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## VOYAGE PROJECT

project No. 561656-EPP-1-2015-1-IT-EPPKA2-CBHE-JP - ERASMUS+ CBHE

*"Opportunities for the young and graduates employability in Vietnam"*

# PERSPECTIVES OF SUSTAINABILITY OF THE VOYAGE PROJECT

## Technical Report

*April 2018*

***Project acronym: VOYAGE***

***Project title: "Opportunities for the young and graduates employability in Vietnam"***

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561656 VOYAGE CONSORTIUM



**Associate partners:**

General Council of Catalan Chambers of Commerce, Spain

Industrial Association of Minho (AIMinho - Associação Empresarial), Portugal

Braga Chamber of Commerce, Portugal

Unioncamere Emilia Romagna, Bologna, Italy



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## The VOYAGE project

The Inter-university consortium ALMALAUREA in collaboration with three Vietnamese Universities:

HANOI UNIVERSITY (HANU),

POSTS AND TELECOMMUNICATIONS INSTITUTE OF TECHNOLOGY (PTIT)

NATIONAL UNIVERSITY OF ART EDUCATION (NUAE)

and with the participation of THE HANOI INDUSTRIAL EXPORT PROCESSING ZONES AUTHORITY - CENTER FOR ENTERPRISE SUPPORT AND SERVICES (HIZA-CES) as well as the European universities of BARCELONA (Spain), MINHO (Portugal) and PADUA (Italy) led the VOYAGE project (<http://voyage-project.eu>) to develop in Vietnam a system inspired by the one implemented in Italy by the AlmaLaurea Consortium. Today, the AlmaLaurea system in Italy gathers in its database more than 2.7 million CV's from 75 Higher Education institutions, representing about 91% of Italian graduates population. The AlmaLaurea system, as well as the VOYAGE one, is based on the online databank of graduates' curricula that:

- ✓ Provides universities with assessment tools (to address the quality of their educational offer)
- ✓ Facilitate the access of the young people to the labour market

A fully operational Vietnamese platform was built within the Erasmus + Voyage project composed by three universities and active since June 2016 when database (DB) population started. This database is filled with graduates CV's from the three partner universities; a system that, by its nature, could be eventually widen to other Universities across the Country willing to join the initiative.

Based on the 20 years experience of AmaLaurea in Italy, the present document summarize the main contents related to the VOYAGE sustainable beyond project life. It therefore sets the general requirement for system migration and centralization in Vietnam in terms of both technical notions and human, resources for the management of the tools beyond project life. AlmaLaurea also wishes to keep committing itself in the follow-up of this Vietnamese experience.

Sustainability has implied, before the end of the project, the centralization and migration of the system to Vietnam<sup>1</sup>, that is the structuring of the system in a centralized manner (a single node) to accommodate data from all universities and allow a shared management and arrangement,

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<sup>1</sup> The Consortium decided to centralize the platform at Hanoi University and the platform transferred from AlmaLaurea server to HANU server in September 2017).



together with the different nodes at each university level (each university, via the web, with access to its own services). The "Consortium" has to deal with Technical Activities as the management of the system hardware, software update, system evolution, regular maintenance activities, as detailed in the present document.

## Premise

The present report "*Perspectives of Sustainability of the VOYAGE system*" is divided in two parts:

**Part 1** provides the general framework for Sustainability of "AlmaLaurea" model based platform. Part 1 aims at providing guidance information and best practices, based on AlmaLaurea longlasting experience about technical and financial conditions addressed to the constitution of a structure meant to carry out "AL" based system: management and development.

As the VOYAGE project is based on the implementation and the adaptation of the AlmaLaurea demand supply matching model in Vietnam, the Part 1 of the report provides guidelines and information that might be useful to VOYAGE Consortium for future management and further exploitation of the platform.

**Part 2** of the present report refers to the VOYAGE project and experience. It reports consortium decision on VOYAGE project sustainability and platform maintenance and functioning beyond project completion, and the division of tasks among VOYAGE project consortium that will allow its functioning beyond project life.

A simulation of Sustainability Budget of VOYAGE Consortium and annual expenditure for system run, done by the VOYAGE universities, is also reported. The estimation, also highlights potential sources of financing of the project in the long run.

## **PART 1. The general framework for Sustainability of “AlmaLaurea” model based platform: Technical information**

### **1. Centralization and Migration of the system in cooperation country**

Centralization and migration of the AlmaLaurea model based system to cooperation country (Vietnam in VOYAGE Project case), that is the structuring of the system in a centralized manner with all project partner Universities as nodes and eventually other institutions which expressed their interest in joining the initiative.

The centralization of the system offers several benefits:

- Sharing the funding resources required for the maintenance and development of the system
- Creation of an Instance able to work in autonomy (even from the budgetary point of view) in relation to the founder universities and parties.

### **2. Migration of the system: technical notions**

#### **a) Needed configuration and required material**

Hereunder, the material and system software configuration. A system capable of supporting the proper functioning of “AL” model based system in recipient countries (i.e. Vietnam) and its maintenance. If it is required to work with acceptable levels of reliability (for example, having a system remaining active even in case of failure of one of its components), it will be necessary to define an appropriate – meaning redundant – architecture for the material.

The required material represents the less complex aspect of the problem. Minimum requirements for the functioning of the system are the following:

- High-speed Internet connection (including equipment, network, firewall, routers);
- Availability of an engine room (implying physical security of the premises, availability of air-conditioning systems, presence of a UPS electric generator able to guaranty – or at least allow – to safely arrest the machines without electricity);
- Availability of a back-up system (for data, applications and contents);
- A medium power server to manage Web servers and Application Servers;
- A medium/high power server to host the DBMS (Database Management System)
- A low-power server designed to host the test environment, the development environments, the “client” machines used as working stations by the team in charge of maintenance and development;



- Other office equipment necessary to manage the working equipment such as: telephones, Internet connection, printer, copy machine.

