

PARTNERSHIP AGREEMENT

Under the Erasmus+ Programme

KA STRATEGIC PARTNERSHIP PROJECT

WINDEXT

n° 612424-EPP-1-2019-1-ES-EPPKA2-KA

This contract, drawn up under the Community programme Erasmus+ shall govern relations between:

ASOCIACIÓN EMPRESARIAL EÓLICA, "AEE"

Asociación

Registro nacional de asociaciones número 170.581, Sección 1^a

C/ Sor Ángela de la Cruz 2 14D

28020 Madrid

NIF: ESG83488163

PIC: 963938471

hereafter named "the Coordinator ", represented by Juan Virgilio Márquez López and Ángel Budia García, General Director and Financial Director respectively,

of the one part,

and

Universidad Tecnológica - UTEC, "UTEC"

Public University

Registration number: Law 19.043 (December 28th, 2012)

VAT number: 217208670014

Av. Italia 6201, Edificio Los Talas del Parque Tecnológico del LATU, CP 11500, Montevideo

(Uruguay)

PIC number: 923124945

hereafter named "the Partner ", represented by Rodolfo Silveira and Graciela Do Mato, Board of

Directors,

of the other part,

Have agreed as follows:

Article 1/Subject

1. Having regard to the Grant agreement n° 612424-EPP-1-2019-1-ES-EPPKA2-KA concluded between the Coordinator and the Education, Audiovisual and Culture Executive Agency (EACEA), the Coordinator and Partner commit themselves to carrying out the work programme covered the contract mentioned above.







- 2. The grant of the whole project for the contractual period shall be of a maximum amount of 912.620,00 EUR and shall take the form of unit contributions and reimbursement of eligible costs.
- 3. The final financial contribution shall depend on the evaluation of the quality of the results of the project n° 612424-EPP-1-2019-ES-EPPKA2-KA pursuant to the rules laid down at Annex II of the Agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA and agreement itself, but shall, under no circumstances, give rise to a profit.
- 4. This contract shall regulate relations between the parties, and their respective rights and obligations with regard to their participation in the project n° 612424-EPP-1-2019-ES-EPPKA2-KA under the Agreement passed between the Education, Audiovisual and Culture Executive Agency (EACEA) and the Coordinator.
- 5. The subject matter of this Agreement and related information in the annexes form an integral part of this contract and each party declares to have read and approved that.
- 6. The **Partner** hereby assumes 3,9% of the financial liability of the Project. Should the **Coordinator** for whatever reason be obliged to reimburse or pay to the **Education**, **Audiovisual** and **Culture Executive Agency (EACEA)** or any other official entity any amount, the Partner hereby assumes to pay up to 3,9% of any such amount.

Article 2/Duration

- 1. The project referred to the Article 1 has duration of **36 months**. It starts on **1 January 2020** and ends on **31 December 2022**.
- 2. This contract enters into force on the date of signature by the last of both participating parties to the contract and terminates at the moment of payment of the balance of the contract, as mentioned in Article 7.
- 3. The period of eligibility of the costs starts on 1 January 2020 and finishes on 31 December 2022.

Article 3/Obligations of the Coordinator

The Coordinator shall undertake:

- 1. To take all the steps necessary to prepare for, perform and correctly manage the work programme set out in this contract and in its annexes, in accordance with the objectives of the project as set out in the Agreement concluded between the Education, Audiovisual and Culture Executive Agency (EACEA) and the Coordinator;
- 2. To send to the **Partner** a copy of any official document concerning the project.
- 3. To notify and provide the **Partner** with any amendment made out to the Agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA concluded with the **Education**, **Audiovisual and Culture Executive Agency (EACEA)**;
- 4. To define in conjunction with the **Partner** the role and rights and obligations of the two parties, including those concerning the attribution of the intellectual property rights.
- 5. To comply with all the provisions of Agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA binding the Coordinator to the Education, Audiovisual and Culture Executive Agency (EACEA).







The Partner shall have sent on time to the Coordinator all documents, reports, (iv) financial report, short description of the developed tasks and all information required during the Project.

The Partner shall have provided in the interim and final reports, all expenses in a (v) form that shall be identifiable and verifiable by the Coordinator and by the

Education, Audiovisual and Culture Executive Agency (EACEA).

