.2. Project partners websites

The project partners will ensure that MSIE4.0 project is presented on their websites. The objective of project presentation on partners websites is to spread knowledge of the project and its related activities to those interested in the activities carried out by the various partners.

The target groups are all the target groups previously identified.

General aspects of presentation:

- Short, objective, and clear.

Contents:

- A short description of the project.
- Logo of the project;
- Link to the official project web site.

Material for the reports

- Printout of the webpage linking to the MSIE4.0 project website; link to the webpage.

6.6.3. Dissemination printed materials

Information about the project objectives, modern concepts in Industrial Engineering (Industry 4.0), together with proper introduction of Industrial Engineering master programme curriculum and results of MSIE4.0 project will be prepared in the form of printed dissemination materials and made available publicly.

In order to strengthen the project's dissemination activities, flyers, brochures, presentations on events will be designed. They will be in Thai and English. They will also be available in electronic format for translation by European consortium members (if necessary). Also, the electronic brochures and posters will be available on project website for download. The flyers, brochures, presentations on events will be in the same visual style as the website to provide a graphic unity for the MSIE 4.0 project.

A dissemination booklet indicating the project achievements will be designed and distributed starting with the final conference in Bangkok.

6.6.4. Dissemination electronic materials

6.6.4.1. Newsletter

To increase public awareness of the project and report periodically on the project's progresses to the beneficiaries Newsletters will be created and delivered to target groups twice a year. The letters will be in an easy-to-read format, with key project results, information regarding the project process and the training sessions as main messages. KKU (the leader of WP5) will be responsible for creating the newsletter layout, production and distribution of the newsletter. The newsletters will be available in English.

At the proper moment, KKU (leader of dissemination work package) will ask all the partners to contribute with news, information about partners' dissemination activities, photos and other graphic materials. Also,

local managers will be responsible for providing information about training sessions and demonstration projects.

Each partner is obliged to provide the information and materials mentioned above at the required moment. It is a good idea that each partner collects continuously information and materials for the newsletter. Also, each partner is responsible for providing different stakeholders with the newsletter. Dissemination of the newsletters will be organised via emailing to at least 500 people and will be posted on the project's website.

6.6.4.2. Social networking tools

The project presence on social network platforms (e.g. LinkedIn, Twitter, Facebook, YouTube) has been established to reach a greater number of professionals and the general public. Via social media, various information about the project will be shared, such as:

- Updates on the project status;
- Updates on the publication of MSIE4.0 official documents/deliverables;
- News on upcoming meetings and events, where the project is directly involved (as organiser or as participant);
- Sharing project information (e.g. objectives, barriers, innovations) in an efficient and effective way with wider audience.

A Facebook page was created (https://www.facebook.com/MSIE4Thailand/?ref=br_rs).

6.7. Channels of dissemination

Many different channels are suitable for disseminating the project results. In order to reach out the above target groups, MSIE 4.0 will use a number of channels and will cooperate with other relevant national and international organizations, programmes and projects sharing similar objectives. The following channels will be used for dissemination of information on the implementation of the project its activities and its results:

Internal channels (special audience – MSIE4.0 members):

- **MSIE4.0** conferences and trainings
- **MSIE4.0** website
- **MSIE4.0 Project Partners** websites

Other channels (wide-range audience):

- Project website;
- Mass media;
- Mailing lists;
- Third parties websites;
- Project events;
- Partners' offices;
- Company visits;
- Journals, newspapers;
- Scientific journals;
- Networks
 - working parties;
 - advisory boards;

- technology platforms;
- innovation clusters;
- industry networks;
- research networks;
- thematic clubs, associations;
- NGO networks;
- social networks, LinkedIn, Twitter.

To decide which DES channels are most suitable, the following aspects will be considered:

- What is being disseminated? Respectively, the results or the product of the project;
- The context of the dissemination;
- The target groups to be reached with information on the result or the product;
- Additional activities to draw the target group's attention;
- The reach, in terms of breadth and depth, of the dissemination channels;
- The attractiveness of the dissemination channels for the target groups;
- The need for external experts, e.g. to make a good video or organize a symposium;
- The cost of the dissemination channels;
- The returns that can be expected.

It is vital for a solid, well-founded link to be created between the target groups and the dissemination channels.

