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## LMPI – VIETNAM

P19 – Ho Chi Minh City University of Technology (HCMUT)

P20 – Hanoi University of Science and Technology (HUST)

P21 – Vietnam National University of Agriculture (VNUA)

## INTERIM TECHNICAL REPORT



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## Quality of the project implementation

### 1. Description of the activities implemented

The activities implemented in the framework of the Erasmus+ LMPI project can be summarized in the below table which includes the work package in the preparation, development and management phase:

Work package	Description of work package	Date of implementation
10.4	Technical Coordination Meeting no.1 by GIP (Prof. Pachoud) in Vietnam at the HCMUT-P.19, HUST-P20 and VNUA-P.21	05-14 March 2017
1.4	International Steering Committee GPI no.1, also known as project kick-off meeting in Lyon, France chaired by P1*UNI and composed of GIP and one representative from each university members P6,P7,P9,P10,P11,P12,P22,P23,P24,P25,P19, P20, P21	20 - 24 March 2017
1.2	Regional Resource Summaries of HCMUT-P.19, HUST-P20 and VNUA-P.21 by HCMUT-P.19	20 - 24 March 2017
1.3	Elaboration of the list of 20 renovators by HCMUT-P.19	20 - 24 March 2017
1.4	GIP starting mission in Vietnam at the HCMUT-P.19, HUST-P20 and VNUA-P.21 (after 1st GPI)	12-16 June 2017
1.4	Regional Steering Committee GPR n°1 at the HCMUT-P.19, in Ho Chi Minh City with the participation of HUST-P20, VNUA-P21 et P6-UVIGO (European referent university)	03-06 July 2017
2.1	Study visit at the P6-UVIGO by the board of leaders from HCMUT-P.19, HUST-P20 and VNUA-P.21 (two members from each university)	09-14 July 2017
2.3	Survey in the enterprises in Vietnam about the needs of the human resources, training programs, skills in Cyber Security	August 2017
9.1	Appointment of external evaluator to Vietnam by the HCMUT-P19	1st November 2017
2.3	Establishment of 2 employment profiles in Vietnam by the professor and expert team (GOP) with support from P6-UVIGO and P2-GIP	October 2017
2.3	Selection of the bachelor and master programs in Vietnam by the professor and expert team (GOP) with support from P6-UVIGO and P2-GIP	October 2017



Work package	Description of work package	Date of implementation
2.4	Classification of training needs in Vietnam by the professor and expert team (GOP)	October 2017
2.3	Regional Steering Committee GPR n°2 at the HUST-P.20 in Hanoi with the participation of HCMUT-P19, VNUA-P21 et P6-UVIGO (European referent university)	28-30 September 2017
3.1	Professional Training for 6 lecturers from HCMUT-P.19, HUST-P20 and VNUA-P.21 (two members from each university) at the P.6-UVIO in Spain	08 -22 October 2017
3.2	Elaboration of the bachelor and master training programs in Vietnam with the support from P.6-UVIGO	April 2018
3.3	Video conference meeting GPR n°3 with the participation of HCMUT-P19, HUST-P.20, VNUA-P21 et P6-UVIGO (European referent university) on the curriculum harmonisation of the master programs , majored Cyber Security at the 3 Vietnamese universities	12 April 2018
3.3	International Steering Committee GPI no.2 in Rome, Italy chaired by P1*UNI and composed of GIP and one representative from each university members P4,P5,P6,P7, P9, P10,P11,P12,P22,P23,P24,P25,P19	5 March 2018
5.3	Working with the expert from P.1-UNI at the HCMUT-P19, HUST-P.20, VNUA-P21 on the state-of-the-art platform and methodology of E-learning and distant learning system	22-27 January 2018
10.3	Staff and coordinator workshop training on the Erasmus+ financial guidelines in Grenoble, France, 2 participants from P19-HCMUT	27-29 November 2017
8.2	Dissemination, EACEA Cluster Meeting CBHE Erasmus+ projects Vietnam, Ho Chi Minh, by HCMUT-P19, HUST-P.20, VNUA-P21	25 May 2017
8.2	Dissemination, EACEA Cluster meeting of E+ CBHE projects in Myanmar by HUST-P20	29-30 November 2017
9.1	Meeting n°1 with the Internal Quality Assurance Expert from P3-CESIE at the HCMUT-P19, HUST-P.20, VNUA-P21	29 January to 2 Feb 2018

As a matter of fact, the project kicked off six month later than scheduled. All the activities mentioned above are in line with the working program and can be stated to catch up with the project timelines. As of partner's share of responsibilities, partners in Vietnam are in good,



cooperative and supportive partnerships towards the project outcomes. University of Vigo, as European referent and supporting university to Vietnam, invests its human resources' time and effort in supporting Vietnamese partners in every steps of the project by chairing the regional steering committee in Vietnam, by organizing the study visits for leaders and the professional trainings for renovators from Faculty as well as consulting in finalizing the employment profiles and accreditation files. Regarding P1-Uninettuno and P2-GIP as project hosts, there is a good corespondance and coordination by email, by meeting with their team in each Vietnamese university approximately every three months.