The **Partner** shall not be in breach of contract. (vi)

Each payment shall not be made until the Partner has spent at least 70% of the (vii) previous payment and the **Partner** has already provided due justification.

It is mandatory for the Partner to fulfil the tasks and activities specified in Annex III, (viii) to receive the total budget amount specified in this contract.

2. All payments shall be regarded as advances pending explicit approval by the Education, Audiovisual and Culture Executive Agency (EACEA) of the final report, the corresponding cost statement and the quality of the results of the project.

Article 7/ Beneficiaries bank account

Name of the Bank: Banco de la República Oriental del Uruguay

Address of the Bank: Piedras 369. 11100, Montevideo.

Account holder: Universidad Tecnológica

Account number: 1569396-00003

IBAN: NY026003324

Article 8/Reports

- 1. The Partner shall provide the Coordinator with any information and document required for the preparation of the Progress, Interim and Final reports and, where appropriate, with certified copies of all the necessary supporting documents completed and signed by the legal representative within the established deadlines.
- 2. The Partner undertakes to submit the reports to the **Coordinator** in English language.

Article 9/Monitoring and supervision

- 1. The Partner shall provide without delay the Coordinator with any information that the latter may request concerning the carrying out of the work programme covered by this contract.
- 2. The Partner shall make available to the Coordinator any document making it possible to check that the aforementioned work programme is being or has been carried out.
- 3. The obligations described in Article II.20. of the agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA apply *mutatis mutandis* to the **Coordinator** and **Partner**.

Article 10/Liability

- 1. Each contracting party shall release the other from any civil liability in respect of damages resulting from the performance of this Agreement, suffered by itself or by its personnel, to the extent that these damages are not due to the serious or intentional negligence of the other party or its personnel.
- 2. The Partner shall protect the European Commission, the Education, Audiovisual and Culture Executive Agency (EACEA), the Coordinator and their personnel against any action for damages suffered by third parties, including project personnel, as a result of the performance of this contract, to the extent that these damages are not due to the serious or intentional negligence







Article 4/Obligations of the Partner

The Partner shall undertake:

- 1. To take all the steps necessary to prepare for, perform and correctly manage the work programme set out in this contract and in its annexes, in accordance with the objectives of the project as set out in the Agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA concluded between the Education, Audiovisual and Culture Executive Agency (EACEA) and the Coordinator;
- 2. To comply with all the provisions of Agreement n° 612424-EPP-1-2019-ES-EPPKA2-KA binding the Coordinator to the Education, Audiovisual and Culture Executive Agency (EACEA);
- 3. To communicate to the **Coordinator** any information or document required by the latter that is necessary for the management of the project.
- 4. To accept responsibility for all information communicated to the **Coordinator**, including details of costs claimed and, where appropriate, ineligible expenses.
- 5. To define in conjunction with the **Coordinator** the role and rights and obligations of the two parties, including those concerning the attribution of the intellectual property rights.

Article 5/Financing

The total cost budgeted by the Parties for the implementation of the part of the Project by the Partner for the period covered by this contract is estimated at 35.250,00 EUR.

Article 6/Payments

1. Subject to the conditions stated below, the **Coordinator** commits himself to carrying out payments relating to the subject matter of this contract to the **Partner** according to the achievement of the tasks within 30 calendar days after receiving the payment and according to the following schedule:

1 st payment	€ – 40%	Within 30 calendar days after signing this
1 payment		agreement.
		Within 30 calendar days after the reception of
2 nd payment	€ – 20%	the 2 nd pre-financing payment from the
		EACEA
		Within 30 calendar days after receiving from
ard .	€ – 20%	the partner the documents related to the
3 rd payment	E - 2076	Second Internal Report covering from
		1/07/2021 until 31/03/2022.
F: 1	€ – 20%	Within 30 calendar days after receiving the
Final payment		final payment from the EACEA.