#### Softwares:

- Microsoft Server License;
- Client license for every working station;
- Visual Studio license (Microsoft developing system) for every developer and installation of a SQL Server;
- Microsoft SQL server Standard Server (for the production server). For the development server a free developer license is used;
- Automation office software (word processor, spreadsheet, PowerPoint) for every working station (Oracle Open Office or Microsoft Office);

#### b) Competences of the IT systems team

Staffing depends on the evolution of the system and the speed with which the development should go on. Hereunder, technical skills required. These can be mastered by a limited number of technical workers.

- Network administrators and systems engineers. Know-how used only in the moment of the installation of the system and of modifications. They can be out of the working team and be included if necessary.
- Database administrator (DBA). This is a fundamental skill since, without any specific software units, many operations will be led directly acting on data. The DBA must have specific skills in database configuration and management, in particular Microsoft SQL Server; he must have a strong experience in the use of SQL for extracting and handling of data, even in aggregated formats.
- Web architect in Microsoft.NET environment. This profile must foresee specific analytic skills and in web applications design.
- Web developer in Microsoft.NET environment. The number of developers depends on the foreseen volume of implementation.
- Other profiles (graphic designer, usability experts, functional experts able to be involved in analysis, final users able to be involved in analysis and tests) are external from the team and participate if required.

#### c) State of the system

The developed AL model based system (as the VOYAGE) is completed on the following units (only maintenance and evolution must be considered on these units):

- Students and graduates. Registration, questionnaire, curriculum vitae.
- Companies. Registration, CV research and download.



- Staff area. Users management and certification.

On the other hand, important units still have to be developed:

- Data warehouse. Data organization and automated generation of statistical reports. Online publication of data and statistics.
- Help desk. Help management systems towards different targeted users.
- Data extraction and transfer. During the VOYAGE project, data handling and transfer were very heavy; this process has to be strengthened.
- New services for graduates' placement (for example, the board of job and internship offers).

#### d) System configuration

The new centralized VOYAGE model<sup>2</sup>, as agreed between the Partners, is structured in a centralized way (only one node) to host data of every university and allow a shared management of the system. The second level of aggregation (local nodes) will be able to coexist with the VOYAGE system and to be used to federate existing or future national networks.

Activities required for implementation:

- Equipment preparation (hardware)
- Installation of the system (OS) and of basic softwares (including MS SQL Server)
- Configuration of the .NET platform and of DBMS
- Installation of other software
- Data migration

Regular activities required for management:

- Exceptions management and corrective measures software (ordinary maintenance)
- Management of development requirements and of progressive actions on the system (progressive maintenance).
- New services conception and development
- Management of Universities' education plans and their evolution
- Administrative data collect and publication
  - Data cleaning
  - Peering collected data
- Production of the data warehouse for statistical analysis
- Management of help requirements from users

*The activities are to be led by Project new IT staff team as they have been trained during the Project.*

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<sup>2</sup> As detailed in the second part of the present document, referring to the Vietnamese case, the VOOYAGE platform is hosted in Hanoi University from September, 2017.



#### e) Human Resources

A management structure as AlmaLaurea Consortium is provided with a minimum number of human resources, fully dedicated to it. The set up team will have to be able to manage every aspect related with production and exploitation of data on graduates, and in particular:

- ✓ Technical and scientific direction: for research activities planning, surveys production, technical development planning, human resources management, relations with Universities presidents and other stakeholder involved.
- ✓ Marketing and services dissemination unit: dissemination of the offer of services linked to the database for the best and quickest professional insertion of graduates (Searching CV's, possibility to publish on the job offers portal, profile selection service on the base of specific conditions. Graduates loyalty management aiming at promoting the rate of CV updating so that to be able to keep in the database also CV's of graduates with working experiences after graduation (added value on the recruitment market).
- ✓ Quality control: unit in charge of guaranteeing the data quality, maximizing the graduates' participation rate, ensuring the full and correct transmission of administrative data by universities. Maintaining direct relations with contact persons in partner universities (persons in charge of school administration offices, administrative managers) to solve potential problems.
- ✓ Help Desk for graduates: help desk for graduates and graduands, automated processes management (password recovery process, web operations, FAQs, etc.) and a second level (help by mail and telephone) of support to graduates for the correct insertion of registration data and for filling the questionnaire.
- ✓ Surveys team: team of statisticians for the surveys production from collected data in the database, planning the survey on professional insertion, subcontracting, external agency for phone interviews (mixed method CATI-CAWI)<sup>3</sup>. Analysis and report writing. The internal team can usually lean on a team formed by researchers from partner universities (scientific council in charge of addressing the research).
- ✓ IT systems: team in charge of the maintenance and development of the web platform and equipments, IT equipments, purchase and maintenance of equipments. Development of database production tools to be provided to the Quality and Research Unit.
- Administration and HR: accountability, HR management, Executive Secretariat.

#### f) Progressive membership of Universities

The AL consortium has progressively increased in the number of its universities, comprising, at now, 75 Italian universities (91% of the Italian graduates population). The AL system base thus allows new

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<sup>3</sup> Every year AlmaLaurea run two main surveys: the Graduates' Profile Survey (also planned within the VOYAGE project) and the Graduates' Employment condition Survey (1,3 and 5 years at graduation).



partners to join the consortium, by financing the local implementation of the CV's collecting system and promoting the database among students. In the Italian case, membership contribution and participation sum involves a one-off payment, depending on the total number of graduates of each university. Moreover, in order to remain part of the consortium and being inserted in the databank, each university has to pay a yearly participation sum. This sum, which is established on a yearly basis by the Board of Management of AlmaLaurea, is proportionate to the total number of graduates of each university<sup>4</sup>.