The project outcomes during the previous period have an impact on the development and renovation of the training programs to meet the country increasing demand of human resources. The employment profile (or job description) and the degree programme titles are in line with Vietnam national strategies in protecting the information systems. The government is currently in preparation of a new law in Cybersecurity.

Vietnamese universities is now facing a challenge relating to the recruitment of master students. They will definitely have the same issue in LMPI project to achieve the number of 30 enrolled students at each of the three universities for the new master programs (to meet the outcome of 90 enrolled master students by the end of the project lifecycle).

## 2. Visibility

Information about Erasmus + LMPI project has been regularly updated in the official website of the P19-HCMUT, P20-HUST, and P21-VNUA. Meetings and events are also published online in Vietnamese. In addition, representatives from Vietnamese universities participated in to EACEA cluster meetings in Vietnam and Myanmar to share our perspective about the project to universities in Vietnam and Southeast Asia.

Electronic link for project dissemination

- <http://www.hcmut.edu.vn/vi/newsletter/view/tin-tuc/4500-tiep-vien-han-lam-grenoble-phap-ve-du-an-lmpi>
- <http://iro.hcmut.edu.vn/?tin-tuc=licence-master-professionel-en-protection-informatique&lang=vi>
- <http://iro.hcmut.edu.vn/?nhom-danh-muc=tin-tuc-hoat-dong-project-lmpi&lang=vi>
- <https://soict.hust.edu.vn/index.php/2017/04/15/khoi-dong-du-an-eramus-key-action-2-ve-linh-vuc-an-toan-thong-tin/>
- <https://soict.hust.edu.vn/index.php/category/hop-tac/du-an/>
- <http://fita.vnua.edu.vn/vi/hoi-thao-gioi-thieu-du-an-lmpi-dao-tao-dai-hoc-thac-si-chuyen-mon-ve-phat-trien-quan-ly-bao-ve-he-thong-va-mang-thong-tin-trong-cac-doanh-nghiep-tai-moldova-kazakhstan-viet-nam/>



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- <http://www.vnua.edu.vn/preview/newid/28718.html>
- <http://fita.vnua.edu.vn/vi/ba-noemi-de-luca-lam-viec-voi-khoa-cong-nghe-thong-tin/>
- <https://www.noticiasvigo.es/universidade-vigo-asesorara-vietnam-mellorar-as-suas-titulacions-no-eido-da-ciberseguridade/>



## New/updated courses

In the framework of Erasmus+ LMPI project, the following degree programs are developed or renovated by its Vietnamese members. They have different orientation in the LMPI project regarding the training programs. P19-HCMUT decided to build the new master program while some optional courses in Cybersecurity can be added to the current Bachelor programs in Computer Science and Engineering. P20-HUST and P21-VNUA chose to renovate their two current BA and MA curriculums.

Name of HEIs	Name of the training programs	Degree	Total ECTS	Duration	Number of students requested for funding and start-up in September 2018	Remarks
P19-HCMUT	Cyber Security	Master	120	2 years	10-20	A new master program taught in English. P19-HCMUT has to undergo the approval process by the Vietnam National University – Ho Chi Minh City, its relevant governmental body.
P20-HUST	Computer Engineering – path Cyber Security	Master	120	2 years	10	P20-HUST and P21-VNUA renovate their existing bachelor and master programs by adding track specialized in Cybersecurity. The renovated programs are expected to be approved by the Scientific Council at each University respectively.
	Computer Engineering – path Cyber Security	Bachelor	248	4 years	40	
P21-VNUA	Information Technology-Path Cyber Security	Master	94	2 years	10	
	Information Technology-Path Cyber Security	Bachelor	260	4 years	30	



At the current time, the five accreditation files regarding the 3 master programs in Cyber security and 2 bachelor programs in Computer Engineering or Information Technology with a track in Cyber Security are finalized after several times of revision and discussions between P6-UVIGO team and Vietnamese team. P19-HCMUT are preparing the module description and contents in English. P20-HUST and P21-VNUA focus on the new courses/modules added to create the track in Cyber Security.

Vietnamese universities are well aware and informed about the national accreditation regulations. Delay and long administrative time can be seen as a risk for the accreditation procedure. The table below shows their plans in order to get approval in the implementation of the new/renovated training programs:

Name of HEIs	Name of the training programs	Degree	Filing date	Expected result	Approval institution
P19-HCMUT	Cyber Security	Master	May 2018	July 2018	Vietnam National University – Ho Chi Minh
P20-HUST	Computer Engineering – path Cyber Security	Master	June 2018	July 2018	HUST Scientific Council and Rectorate Board
	Computer Engineering – path Cyber Security	Bachelor			
P21-VNUA	Information Technology-Path Cyber Security	Master	June 2018	July 2018	VNUA Scientific Council and Rectorate Board
	Information Technology-Path Cyber Security	Bachelor			

To express in percentage the level of achievement

Name of HEIs	Name of the training programs	Degree	Development/update tasks	Recognition/accreditation tasks	Courses already implemented/delivered
P19-HCMUT	Cyber Security	Master	100%, finish the accreditation file of European style as project output	Preparing the accreditation of Vietnamese template as a requirement for the approval. ⇒ 30% done on the accreditation process	⇒ About 50% courses are delivered in the current Master program in Computer Science and Engineering, in Vietnamese that can be applied for the new master program in Cyber Security.