Payment shall only take place if following conditions are met:

- (i) The Coordinator has previously received the relevant funds from the Education, Audiovisual and Culture Executive Agency (EACEA).
- (ii) Payment shall take place on equal terms to the **Coordinator** and all **Partners**.
- (iii) The **Partner** shall have performed at the moment of payment the tasks incumbent on time and in compliance with the guidelines and procedures established in the application form, other rules, by the **Education**, **Audiovisual and Culture Executive Agency** (**EACEA**) and the **Coordinator**.





of the EC, the Education, Audiovisual and Culture Executive Agency (EACEA), the **Coordinator** or their personnel.

Article 11/Termination of the contract

The Coordinator may terminate the contract if the Partner has inadequately discharged or failed to discharge any of the contractual obligations, insofar as this is not due to force majeure, after notification of the Partner by registered letter has remained without effect for one month. The period of notice is 30 days and it starts on the first day of the calendar month following after delivering the notice to the other contractual party.

1. The Partner shall immediately notify the Coordinator, supplying all relevant information, of any event likely to prejudice the performance of this contract.

Article 12/Jurisdiction clause

- 1. Failing amicable settlement, the Court of Madrid shall have sole competence to rule on any dispute between the contracting parties in respect of this contract.
- 2. The law applicable to this contract shall be the law of Spain.

Article 13/Intellectual property

- 1. The property of the project results, including intellectual property rights, of the relationships and of the other documents related to it are reserved for the Project consortium members.
- 2. Without prejudice to the provisions under Article 14.1., the Coordinator grants the Education, Audiovisual and Culture Executive Agency (EACEA) and the European Commission the right to use the project results at their discretion, provided that this does not entail a violation of the confidentiality obligations or of the pre-existing intellectual property rights.
- 3. Any marketing and/or commercial use of the products, documents and results produced within the Project framework is strictly forbidden.

Article 14/ Amendments or additions to the contract

Amendments to this contract shall be made only by a supplementary Agreement signed on behalf of each of the parties by the signatories to this contract.

Annexes

- Detailed budget relating to the activities of the **Partner** I.
- Percentage for financial liability and reimbursement rate II.
- Detailed project tasks and activities of the partner III.
- IV. Project Application Form







SIGNATURES

For the Coordinator

For the Partner

Juan Virgilio Márquez López, General Director

ASOCIACIÓN EMPRESARIAL EÓLICA

(AEE)

Ángel Budia García, Financial Director ASOCIACIÓN EMPRESARIAL EÓLICA (AEE)

Done at Madrid

, Date: 16/03/2020

Rodolfo Silveira, Board of Directors Universidad Tecnológica – UTEC, "UTEC"

Graciela Do Mato, Board of Directors Universidad Tecnológica – UTEC, "UTEC"

Done at

Joseph

, Date: 22/01/2020



Annex I DETAILED BUDGET RELATING TO THE ACTIVITIES OF THE PARTNER

Budget Summary

Budget items	Total per project, in Euros
1. Work packages (WPs)	
1.1. WP1 Project Management	3.070 €
1.2. WP2 Training course general structure and definitions	6.010 €
WP3 Module A: Digitalisation approach, definition of tasks and time schedule	770 €
1.4. WP4 Module B: General description and critical components	7.700€
1.5. WP5 Module C: Maintenance	9.240 €
1.6. WP6 Module D: Life extension, repowering and dismantling	0€
1.7. WP7 Pilot experiences and follow up	3.850 €
1.8. WP8 Project evaluations & quality control	770 €
1.9. WP9 Dissemination and Exploitation	3.840 €
Fotal Granted (I. – II.)	35.250€