The amount of the required investment will depend on dimensions of the University and the number of graduates per year. To integrate students' CV's in the database, it will be necessary to:

- ✓ Inform the students enrolled in the last year of the existence of the system and its advantages;
- ✓ Provide these students a users' guide on the website (thanks to the ID and password that will be given to them) and, according to the laws regarding IT handling of personal data, remember to have them signed the agreement for online publication of their CV.
- ✓ Automatically certify the authenticity of information filled in by the students by transferring administrative data to VOYAGE.
- ✓ Disseminate the information regarding the system among companies (services of job and internship offers).
- ✓ Process data for statistical purposes.

Sharing costs and investments will allow the progressive diminution of each participant's investment as the number of universities involved in the project grows.

#### **g) Costs of the surveys on Professional Insertion**

The surveys of professional insertion carried on by AlmaLaurea every year demand extra interviews normally executed 1, 3 and 5 years after graduation. The most efficient method from this point of view is the CATI (Computer Assisted Telephone Interviews). This activity represents one of the most important costs the VOYAGE initiative will have to cover; however, it is necessary to ensure to partner Universities the best quality of the data on the professional insertion of its graduates.

To reduce the costs related to telephone interviews, AlmaLaurea has implemented for a few years a mixed survey method CATI/CAWI, which allows to reduce the costs (some interviews are carried on thanks to an online questionnaire).

#### **h) Services offered to companies**

With the improvement of the quality of products and with the strengthen of its organization and structure, one of the major funding sources for AlmaLaurea has become the recruitment services

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<sup>4</sup> For AlmaLaurea Membership and service provided to Universities sees:  
<http://www.almalaurea.it/en/info/chisiamo/come-aderire>





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for companies looking for highly qualified human resources. Once it fully uses the stocked information and its required quality, the VOYAGE consortium could eventually enter on the e-recruiting market, competing with other public and private organizations offering similar services on the Vietnamese market<sup>5</sup>. There are several competitive advantages in comparison with other operators: partial certification of the CV information, competitive price of the services due to the non profit nature of the initiative, centralized supply of higher education graduates' profiles, meaning a unique point of reference to get a full panorama of the available skills at the national level as well as for each region/university.

Several services to companies can be developed on the base of stocked CV's. For AlmaLaurea services to companies you can refer to AlmaLaurea webpage: <http://www.almalaurea.it/en/aziende>

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<sup>5</sup> The willingness of the Vietnamese companies to pay for VOYAGE platform services has been analyzed in a pilot evaluation assessment done with the companies within the project.

## **PART 2. VOYAGE PROJECT SUSTAINABILITY**

### **1. VOYAGE Project Consortium Decision for platform maintenance and functioning beyond project completion**

As a result of decision making process by the VOYAGE Vietnamese Partners it is agreed that HANU University will be responsible for VOYAGE platform maintenance according to the following condition:

**On September 19, 2017 the VOYAGE platform has been transferred from AlmaLaurea hosting servers to HANU servers. Actually, the production web site run on:**

**[http:// voyage.hanu.vn](http://voyage.hanu.vn)**

Before system transfer, the IT staff of Vietnamese partners, as AL interface for system migration, has been trained by AL IT experts during the training meetings planned in the framework of the project.

- VOYAGE platform has been thus centralized at HANU; following the VOYAGE platform centralization, project partners will have future meetings to analyze the efficiency of platform maintenance by the hosting institution and eventually revise and improve it.
- VOYAGE Universities are committed to keep on populating the VOYAGE database beyond project end.

The main tasks of VOYAGE Project Consortium are detailed in the next Paragraph 2:

### **2. VOYAGE Project management: distribution of tasks according to Consortium Member**

A minimum number of human resources are envisaged to be dedicated to VOYAGE project for platform management, functioning and full exploitation, with VOYAGE universities working for database population and functioning at local level and the platform hosting institution (HANU), motivating for project continuity.



Listed below, the main tasks/activities and the distribution of tasks among VOYAGE project consortium:

- **Standard System maintenance: HANU as institution hosting the platform**
- **Eventual System Evolution. HANU as institution hosting the platform in accordance with VOYAGE Project Vietnamese universities.**

Small changes could be done only on system administrator level. Any major changes or introduction of new features are subject of joint decision of VOYAGE institutions and if needed joint contribution should be done.

- **Course list management. VOYAGE Vietnamese universities** (information to be delivered to HANU-institution hosting the platform in a format to be provided by HANU)

VOYAGE Vietnamese Universities prepare data according to the format provided by HANU and are responsible for data verification and correctness.

- **Administrative data collection. VOYAGE Vietnamese Universities will provide administrative data to HANU in a format to be provided by HANU.**
- **Survey production.** Data extraction and processing for statistical analyses and report writing: Team of statisticians from **HANU and VOYAGE Vietnamese universities.**
- **Help Desk for graduates' AND COMPANIES:** help desk for graduates and companies, automated processes management (password recovery process, web operations, FAQs, etc.) and a second level (help by mail and telephone) of support to graduates for the correct insertion of registration data and for filling the questionnaire. **First level HELP-DESK Voyage Vietnamese Universities, second level HANU.**
- **Dissemination for database population to graduates and companies: VOYAGE Vietnamese universities and the career services, HIZA-CES, etc.**
- **Quality control:** unit in charge of guaranteeing the data quality ensuring the full and correct transmission of administrative data by universities. **(HANU will provide institutions with some reports for ensuring the correctness of their data).**
- **Technical and scientific direction:** for research activities planning, surveys production, technical development planning, relations with Universities presidents and every stakeholder: **VOYAGE universities and HIZA-CES.**



### 3. Sustainability Strategy of the VOYAGE Consortium.

In the Steering Committee meeting held in Hanoi at Post and Telecommunication Institute of Technology (PTIT), on November 7 2016, the issue of 561656 project sustainability was discussed in presence of the Vietnamese Project Consortium members. The beneficiary Universities of HANU, NUAU, PTIT and Hanoi Industrial Export Processing Zones Authority - Center for Enterprise Support and Services (HIZA-CES) agreed to centralize the 561656 Voyage Platform at HANU University, that candidate itself for hosting the Platform. The aforementioned partners signed the Sustainability – Memorandum of Understanding for platform hosting on November 29, 2016 (see Annex I Voyage Sustainability Agreement).