					⇒ 0% Courses specialized in Cyber Security are delivered as the recruitment starts in September 2018
P20-HUST	Computer Engineering – path Cyber Security	Master	100%, finish the accreditation files of European style as project output	⇒ 50% done on the accreditation process	⇒ About 60% to 70% courses are delivered in the current Master/Bachelor programs in Computer Science and Engineering, in Vietnamese that can be applied for the new track in Cyber Security.
	Computer Engineering – path Cyber Security	Bachelor			
P21-VNUA	Information Technology-Path Cyber Security	Master	100%, finish the accreditation files of European style as project output	⇒ 50% done on the accreditation process	⇒ About 60% to 70% courses are delivered in the current Master/Bachelor programs in Information Technology, in Vietnamese that can be applied for the new track in Cyber Security.
	Information Technology-Path Cyber Security	Bachelor			



## Activities related to Teaching / Training

With the support from the University of VIGO, Spain, two mobility programs was implemented in the LMPI project in 2017 :

The study visit lasted 5 days in July 2017. Six participants included Rectorate Board and Dean from the three Vietnamese universities. Their profiles are qualified for the target of the study visit as described in the project. The visit to VIGO University, referant European partner to Vietnamese universities is important for them to better understand about the LMPI project, about the collaboration with the University of VIGO and the European training systems. The leaders can support and lead the project team in their respective university to implement and acheive the project outputs.

The professional training for Vietnamese lecturers/staff was carried out during two weeks in October 2017. Staff was sent to University of VIGO with the mission to finalise the two employment profiles (or job description) in demand in the field of cyber security and preparing the first draft of the accreditation files at the bachelor and master levels. Six faculty members, in which 2 from each university among P19-HCMUT, P20-HUST and P21-VNUA, were appointed by the Board of Dean. Requirement in the selection process included (1) understanding in the methodology of building new curricula, (2) experience in teaching/ researching in Computer Science Engineering in general and in Cyber security in particular, and moreover (3) competences in English communication and writing.



## Awareness raising, dissemination, sustainability and exploitation of the project results

Three Vietnamese universities are well aware of the raising, dissemination, sustainability and exploitation of the Erasmus+ LMPI project results.

In terms of ensuring the visibility of the project at all levels (i.e. department and faculty, institution, local and regional, national, international), the following measures have been applied:

- Project teams at each university were formed at the beginning led by the member of rectorate board (rector or vice rector) and composed of managers from administrative offices such as Academic Affairs, Graduate Program, External Relations, Equipment-Facility and Academic teams (Dean and staff in Computer Science)
- P19-HCMUT sent the project framework to get permission from its higher management level, called Vietnam National University – Ho Chi Minh City and then submitted to the Ministry of Finance to obtain approval to spend the budget allocated from European Union, through the contract with P1-Uninettuno.
- the spirit of sharing, dissemination and valorization are developed from the beginning of the project and during 3 years with all the actors.
- Attractive media for dissemination are planned and supported by P2-GIP. Six information workshops for the dissemination are going to be organized by three Vietnamese university members. 2000 brochures of the new training programs and 2000 posters of the project are printed. In addition, multimedia supports (website, Facebook page, etc.) are prepared for the awareness campaign of companies to their cybersecurity as well as for student recruitment campaigns (information days, open houses ...).
- University members' networks and place dissemination are used throughout the project life cycle and beyond that.
- Curricula and courses are planned to publish on the university E-learning systems and make them easy to access.

Regarding guaranteeing the sustainability of the project outcomes beyond the project lifetime (specify the funding sources if known) ...)

- The implementation of the pole of excellence at P19-HCMUT and the attractiveness and performance of the technological platforms created at the P20-HUST and P21-VNUA provide the background for the universities to continue the production of their online educational material in Cyber security that will continuously attract students and engineers to join the program.
- Companies are invited to anchor in the thesis supervisors or evaluation as a first step. Next, collaborative plan should be discussed with companies to have them as sponsors.
- Trainers renovators, who were trained in Europe or are expected to host workshops to share their knowledge in curricula building according to Bologna process and survey analysis.



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- The bachelor and master programs developed in the Erasmus+ LMPI meet currently the need in human resources training in the field of Cyber security. As a result, they are able to operate and maintain beyond the project lifetime from the tuition fee paid by students.