6.8. Dissemination activities

6.8.1. Publications in professional journals, newspapers, magazines and social media

The consortium members will regularly disseminate project outcomes achieved at each stage of the project considering every opportunity that appear. The project partners will draft and submit scientific or informative articles to professional and scientific journals or newspapers and magazines. Also, they will present papers at the proper scientific or academic conferences. Social media will be employed also in dissemination with regular posts on dedicated pages. This task will be reviewed at every six months.

Scientific publications are central to maximizing the impact of the project within the scientific community. Therefore, publications in peer-reviewed journals will be strongly encouraged to ensure the high visibility of the project partners' work within the scientific community.

Working papers will be published as intermediate outputs aimed at encouraging a broader understanding of and debate on the themes of the project. It will be ensured that all publications produced in the MSIE4.0 project will be subject to international scrutiny and validation of the highest standards.

6.8.2. Dissemination events with relevant stakeholders

Dissemination events (workshops and info days) will be organised at each Thai university with two aims:

- disseminate project objectives, activities and outcomes;
- promote the concepts of the new study programme.

Each Thai university will organise at least 5 dissemination events. These dissemination events will start to be conducted after the completions of key activities for preparation and development phase and more often during the last six months of the project. Participants on these dissemination events will be academic staff, researchers, potential students of the new study programme, undergraduate students and industry representatives. EU partners will also participate in some of these events with the aim to share good practices from EU institutions.

A major dissemination event will be the final conference. The final conference will be organised in M35 in Bangkok by AIT and will involve academic staff, students, administrative staff, policy makers, businesses and relevant authorities in the country. Two representatives from all participating institutions as well as all relevant stakeholders from Thailand will make presentations in the conference. Universities that are not directly involved in the project activities will be invited to participate in the conference. The conference will have two aims: dissemination of the project results and presentation of the sustainability measures to develop the project achievements after the ending of the EU financing.

During the conference all project achievements and the foreseen sustainability measures will be presented together with the impact of the project on consortium universities. Students will present their experiences and possible projects conducted within the master programme. This will be the final step that helps promoting the project outcomes and makes final conclusions about the project. A dissemination booklet with all project results will be edited and released.

6.8.3. Establishing a sustainable network between project partners and IE enterprises

A cooperation network between the project partners and the enterprises will be created and a cooperation agreement will be signed in the third year of the project. The network will persist after the project ending and the project sustainability will be ensured through the network. At least 5 companies will be included in the network. The network will present its activities on the MSIE4.0 platform. This network will be used to ensure dissemination of project activities, but it also serve as an important sustainability tool. New project proposals will be created through the network. Members and activities of the network will be continuously updated. Furthermore, it will ensure that industry representatives will be involved in the course creation and delivering after the project ending. Also, it will give chance for creation of the professional programmes for industry that will create additional funds to the Thai HEIs. This cooperation will be continued through the MSIE 4.0 platform, by sharing the virtual laboratories, teaching materials, e-learning courses and other.

6.8.4. Expected results

The expected results of the dissemination activities are the following:

- a dissemination, exploitation & sustainable plan (approved by all partners);
- an official project website;
- other dissemination materials (brochures, posters, newsletters, etc.);
- articles in professional journals, newspapers, etc., papers presented at scientific conferences, press releases, etc.;
- activity on social media;
- dissemination events with relevant stakeholders organised;
- a final conference in Bangkok.

The impact of the dissemination activities carried-out in the MSIE4.0 project is expected to be:

- awareness, in particular with the students, technical universities and industrial companies, of the new curriculum developed within the MSIE4.0 project and awareness of the technological progress introduced by Industry 4.0;
- involvement of the target groups in the project's activities;
- enhanced visibility and attention focused towards the introduction of Industry 4.0 and related concepts and principles in the higher education;
- knowledge gained and shared with professionals of the field;
- sustainable network between project partners and industrial enterprises.

7. Dissemination Exploitation and Sustainability Time Plan

Many actions and events will be organized during the MSIE4.0 implementation period with the purpose to disseminate project results.

7.1. Dissemination Exploitation and Sustainability Time Plan of the project (DESTP)

A Dissemination Exploitation and Sustainability Time Plan of the project (DESTP) will be elaborate by the KKU leader of the WP5.