The 561656 project plays an important role in monitoring the higher education system in Vietnam and in creating job opportunities for the Vietnamese graduated students. Thanks to the project the beneficiaries are endowed for the first time with a tool (Voyage Platform) conceived at the scope. The sustainability strategy implies for its implementation period the commitment of the Consortium Members to accomplish the actions detailed in Chapter 2. *“VOYAGE Project management: distribution of tasks according to Consortium Member”* of the present document and the strength of the Vietnamese Consortium to improve the participation of new stakeholders in joining the platform. The strategy aims at increasing the number of the universities joining the platform also from other regions of the country together with the number of companies, with a preference towards the enrichment of the different economic sectors represented by the registered firms.

Below the core of the Sustainability Strategy agreed for the 3 years that follows the end of the 561656 eligibility period thus covering the implementation period 15-10-2018/15-10-2021 and it is detailed according to the implementation years.



561656 Project Sustainability Strategy <sup>6</sup>					
3 Years Implementation Period 15-10-2018/15-10-2021					
	Graduates Registration rates for 561656 Universities	Dissemination Strategy towards new universities	Inclusion of new universities	Graduates registration rates for new universities	Dissemination strategy towards companies
<b>Year 1</b>	<p>Reach the <i>response rate</i><sup>7</sup> of 15% for the Partner University of HANU</p> <p>Reach the response rate of 7% for the Partner University of PTIT</p> <p>Reach the response rate of 10% for the Partner University of NUAE</p>	Present the project to at least 5 new universities	Include in Voyage Platform 1 New University with a preference for universities with a rich educational supply.	Reach the response rate of 5% for the new university	Present the Project to 7 new companies based in Hanoi and in the province and registered at least 5 of them in the Platform
<b>Year 2</b>	<p>Reach the response rate of 20% for the Partner University of HANU</p> <p>Reach the response rate of 10% for the Partner University of PTIT</p> <p>Reach the response rate of 15% for the partner</p>	Present the project to at least 5 new universities	Include in Voyage Platform 2 new universities	Reach the response rate of 5% for the new 2 universities and of 10% for the university included in year 1	Present the Project to 10 new companies (with a preference towards mechanic sector and tourism <sup>8</sup> , ICT sector and Cultural sector) including companies based in the Hanoi and its province and registered at least 7 of them in the Platform.

<sup>6</sup> For more details on the inner strategy of the HUB universities PTIT and NUAE see Annex II "Voyage' System Hubs sustainability"

<sup>7</sup> Response rate of X% in the present table refers to the number of valid questionnaires filled out by graduates compared to the annual graduates population.

<sup>8</sup> These sectors are in the high demand for labour but also face difficulties in recruiting qualified employees

	university of NUAE				
<b>Year 3</b>	<p>Reach the response rate of 30% for the Partner University of HANU</p> <p>Reach the response rate of 12% for the Partner University of PTIT</p> <p>Reach the response rate of 25% for the Partner University of NUAE</p>	Present the project to at least 7 new universities	Include in Voyage Platform 3 new universities.	<p>Reach the response rate of 15% for the new university included in the Voyage Platform during year 1 and 10% for the new university included in the Voyage Platform during year 2.</p> <p>Reach the response rate of 5% for the new 3 universities included in year 3</p>	Present the Project to 10 new companies including companies based in the provinces of Hanoi and in the South of the country (Ho Chi Minh city and Bing Duong province) and registered at least 7 of them in the Platform.
<b>Year 3</b>	<b>Assessment of Platform Price Policy</b>				
	<p>Develop a survey for assessing the availability of the registered companies to pay for the Voyage Platform based employability services (CV search and download).</p> <p>Develop a survey for assessing the availability of the universities to pay for joining the Voyage platform and benefits from its services.</p>				

#### 4. Simulation of Sustainability Budget of VOYAGE Consortium.

The Sustainability Budget below related to the VOYAGE project estimates annual expenditure according to required resources for system run.

The human and technical resources needed for 561656 platform sustainability are detailed below:

**1. It team** (portal sustainability, minor software changes)

- Required staff: IT team leader, server administrator, programmer

**2. Research, monitoring and administration team** (data research activities, research seminars, monitoring overall activities and on-going administration).

- Required staff: consortium coordinator, research specialist, monitoring specialist.

**3. Communication and relation team** (working with consortium members, enterprises, governmental and non-governmental stakeholders, help-desk)

- Required staff: communication specialist, help-desk operator



**4. Technical and maintenance infrastructure** (server infrastructure, office space and furniture, communication and utilities, etc.)

**VOYAGE SUSTAINABILITY PLAN  
CALCULATION OF REQUIRED EXPENSES PER YEAR  
HANU UNIVERSITY**

N.	ITEM - STAFF	N. OF UNITS / ITEM	TIME UNIT	UNIT PRICE / MONTH (VND)	UNIT PRICE / MONTH (EURO)	No. OF TIME UNITS	% IN TIME ENGAGEMENT FOR VOYAGE	TOTAL / YEAR (VND)	TOTAL / YEAR (EURO)
1	IT team leader	1	month	VND 25.000.000,00	€ 568,50	12	15%	VND 45.000.000,00	€ 1.023,30
2	Server administrator	1	month	VND 10.000.000,00	€ 379,00	12	20%	VND 24.000.000,00	€ 909,60
3	Programmer	1	month	VND 10.000.000,00	€ 379,00	12	15%	VND 18.000.000,00	€ 682,20
4	Communication specialist	1	month	VND 5.000.000,00	€ 189,50	12	30%	VND 18.000.000,00	€ 682,20
5	iHelp Desk operator	2	month	VND 4.000.000,00	€ 151,60	12	15%	VND 14.400.000,00	€ 545,76
6	Researcher - employment market	2	month	VND 20.000.000,00	€ 758,00	12	10%	VND 48.000.000,00	€ 1.819,20
7	Monitoring specialist graduates certify data	1	month	VND 5.000.000,00	€ 189,50	12	20%	VND 12.000.000,00	€ 454,80
8	Consortium Coordinator	1	month	VND 5.000.000,00	€ 189,50	12	30%	VND 18.000.000,00	€ 682,20
N.	ITEM - OTHER CATEGORIES	N. OF UNITS / ITEM		UNIT PRICE / MONTH (VND)	UNIT PRICE / MONTH (EURO)	No. OF TIME UNITS	% IN TIME ENGAGEMENT FOR VOYAGE	TOTAL / YEAR (VND)	TOTAL / YEAR (EURO)
1	Servers*	3	available with Voyage EU funds				100%	VND 0,00	€ 0,00
2	Servers (other consortium members)	2	available with Voyage EU funds				100%	VND 0,00	€ 0,00
3	PC/ working stations*	10	available with Voyage EU funds				100%	VND 0,00	€ 0,00
4	Laptop*	4	available with Voyage EU funds				100%	VND 0,00	€ 0,00
5	PC/ working stations (other consortium members)	20	available with Voyage EU funds				100%	VND 0,00	€ 0,00
6	Laptop	8	available with Voyage EU funds				100%	VND 0,00	€ 0,00
5	Furniture		available - own sources				100%	VND 0,00	€ 0,00
6	Communication costs		month	VND 3.000.000,00	€ 113,70	12	100%	VND 3.000.000,00	€ 1.364,40
7	Utilities		provided by consortium				100%	VND 0,00	€ 0,00
8	Other costs		month	VND 2.000.000,00	€ 75,80	12	100%	VND 2.000.000,00	€ 909,60
<b>TOTAL EXPENSES</b>								<b>VND 202.400.000,00</b>	<b>€ 9.073,26</b>
* refers only to HANU who host the platform									
Exchange rate (November 2017)		VND	EURO						
		VND 100.000,00	€ 3,79						

The estimation above refers to the human resources to be involved in project activities per year belonging to the University of Hanoi-HANU as host of the platform and to the other related costs (equipment and, utilities, communication costs).

### CALCULATION OF REQUIRED EXPENSES PER YEAR PTIT UNIVERSITY

N.	ITEMS	UNIT	UNIT PRICE (VND)	QTY	N. OF UNITS	LENGTH OF ENGAGEMENT (%)	TOTAL (VND)	TOTAL (EUR)
1	IT team specialist	month	15 000 000	1	12	0,15	27 000 000	964,29
2	Communication specialist	month	7 000 000	3	12	0,2	50 400 000	1 800,00
3	Help Desk Operator	month	4 000 000	1	12	0,8	38 400 000	1 371,43
4	Researcher - specialist employment market	month	15 000 000	1	12	0,2	36 000 000	1 285,71
5	Events	time	10 000 000	2			20 000 000	714,29
6	Annual meeting	times	20 000 000	1			20 000 000	714,29
7	Marketing prints	set	10 000	1000			10 000 000	357,14
<b>TOTAL EXPENSE/ YEAR</b>							<b>201.800.000</b>	<b>7.207,14</b>

\* The staff cost from item 1 to 4 are partly the salaries that PTIT have to pay for those people as full-time officers at PTIT

### CALCULATION OF REQUIRED EXPENSES PER YEAR NUAE UNIVERSITY

N.	ITEM - STAFF	N. OF UNITS / ITEM	TIME UNIT	UNIT PRICE / MONTH (VND)	UNIT PRICE / MONTH (EURO)	No. OF TIME UNITS	% IN TIME ENGAGEMENT FOR VOYAGE	TOTAL / YEAR (VND)	TOTAL / YEAR (EURO)	NOTE
1	IT team specialist	2	month	VND 15.000.000,00	€ 568,50	12	15%	VND 54.000.000,00	€ 2.046,60	A Monitoring specialist graduates certify data concurs a Help Desk operator
2	Communication specialist	1	month	VND 5.000.000,00	€ 189,50	12	30%	VND 18.000.000,00	€ 682,20	
3	Help Desk operator	2	month	VND 4.000.000,00	€ 151,60	12	15%	VND 14.400.000,00	€ 545,76	
4	Researcher - employment market	1	month	VND 23.000.000,00	€ 738,00	12	20%	VND 24.000.000,00	€ 909,60	
5	Monitoring specialist graduates certify data	1	month	VND 5.000.000,00	€ 189,50	12	20%	VND 12.000.000,00	€ 454,80	
N.	ITEM - OTHER CATEGORIES	N. OF UNITS / ITEM		UNIT PRICE / MONTH (VND)	UNIT PRICE / MONTH (EURO)	No. OF TIME UNITS	% IN TIME ENGAGEMENT FOR VOYAGE	TOTAL / YEAR (VND)	TOTAL / YEAR (EURO)	
1	Communication costs		month	VND 3.000.000,00	€ 113,70	12	100%	VND 3.000.000,00	€ 1.136,40	
2	Other costs		month	VND 1.000.000,00	€ 37,90	12	100%	VND 12.000.000,00	€ 454,80	
<b>TOTAL EXPENSES</b>								<b>VND 137.400.000,00</b>	<b>€ 6.458,16</b>	

Exchange rate (November 2017)	VND	EURO
	VND 100.000,00	€ 3,79

The estimation above refers to the human resources to be involved in project activities per year belonging to the University of PTIT and NUAU and to the other related costs (meeting, marketing, events, communication costs).