Event calendar will be posted on the project website in order to provide information to partners, students and other website visitors about relevant events in appropriate areas of interest. The organization of events will be undertaken by every Consortium partner, but with coordination with the partner responsible for dissemination activities

According to project application and considering the delay, the time plan for dissemination Work Package 5 is as follows:

- Development of a Dissemination, Exploitation and Sustainable Plan of the project – July 2018
- Creating a project website and maintaining it throughout the project lifetime to support the dissemination strategy, and communication and collaboration among partners - February 2018 / Permanent
- Production and dissemination of project materials (24 weeks)
 - Drafting and distribution of newsletters – September 2018, March 2019, September 2019, March 2020, September 2020
 - Design of flyers, brochures – August 2018
 - Translation of flyers, brochures (Thai, English) – September 2018
 - Launch of public tender for printing – August 2018
 - Permanent distribution of flyers, brochures – Permanent
 - Design and translation of final brochure – June 2020
 - Launch of public tender for printing of brochures – July 2020
 - Publications in professional journals, newspapers, magazines, and social media - Permanent



- Developing joint short-term courses in the field of Industrial Engineering in cooperation with industry for professionals (9 weeks) – October 2019, April 2020, June 2020
- Organizing dissemination events with relevant stakeholders (13 weeks) – August 2018, February 2019, August 2019, February - August 2020
- Organizing the final dissemination-sustainability conference (2 weeks) – August 2020
- Project dissemination report and Partners dissemination reports – For each 6 months meeting of Project Executive Committee
- Sustainable network between project partners and IE enterprises - to be completed in August 2020

7.2. Partner Dissemination Exploitation and Sustainability Time Plan of the project (PDESTP)

A Partner Dissemination Exploitation and Sustainability Time Plan (PDESTP) with the same structure as project as DESTPP will be elaborated by each project partner. Those plans are updated at each 6 months meeting of Project Executive Committee. The project Dissemination Exploitation and Sustainability Time Plan of the Project (DESTPP) is based and updated according to the individual a Dissemination Exploitation and Sustainability Time Plans of the partners.

The PDESTP is an overall plan of each partner to disseminate and exploit the project activities and results through several means (e.g. on-line dissemination, workshops, meetings, etc.). This plan is indicative and will be regularly assessed and updated.

8. Project exploitation

Exploitation is associated with the use of the project's results at different levels, during and after the implementation of the project. It is related with the necessary action that will bring visibility to the project to involve the target groups, end-users, stakeholders and transfer the results/products into their professionals' scope.

Exploitation is mostly related to the idea of convincing the key actors to use the main products and services of the project. Exploitation is closely associated with the sustainability of the project after its conclusion, since exploitation activities should ensure that the results of the project are used by its target groups and possibly are transferred to other contexts (e.g. other countries; other pedagogical areas, other sectors)

A very good opportunity to disseminate the project and its main outcome is the organisation of joint short-term courses based on the new curriculum. Also, it is a form of project exploitation. So, a subset of the teaching/learning materials developed under WP3 (Tasks 3.1 & 3.2) will be revised for short course trainings which are planned to offer in the third project year. These courses will be offered to different Thai Industrial Engineering professionals. Through cooperation with the associated partners, these training courses can open up opportunities for continuous professional development and requalification with regard to the needs of the labour market. KMUTNB will be responsible for this deliverable with active involvement from other Thai partners.



Exploitation of the project results requires the development of an appropriate marketing strategy to ensure the project's sustainability. In designing the strategy, the MSIE4.0 addressed and will address the following basic questions:

- What are the project results that can be exploited?
- To which sector do they belong (academic, technology, education, institutions, etc.)?
- Identify target markets, main target groups or end users suitable for the exploitation of project deliverables;
- Which mechanisms and strategies are to be used for each type of project outcome and according to which user needs?
- What is the aim of each partner's individual exploitation plan?
- Which products /project outcomes can be best exploited by the Consortium.

The MSIE4.0 is designed in such a way that produced results can be exploited during the project implementation and lead to its multiplication outside the Consortium even after the project ends. Here are some of them:

- The consortium's exploitation strategy plan;
- The institutional plans of each project partner for exploitation of project results;
- Large number of deliverables especially reports and publications, publicly available on the project website and partners' websites for wider use by both participating and HEIs outside the Consortium. In this way, the project target groups will benefit from project results even after the project ends.
- Since the project webpage will be sustainable, the webpage users (professors, researchers, students, etc.) will use it for generating and developing ideas, and team work on innovative and research projects.
- Mobilization of HEIs resources should result in joint innovative projects with enterprises and marketable innovations.
- In order to attract new users not only on national, but also on regional, national and EU level, after the project's end various sustainable mechanisms for raising awareness, dissemination and exploitation of project results will be used and the whole set of activities will be conducted leading to the sustainable impact on these target groups with public access to almost all outputs, info days and participation in similar public events outside the project, through social networks, promotional materials, existing contacts and networks.