The activities to be carried out by the Vietnamese consortium members of HANU, NUAU, PTIT and HIZA-CES, as detailed in Chapter 2. "VOYAGE Project management: distribution of tasks according



to Consortium Member” will be performed by involving the necessary number of resources made at disposal by each organization.

The Voyage Consortium, during the sustainability meeting at NUAE (4th day of October 2017 meeting), discussed about the possibility to involve the Ministry of Education and Training, in a near future, in the Project. The Vietnamese partners will discuss with the representatives of the Ministry of Education and Training in order to involve it in the Project. The support of the Ministry of Higher Education and Training will represent an incentive for other new Vietnamese universities to be part of the Voyage Project and to transform it from a pilot Project to a national initiative.

During the meeting held at National University of Art Education in October 2017, the Deputy Minister of Vietnamese Ministry of Education and Training, has expressed a high interest in Voyage Project.

The Voyage Project will continue its activities as decided by the initial consortium and as detailed in the present document and the Voyage platform will be hosted by University of Hanoi in order to ensure the Project sustainability after the Project life cycle.

During the 3<sup>rd</sup> year of the sustainability strategy implementation period (15-10-2018/15-10-2021) a survey will be run for assessing the availability of the registered companies to pay for the Voyage Platform based employability services (CV search and download), actually free of charge and of the Universities to join the Consortium.

#### POSSIBLE SOURCES OF FINANCING

-The new universities joining the system will use their inner human resources, equipment and the needed facilities for allowing the system run. They will cofinance with their own resources the communication and dissemination strategy towards students and enterprises as well as the run of the survey and researches platform based. Following the three years implementation period of the sustainability strategy (15-10-2018/15-10-2021) a feasibility study will be run for assessing the possibility to apply an entrance fee for newcomers universities and set the relative price-policy and criteria to be eventually applied in the future.

-At third year of the sustainability strategy’ implementation years (15-10-2018/15-10-2021), the Voyage Consortium will develop a survey for assessing the availability of the registered companies to pay for the Voyage Platform based employability services (CV search and download). A pilot survey<sup>9</sup> has already been carried out in the framework of the project with a sample of 20 companies registered in the Voyage Platform. Such companies have been asked how much would they be willing to pay for using the Platform services and expressed their preferences according to different price ceilings.

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<sup>9</sup> The result of the survey are collected in the 561656 “Voyage Platform Evaluation Report”-WP.3.2.



-Once the platform reaches a considerable number of stakeholders involved (N of universities and N of companies), the Voyage consortium will assess the interest of the Ministry of Education of the Republic of Vietnam to contribute to system costs.

-The participation to international projects, as EU funded projects, represents an additional source of financing the Voyage platform' future sustainability, in particular the enlargement of the system from a local to national and regional perspective.

### **5. Contribution of the 561656 Project European Partners to Voyage Project Sustainability**

Committed with the sustainability of the achieved results of the project, AlmaLaurea, as 561656 project coordinator, makes itself available to keep supporting the VOYAGE initiative beyond project life.

**AlmaLaurea** commits itself to:

- promote cooperation projects between the AlmaLaurea Consortium and the Vietnamese and EU partners of the 561656 VOYAGE project for the monitoring of university performance and the higher education system, for strengthening the university-labour market relations aimed at enhancing the young generation and for disseminating the initiatives of the Consortium in the Republic of Vietnam on European funding (such as Erasmus +) and other sources of financing

- promote the development of future cooperation projects with the Republic of Vietnam and Asian countries, including those promoted by the European Union;

- promote joint activities aimed at presenting country (Italy-Vietnam) opportunities to young graduates.

- provide information to the partner Universities of the Voyage Consortium on statistical analyses conducted annually by the AlmaLaurea Consortium on the Graduates Profile and the Graduates Employment Condition in Italy

-as far as the Voyage Project milestone, that is the online platform, is concerned, AlmaLaurea has transferred during the 3 years of project implementation all the know how to the beneficiaries universities to run and exploit the system locally. AlmaLaurea commits itself to:

-provide its experts' point of view on eventual beneficiaries' proposal for platform development

-evaluate and assess the impact of the proposed changes

-provide suggestions for more effective or economically convenient solutions



**The Observatory of Globalization of the Universitat de Barcelona** commits itself to:

- promote cooperation projects between the Observatory of Globalization of the Universitat de Barcelona and the Vietnamese and EU partners of the 561656 VOYAGE project for the monitoring of university performance and the higher education system, for strengthening the university-labour market relations aimed at enhancing the young generation and for disseminating the initiatives of the Observatory in the Republic of Vietnam on European funding (such as Erasmus +) and other sources of financing
- promote the development of future cooperation projects with the Republic of Vietnam, including those promoted by the European Union
- promote joint activities aimed at presenting country (Spain-Vietnam) opportunities to young graduates
- engage other Spanish institution in the mentioned cooperation.