The exploitation strategy will be developed during the course of the project. An internal first version will be written towards the end of the second year, when the exploitable results become clearer. A final version will be written and put into action during the third year of the project and will set the guideline for future exploitation beyond the scope of the project.

9. Project sustainability

9.1. *The consortium's sustainability strategy.*

The institutional and financial sustainability is a part of the DESP and will be developed after the completion of the WP1, WP2 and WP3 by their package leaders. In principle, the new master programme will be financed through the student fees and sponsored grants just like other existing master programmes. This plan will be presented to the university authorities at various Thai HEIs with the aim to persuade them to

include the new master programme developed in this project into their university programs and to adopt the new teaching methods for other courses which are not considered directly in this project.

Dissemination of the project result is the responsibility of all project partners not only during the lifetime of the project but also after the project closure so as to sustain the project impact in the long run.

To ensure MSIE4.0 outputs and outcomes sustainability and impact the following main factors were taken into account:

- High quality of curricula and courses by a depth assessment of the needs of the target groups for new skills and analysing the long-term labour market trends in order to argue on the future attractiveness of the new innovative curriculum;
- Continuous, complementary and well-balanced involvement of each partner;
- Involvement of students and target groups in project activities;
- The new curricula and courses institutional sustainability is guaranteed by accreditation of the study programs by appropriate academic bodies at Thai and EU universities;
- The Thai Universities human resources trained with updated methodologies, and teaching-research equipment and material resources will be integrated in daily activities and will ensure at least 5 years organizational sustainability;
- Actively lobby the University to secure the main resource and Thai (private or public) actors and organizations to support the project's activities after the EU funding ending;
- Financial sustainability will define the balance of expenditure and costs, also forecasting the coverage of MSc costs via the fees after the conclusion of the project. Since the MSc in IE programs will be accredited, the programmes will be financed through the student fee and by sponsored grants, just like other existing MSc programmes, so financial aspects of the sustainability will be no a problem.
- The project results that are sustainable are the curricula and courses including e-learning and blended learning courses at consortium (Thai and EU) universities, laboratories equipped with IT equipment, laboratory works, project webpage who will become network webpage, short courses for professionals, the consortium agreement including the financing model.

10. Post-Project Visibility

It is agreed that the first post-project activity will be the document the recommendations registered in the Final Conference, as well as the knowledge related with the implementation of the new curricula in the Thai universities. The website will be updated with HEI MSIE4.0 activities and the information linked to the implementation of the distance and simulation based-training curricula in Thai HEI partners.

This will enable the development and publication of articles in media to communicate the scope, progress and results concretized by the post-project stage, with new professionals and the general public receiving the impact of MSIE4.0.

This situation will make possible to organize meetings of updating and dissemination activities between HEIs, and representatives of regional and international organizations, to report progress activities after the end of the project. The meetings will require the design and publication of documents to illustrate results, goals and new objectives faced in the post project period, depending on the current context.

To evaluate the actions suggested, we will continue considering the performance indicators used during the development of the project.



11. Deliverables of WP5

The overview of deliverables is presented in Table 5.

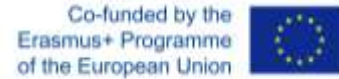
Table 5. Overview of Deliverables

Task	Delivery name	Method of measurement	Expected results	Type of deliverable	Format	Language	Target Group	Lead partner	Dissemination Level	Month of Completion
5.1	Project Dissemination Exploitation and Sustainability Plan (DESP)	Number of updated versions	6	Report	Electronic	EN	Teaching Staff	UPB	Dept/Faculty Institution Regional National International	M3. Updated every 6 Months
	Partner Dissemination Exploitation and Sustainability Plan (PDESP)	Number of updated versions	5	Report	Electronic	EN	KKU	Partners	Internal	M5. Updated every 6 Months
	Partner Dissemination Exploitation and Sustainability Report (PDESR)	Number of reports	5	Report	Electronic	EN	KKU	Partners	Internal	Every 6 Months before the PEC meetings



ERASMUS+ CBHE PROJECT

Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



Task	Delivery name	Method of measurement	Expected results	Type of deliverable	Format	Language	Target Group	Lead partner	Dissemination Level	Month of Completion
	Project Dissemination Exploitation and Sustainability Report	Number of reports	6	Report	Electronic	EN	PEC meeting	KKU	Internal	Every 6 Months at the PEC meetings
5.2	Project website	Available	1	Product	Electronic	EN	Teaching staff, students, administrative staff, general public	AIT	Dept/Faculty Institution Regional National International	M2. Updated permanently
	Project logo	Available	1	Product	Electronic	-	Teaching staff, students, administrative staff, general public	AIT	Dept/Faculty Institution Regional National International	M2
5.3	Project brochure	Number of distributed items	All printed items were distributed	Product	Printed	En Thai	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians	KKU	Department / Faculty Institution Regional National International	M6



ERASMUS+ CBHE PROJECT

Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry

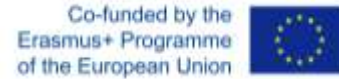


Task	Delivery name	Method of measurement	Expected results	Type of deliverable	Format	Language	Target Group	Lead partner	Dissemination Level	Month of Completion
5.3	Project flyer	Number of distributed items	All printed items were distributed	Product	Printed	En Thai	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians	KKU	Department / Faculty Institution Regional National International	M6
5.3	Booklet for final conference	Number of distributed items	All printed items were distributed	Product	Printed	En Thai	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians	KKU	Department / Faculty Institution Regional National International	M35
5.3	Newsletters	Number	5	Product	Electronic	En Thai	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians	KKU	Department / Faculty Institution Regional National International	Every 6 Months
	Mailing list	Number of addresses	500	Service	Electronic	-	Teaching staff, Students, Trainees, Administrative staff, Technical staff, Librarians	Each partner	Department / Faculty Institution Regional National International	M3 Permanently updated



ERASMUS+ CBHE PROJECT

Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry

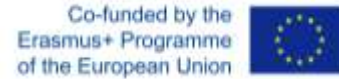


Task	Delivery name	Method of measurement	Expected results	Type of deliverable	Format	Language	Target Group	Lead partner	Dissemination Level	Month of Completion
5.4	Publications in professional journals, newspapers, magazines	Number of publications	18	Product	Electronic	EN	Teaching staff, Students	AIT and all partners	Institution Local Regional National International	After M18
5.4	Social media pages	Available	1	Product	Electronic	EN	Teaching staff, Students	AIT and all partners	Institution Local Regional National International	M2 Permanently updated
5.5	Joint short-term courses in the field of IE for professionals	Number of learners	50	Learning material; Training material; Event; Service/Product	Printed Electronic	En Thai	Teaching staff Trainees Other	KMUTNB Thai partners	Regional National	Offered in year 3
5.6	Dissemination events with relevant stakeholders	Number of events	30	Event	-	En Thai	Teaching Staff Students Technical Staff Industry representatives, Professionals, External Universities	Thai partners	Institution National International	After completion of development phases



ERASMUS+ CBHE PROJECT

Curriculum Development of Master’s Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



Task	Delivery name	Method of measurement	Expected results	Type of deliverable	Format	Language	Target Group	Lead partner	Dissemination Level	Month of Completion
5.7	Dissemination-Sustainability Conference	Number of participants	200	Event	-	En Thai	Teaching Staff Students Technical Staff Universities, Ministries, Business & labour market, employers and social partners. Other stakeholders	AIT	Department / Faculty Institution Regional National International	M35
5.8	Sustainable network between project partners and IE enterprises	Number of partners that signed memorandum of understanding	All partners signed memorandum of understanding	Event Service/Product	-	EN	Teaching staff Students Administrative staff Technical staff Industry representatives	AIT	Department / Faculty Institution Regional National International	M35

12. Monitoring and evaluation

The project has an overall evaluation strategy to ensure the project quality, therefore the monitoring for dissemination is vital, since the impact of those activities contributes to the successful implementation of the project. It is important that this evaluation is carried out on a continuous basis, to ensure:

- An effective impact assessment and update or redefinition of dissemination activities,
- The quality of the dissemination carried out.

The following monitoring and evaluation tools will be set up:

Statistics on the usage, reach and engagement of the website and the social networks: KKU will oversee analysing trends, statistics, and the impact of each activity performed on the website and on social networks. This will allow partners to a better understanding of the most appropriate timing, communication style and target audience of each message.