**The University of Minho** commits itself to:

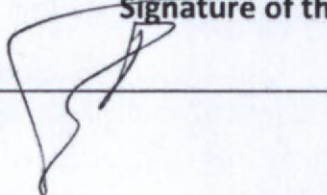
- disseminate the project and its outcomes at national and international levels
- explore possibilities of establishing new cooperation project in the line of Voyage project with institutions in Vietnam
- explore and contribute to new cooperation projects with Alameda and all partners of the Voyage project aiming the improvement of the partners higher education systems.
- exchange information and join efforts with the Portuguese Associação Industrial do Minho and Associação Comercial de Braga aiming the establishment of cooperation relationship with Vietnamese institutions on the promotion of new opportunities to young graduates.

**The University of Padova** commits itself to:

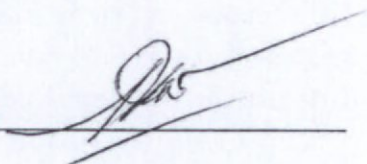
- promote cooperation between the University itself and the Vietnamese and EU partners of the VOYAGE project for strengthening the university-labour market relations in Vietnam and for increasing employability of the Vietnamese graduates
- promote the development of future cooperation projects (included research and mobility projects) with the Republic of Vietnam, including those promoted and financed by the European Union
- promote joint activities aimed at presenting country (Italy-Vietnam) opportunities to young graduates
- promote the engagement of other Italian institution in the mentioned cooperation.

**Signature of the Sustainability Plan**

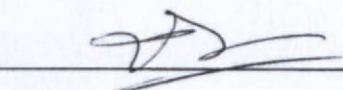
Hanoi University  
Nguyen Van Trao  
Rector



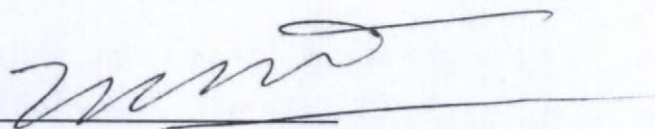
National University of Art Education  
Dao Dang Phuong  
Rector



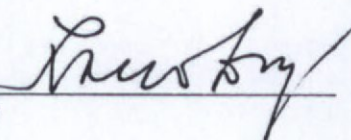
Posts and Telecommunications Institute of Technology  
Vu Van San  
Rector



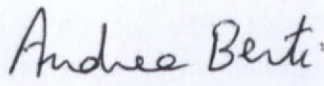
Hanoi Industrial Export Processing Zones Authority  
Nguyen Duc Quang  
Vice-Chairman



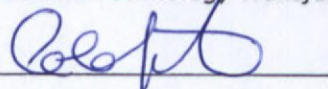
AlmaLaurea  
Ivano Dionigi  
President



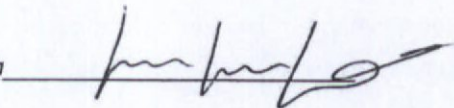
University of Padua  
Andrea Berti  
Manager, Research Area and Technology Transfer



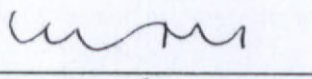
University of Minho  
Carla Martins  
Pro-Rector



Manuel Filipe Costa  
Professor



University of Barcelona  
Marina Sole Cata  
Director of the Observatori de la globalització.  
Universitat de Barcelona.





Hanoi, 29 November 2016

**Subject: 561656 Sustainability-Memorandum of Understanding**

In the Steering Committee meeting held in Hanoi at Post and Telecommunication Institute of Technology (PTIT), on November 7, the issue of 561656 project sustainability was discussed thoroughly in presence of all the Project Consortium members.

One of the goals of the discussion was to learn about different configurations for the system and their advantages and limitations, which help Partner Universities to choose the best configuration to maximize the sustainability of the platform when the current project ends in September 2018. The two options were (i) a basic independent system where each Partner University would maintain a separated production environment, a development environment, and a research environment and (ii) a balanced centralized system where one Partner University would maintain a shared production environment and each Partner University has their own development environment and research environment. The "Consortium" was also explained the technical and financial demands in the management of the system hardware, software update, system evolution, regular maintenance activities.

In the said meeting, the Chief IT expert from AlmaLaurea has shared the benefits of AlmaLaurea centralized system (i.e., balanced configuration) among Project Consortium members. Key benefits are as follows:

- *For universities:* the possibility to develop common methodological tools for survey run; extensive overview of graduates' profile data for assessment and comparison purposes; possibility for new coming universities to join the platform; sharing the funding resources required for the maintenance and development of the system
- *For students/graduates:* more internship/job offers available on one platform in a unique platform;
- *For companies and firms:* greater range of available graduates' CVs; one platform and one access code.

Given that, the beneficiary Universities of HANU, NUAE and PTIT and the Hanoi Industrial Park HIZA-CES, also having considered all the pre-requisites<sup>1</sup> for the 561656 central hub hosting and the respective inner resources (e.g., internal capacity, human resources), **agreed to centralize the 561656 Platform at HANU University** that candidate itself for hosting the platform.

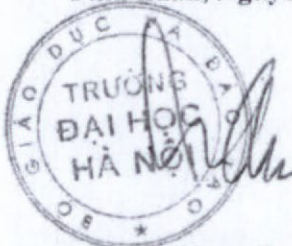
<sup>1</sup> A fully comprehensive sustainability report will be delivered (d.7.2.) by due date.



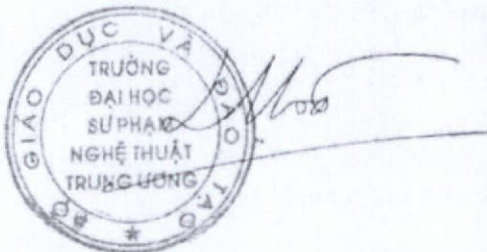
As a result, the beneficiary Universities of HANU, NUAE and PTIT **agreed to use the budget available for the most efficient purchase of equipment in line with the balanced configuration.** The agreement implies a small change in the list of the equipment to be purchased per university (initially allocated for sites-basic scenario) so to meet the balanced configuration agreed<sup>2</sup>. The list of equipment to be submitted to the approval of the European Commission is detailed in Annex 1 to the present decision.