Monitoring of workshops, study visits and other relevant events: Communication and dissemination activities within this framework will be carefully evaluated ex ante, in fieri and ex-post, to maximize the visibility of the project. Examples of impact monitoring in this framework are: photos taken from events, registration sheets and presentations.

12.1. Evaluation criteria: impact measurement indicators

Impact is one tool used to ensure that the MSIE4.0 project objectives are being accomplished through a selection of tailored activities. To measure the impact and thus conduct the most accurate assessment of the dissemination activities, both quantitative and qualitative indicators should be considered for this activity/action.

Qualitative indicators are slightly more difficult to define than quantitative indicators, but nevertheless equally or more important. A qualitative indicator is an untailed phenomenon as it is people's judgments and perceptions on a given subject, compared to quantitative that are mainly reflected in numbers and statistics. Qualitative indicators that will be utilized are:

- Individual feedback by all partners;
- Feedback by enrolled students;
- Specific ideas about what has been successful, how to do things differently next time or new ideas for future projects.

Qualitative indicators will be obtained through the implementation of the following tools:

- Evaluation lists distributed to participants at a workshop, meetings and other events;
- Activities conducted within WP5 regarding quality assurance;
- Self-evaluation forms for students and staff mobilities;
- Self-evaluation forms for master curricula.

The dissemination-related indicators that will be used are:

- Facts and figures about the project organizers' website (updates, visits, views, cross referencing);
- Media coverage: number of specialist press articles, press, reports, press releases, interviews etc.
- Visibility on social networks;
- Links with existing transnational networks and partners;
- Reaction of end users, other stakeholders, peers and decision-makers e.g. using satisfaction questionnaires;
- Number of project-related events: open days, gala etc.

- Number of event attendees (use attendance sheet as proof of this information);
- Diversity of target audience profiles in the dissemination plan etc.

12.2. Monitoring procedures: reporting and feedback

All dissemination, exploitation and sustainability activities are to be reported to WP5 leader who will compile documentation of implemented activities and update the Dissemination, Exploitation and Sustainability Plan.

Project partners are responsible for providing the WP5 leader with dissemination, exploitation and sustainability materials.

To facilitate an accurate monitoring and assessment of the dissemination activities, and to understand the impact of the actions carried out, it is necessary for all partners to register the activities that they implement, therefore:

- all partners should prepare their dissemination activities accordingly to the Dissemination, Exploitation And Sustainability Plan;
- all partners should report all dissemination activities, at least every six months, as part of the project's overall reports;
- all partners should save evidence of the activities conducted.

By performing regular monitoring of the activities, it is possible to assess if the dissemination plan is being carried out properly and on time. It will also be possible to see which activities had the biggest impact on the stakeholders (both in quantitative and qualitative terms) and to improve communication actions if necessary.

After each reporting period, each partner will also be requested an update list of communication activities. The monitoring is a continuing process that will assess the overall WP5 activities/results, but also evaluate each individual activity and its impact on the project. It is most likely that the Dissemination, Exploitation And Sustainability Plan will be updated according to the results of such evaluations. Based on the half yearly reporting documents received from the partners, KKU will provide recommendations for the future dissemination activities and actions. To facilitate the process of collecting information on dissemination activities, the web page of the MSIE4.0 will be utilized and which will contain all most relevant documents to be shared among partners.

12.3. Activity Dissemination, Exploitation Sustainability Report (ADESR)

In order to capture the impact of communication, a combination of criteria or feedback mechanisms will be used to measure the effectiveness of each DES activity. The partners will be asked to provide Activity Dissemination Exploitation Sustainability Reports (ADESR). It is compulsory to submit the ADESR to the Work Package leader (KKU) within 5 working days after the completion of the activity.

The ADESR should contain detailed descriptions of the activities performed and presented in the DES Reports, by using the following two ADESR templates according to the type of activity (Annexes 1 and 2). Actually, Annex 1 is the template recommended by the coordinator for reporting activities.

12.4. Partner Dissemination Exploitation Sustainability Report (PDESR)

A PDESR should be provided by all consortium partners at every 6 months. The dissemination report should contain all relevant information related to the dissemination activities carried-out during the previous 6 months. The dissemination reports will contain also the proofs for the activities carried-out (signature lists, photos, videos, etc.). If not possible, the proofs will be submitted separately.