Date 29 November 2016

**Dinh Luan, Nguyen, Rector of HANU**



**Le Hoa, Pham, Rector of NUAE**



**Van San, Vu, President of PTIT**



**Quang Long, Le, Vice-Chairman of HIZA**



<sup>2</sup> The basic configuration implies the purchase of the same equipment for all the universities (3 production environment, 3 development environments, 3 research environments); while the most efficient and effective balanced configuration implies the purchase of 1 production environment, 3 development environments, 3 research environments.



## Annex II Voyage' System Hubs' Sustainability details

The sustainability of strategy of the Voyage Consortium is based on the hub and spoke structure where the hub of the system is represented by the University of HANU as host of the platform and the spokes are represented by the university of PTIT and NUAU.

Below the details of the sustainability strategy of Voyage platform' hubs for the 3 years following the end of the project eligibility period (15-10-2018/15-10-2021).

### PTIT University: details of sustainability strategy

#### I. Estimate of volume growth

The following table shows the plan of PTIT in developing the number of stakeholders participating in the Voyage platform:

	1st Year (2019)		2nd Year (2020)		3rd Year (2021)	
	Number of registrations	Total	New of registrations	Total	New registrations	Total
PTIT (graduates)	560	560	616	1176	678	1254
Enterprises	2	2	2	4	2	6
Universities	1	1	1	2	1	3

Being aware that the number of PTIT's graduates participating in the platform remains to be improved, PTIT will keep organizing dissemination campaign both online and off-line approach:

-Before and during commencement ceremony (2 times/ year), PTIT will arrange a help-desk at Training and Education Department where students get their diploma to introduce the system to graduates.

-Gathering those students in face-to-face events before commencement ceremonies is a matter of concern because most of them are coming back their hometown, waiting for the ceremony. Therefore, PTIT will concentrate on online dissemination via personal emails and social networks. In the meantime, PTIT will carry out introduction of the platform on the occasion of ceremonies and conferences for PTIT's students such as scientific conference and other meetings.

-PTIT has a university campus in Ho Chi Minh City with about 700 graduates every year and PTIT will disseminate some activities in PTIT HCMC to increase the number of students joining the system in the next years.

-PTIT expects to increase 10% of the number of graduates participating in the system every year.



Thanks to the strategic relationship between PTIT and a number of ICT companies (like Samsung Electronics, Motorola, VNPT, Mobifone, FPT) in training high-quality human resources, PTIT will invite those partners to participate in a workshop to introduce the system. Most of those partners have its sub-companies/ divisions being in charge of different fields so PTIT will directly work with contact points of those companies to have their participation. In the year 2018, PTIT plans to invite at least 4 companies to participate in the system and assume that only 50% of them to accept the invitation.

-In order to create a strong eco-system among ICT enterprises, ICT universities and ICT students, PTIT will connect to strong universities in the field such as Hanoi University of Science and Technology (HUST), Vietnam National University (UNU) to create a branded system of ICT student's profiles.

-Every year, PTIT will carry out an annual meeting for stakeholders to evaluate the system and discuss how to improve the system so that it increasingly becomes a reliable platform for users.

#### **NUAE University: details of sustainability strategy**

On behalf of one of three universities member, NUAE set up the sustainability strategy for VOYAGE Project within next three years as follows:

		<b>1st year (2019)</b>	<b>2nd year (2020)</b>	<b>3rd year (2021)</b>
<b>Graduates</b>	<b>NUAE</b>	10% graduates	15% graduates	25% graduates
	<b>New university partners of NUAE</b>	1 new university (10% graduates)	1 new university (15% graduates)	2 new universities (25% graduates)
<b>Enterprises</b>		1	1	2

In order to obtain this sustainability strategy, NUAE will organize a detailed plan as follows:

-In term of NUAE graduates, at the opening ceremony, Project Researcher will inform the fresh students about the existence of the VOYAGE Project Platform and its advantages. It is the necessary step because NUAE students are trained by credit-based system, so that they can be considered to be graduands when they accumulate enough credits in training curriculum so that some students can complete their undergraduate program within 3 years or prolong more one, two years. As soon as, these students registers to the Platform, they can know CVs form or apply for the part-time jobs.

-Before and during graduation ceremony 2 times/year for under-graduate studies program and 1 time/year for post-graduate studies program, help-desk operators and researchers will help students to complete registered CVs or register new users. NUAE expects to cover 10% of the number of graduates and administrative data participating in the Platform next years.



-In term of new university, firstly NUAE will introduce VOYAGE Project Platform to at least 5 new universities specialized Culture - Arts – Sports and Tourism field such as Ha Long University, Thai Nguyen University, University of ThanhHoa Culture, Sports & Tourism etc. Up to 2019, a new university will be anticipated to participate in the Platform in which this university will assume that 50% graduates registering in this. By the end of 2020, NUAE will have encouraged total 4 new university graduates to create a link Culture - Arts – Sports and Tourism graduates' database for enterprises.

-In term of new enterprises, based on relationship between NUAE and many enterprises which had recruited NUAE graduates', NUAE will invite other partners to participate in a workshop to introduce the Platform. As sustainability strategy, NUAE plans to invite at least 4 enterprises to register in the Platform.

-Every year, NUAE will carry out an annual meeting for new stakeholders to evaluate and discuss how to improve the Platform to meet the demand of users and society.