The Partner Dissemination Exploitation Sustainability Reports will contain the information previously presented in the activity reports, but also a synthesis of all the actions performed, underlining the general aspects and, of course, conclusions regarding the fulfilment of objectives and measures to prevent the possible setbacks.

The PDESR will be analysed by the leaders of the dissemination Work Package 5 in order to detect gaps, delays, etc. and to propose measures for improvement of future dissemination activities.

13. Guidelines for an Institutional and Financial Plan for Master Programme's Sustainability

The principal representative of each partner university will develop her/his own institutional and financial plan for project sustainability. This plan will be drafted according to the particularities of each university. The plan will be submitted to the leader of dissemination workpackage.

In order to ensure the proper support from the management, the plan will include the actions meant to involve in the MSIE 4.0 project of:

- A member of university's leadership (president, vice-president or scientific secretary);
- A member of faculty's leadership (dean, vice-dean or scientific secretary);
- Head of department – if not already involved.

Because the master programme's promotion is a critical endeavour for project sustainability and Thai universities have no sponsorship and funding from the government, the institutional and financial plan will include the following promotion activities:

- Promotion through the Council of University Presidents of Thailand (CUPT). The CUPT and the Ministry of University Affairs will promote and support each other for the shared benefits of higher education affairs of the nation. Meeting of the CUPT will be at least every 2 months. Hence, WP5 can promote and update the progress of the MSIE4.0 project through the CUPT meeting regularly. The promotion through this channel can increase the adoption of MSIE4.0 curriculum for which the MSIE4.0 curriculum can interest the sponsorship of Thai Universities from other financing sources such as companies, organisations (both domestics and abroad), institutions, or their own funds.
- Promotion through the both private and governmental institutions in which the partner universities have employee development programmes;
- Promotion within university to the students enrolled at bachelor programmes;
- Promotion through student union (locally and nationwide);
- Promotion through university's publications;
- Promotion through university's scientific events;
- Promotion in local press.



There were will envisaged five sources for financing the MSIE master programme:

- Student fees;
- Sponsorships from organisations that will employ the future graduates;
- Sponsorships from research institutes through joint research programmes;
- Sponsorship from University Alumni;
- Sponsorship from university's own funds.

The MSIE team will take into consideration the worst-case scenario in which there will be no sponsorship and no other source of funding (especially, for the Thai universities), but only student fees. The value of student fee will be calculated and it will be estimated if it can be borne by the regular student. The estimation will be made by comparison with other similar study programme or by direct consultation with bachelor students.

The organisations that would be interested in sponsoring the master programme will be identified from the following:

- Organisations that have already employed MSIE graduates;
- Organisations that employed graduates from similar master programmes;
- Organisations that activate in the field of smart industry;
- Research institutes.

There will be developed a promotion plan that will include specific actions aimed directly to the identified organisations.

14. Conclusions

The Dissemination, Exploitation and Sustainable Strategy of the MSIE 4.0 project is based mainly on two principles:

- Intensive use of project's dissemination, exploitation materials and communication channels;
- Personal communication and involvement of the partner organisations' staff.

To ensure the maximum impact of DES activities, the project's consortium has decided to focus on a strong presence and involvement in public events and events involving stakeholders and policy-makers.

All project partners will contribute to DES activities to deliver a high impact of project results. The whole strategy for DES activities is based on a collaborative effort and involvement from the very start of the project.

The activity deliverables should be freely shareable and re-usable as possible to ensure a proper distribution of materials.



Annex 1.

Activities Reporting Template (for conferences, workshops, presentations, social media)

Activity/Event Report Form

Activity/Event Name			
Work Package		Task no.	
Date of activity/event:		Time:	
Host		Location:	
1. Attendance or Participants			
	Name	Organization	
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			



2. Purpose of Event/activity
3. Agenda
4. Outcomes
5. Attachments (documents/handouts, printed material, photos, etc.)
6. Others

Annex 2.

Publications Activities Reporting Template

Item	Detail
Name of activity	[Publication]
WP/Task	
Responsible partner	
Responsible/participating staff	
Level of dissemination	
Target groups	[Audience type]
Objectives	
Outcomes	
Target audience (Number of people)	
Title of article / news	
Name of publication / website	
Type of publication	
Link (if online)	
Date of publication	
Topics	[Short description of the published topics]