Annex II PERCENTAGE FOR FINANCIAL LIABILITY AND REIMBURSEMENT RATE

Heading	AEE	8.2	BZEE	DP2i	INESCTEC	TESICNOR	TUDELFT	NCLM	NCY	UTEC	SGS
Working											
Packages											
WP1	39.060€	4.720 €	4.720€	4.720 €	2.880 €	2.880€	5.295€	2.880 €	2.880€	3.070€	23.020 €
WP2	10.640€	31.125€	13.530 €	10.700€	10.550 €	13.785 €	13.550 €	12.145 €	3.845 €	6.010€	8.580 €
WP3	9.000€	90	€	11.275€	90	33.570€	10.340 €	5.720 €	€	770€	5.720 €
WP4	10.030€	90	90	9.020 €	90	9.565 €	27.990 €	10.550 €	10.550 €	7.700€	5.720 €
WP5	10.030€	20.030 €	€	8.050 €	10.550 €	9.120€	10.340 €	32.210 €	€	9.240 €	5.720 €
WP6	8.135€	10.700€	90	29.370 €	€	9.565€	90	9.565 €	€	90	5.720 €
WP7	24.705€	4.405€	13.530 €	4.510€	8.135 €	10.995 €	10.340 €	8.580 €	9.565€	3.850 €	8.580 €
WP8	7.780€	2.255 €	2.255 €	2.255 €	1.430 €	1.430 €	2.585 €	1.430 €	1.430€	770€	13.450 €
WP9	15.830€	21.320 €	43.425€	14.735 €	11.965 €	15.365 €	13.175 €	15.365 €	12.950 €	3.840 €	13.935 €
Total	135.210€	94.555 €	77.460 €	94.635€	45.510 €	106.275 €	93.615 €	98.445€	41.220€	35.250€	90.445€
LIABILITY %	14,8%	10,4%	8,5%	10,4%	2%	11,6%	10,3%	10,8%	4,5%	3,9%	%6'6

Annex III DETAILED PROJECT TASKS AND ACTIVITIES OF THE PARTNER

This annex summarizes the work packages, tasks and activities that are direct responsibility of the partner and in case of unfulfillment it would be considered a breach of this contract that could affect the payment of the project costs assigned to the partner and it would be done accordingly to its involvement in the project.

Work Package 1 - Project Management

All the consortium members are involved in this WP which serves to the coordination and management of the project from both the administrative side and the technical side.

UTEC tasks are:

- T1.2 Setting up the Management Committee.

 Providing 3 representatives to the Management Committee of the project: A project general manager, and administrative and monitoring responsible and a communication/dissemination officer.
- T1.4 Transnational meetings. Attending the 6 expected Transnational meetings to be held during the project lifetime and all the videoconferences organized to follow-up on specific tasks.
- T1.6 Financial and administrative Reporting.

 Providing a financial and activity report every 9 months according to the reporting procedure described in the administrative guidelines.

Work Package 2 - Training course general structure and definitions

The main goal of this WP is to identify the teaching techniques, timeframe and target groups in order to do a proposal of a first course structure that will serve as base to the training standard.

Furthermore, the involvement of UTEC has to serve to adapt to the materials to a different scenario as well as to promote the outcomes to the LATAM countries. Uruguay is a small country but there are five different technologies installed in the country. For this reason, the contribution form UTEC will be addressed to identify the specificities of the Uruguayan and LATAM countries from the cultural and legal sides.

UTEC is responsible of providing information for the four reports to be delivered according to the following tasks:

- T.2.1 Evaluation of the operation and maintenance market
- T.2.2 Elaboration of a new structure of the training course, defining priorities and dissemination activities
- T.2.3. Identification of the topics where digitalisation is going to be most appropriate.
- T.2.4 Evaluation of the reinforcement of business opportunities by the use of advanced digital tools.

Work Package 3 - Module A: Digitalization

WP3 goal is to define the digitalization procedures that will be structured in 5 different tasks.

UTEC tasks in this WP will be to provide information for the different reports according to its experience in this topic. The tasks of the WP are:

- T.3.1. Evaluation of the existing digital/simulators tools and more specifically the outcomes of SIMULWIND project
- T.3.2. Identification of the main challenges to define the contents selected in WP3







- T.3.3. Evaluation of the difficulties to digitalise components and tools
- T.3.4 Selection of 3D Videos to complete the digital models.
- T.3.5. Procedures to follow for digitalisation in the simplest and representative way

There are some additional tasks to develop in this WP regarding the development of the contents of the Module A of the training program:

Task number	Title of the Unit (Complementary tasks)	General Content	Detailed content
A3.1	Data gathering	Selection and data gathering	 Types and data to fill the simulation models.
A3.2	Data driven assessment	Selection of data to validate the simulation models	- Operational/SCADA data
A3.3	Simulator Functional design	 User selection Presentation of tools, materials and PPEs 	 Define the main tasks to be implemented Tutorial and guidelines
A3.4	Development of the standard WTG model	WTG Model to be integrated	 Identification of the components to be modeled Rendering of those components
A3.5	Simulator development	Digital product to be integrated in the training courses	 Development of the simulator Identification of the main practices to be integrated
A3.6	Selection of tools to be digitalized	Simplified but sufficiently representatives of the maintenance tasks	 Definition of tools and elements to be digitalized Procedures to integrate with the maintenance materials and components to replaced/repaired
A3.7	Creation of business opportunities in digitalization	Definition of the methodology to create sustainable companies in this field	 Selection of the most appropriate products considering the market opportunities and the customer answer Evaluation of competitors Selection of the most appropriate commercial strategies

Work Package 4 - Module B: General description and critical components

This WP is concentrated in the definition of the general components of the WTG as well as of the WF and the identification of the most critical ones to extend the WF life.

This will be done through the development of simulation models and software as well as online lectures, exercises and coursework.

UTEC will participate in the following tasks within this WP:

- T. 4.1. General Identification of the main elements Providing information that identifies the main elements of the WTG and the WF to be part of the training contents
- T. 4.2. Outline structure of Module A teaching material UTEC will help the leader of this WP to decide on the content and structure of what is to be taught in Module A in order to cover the course contents ian a logical and easily accessible way.
- T.4.3. Develop written materials





Helping to produce written materials following the course outline in a combination of pdf and web-page interactive material.

- .4.4. Develop software for turbine and farm simulations UTEC will collaborate in the development of a software to adapt the course contents to a simulation -based environment.
- T4.5 Produce online materials, including lectures Developing online lectures will be developed which are engaging and also interactive allowing the course participant to pause the lectures and attempt online exercises linked to the lectures.
- T.4.6 Develop remote teaching lab UTEC will help in the development of a remote teaching lab that will help participants to understand the turbine operation, performance and loading.

There are some additional tasks to develop in this WP regarding the development of the contents of the Module B of the training program:

Task number	Title of the Unit (Complementary Tasks)	General Content	Detailed content	Digitalisattion
В 4.1	Introduction to the training course	General presentation of the course	 Objectives of the course Contents and structure Forum of discussion of the participants Hangout sessions to directly ask of specific questions to the professors Self-evaluation procedures 	Online
В 4.2	Basic concepts-1: WTG (Wind Turbine Generator) components	Presentation of the general concepts related to the wind turbines, detailed description of the different components	 Main WTG components: Rotor and blades Drive transmission Electrical Power electronics Tower and foundations 	Digitalized
В 4.3	Basic concepts-2: WTG (Wind Turbine Generator) operation modes	Function of the components and typical loads	 Main loads affecting to the wind turbine operation Procedures to reduce stresses 	Digitalized
В 4.4	Basic concepts-3: WF (Wind Farm)	Description of the structure and main components of a wind farm	 Wind Farm Layout Access roads Cables dips WTG platforms 	Online
В 4.5	Basic concepts-4: WF (Wind Farm)	Electrical components of the WF Balance of Plan (BOP)	 Internal electrical grids Electrical equipment Substation 	Online
В 4.6	Fault trees	Examples of WTG fault trees	 Trees to present the fault up to root cause Different kind of fault trees 	Online
B 4. 7	Typical failures	Most common failures	 Presentation of some failures affecting to the wind turbine life Failures in the WTGs following the fault trees 	Online
В 4.8	Metrics	Procedures to evaluate the wind farm performance	 Most common metrics used Their evolution to follow the availability loss 	Online
В 4.9	Contractual models	Different types of contracts, which could affect to the WF operation	 Full service Big correctives Small correctives 	Online







Work Package 5 – Module C: Maintenance

This WP is focused in developing training materials for the Maintenance module of the course. The WP5 leader is in charge of gathering the information from different entities among which is UTEC.

UTEC tasks in this WP are to provide with the required information to the WP leader to produce the following reports:

- R5.1. Report on the Types on maintenance strategies
- R5.2 Report on the Condition and Structural Monitoring.

There are some additional tasks to develop in this WP regarding the development of the contents of the Module C of the training program:

Task number	Title of the Unit (Complementary Tasks)	General Content	Detailed content	Digitalisattion
C 5.1	Reviews and reparation of : BLADES	Evaluation of the blades state Main reparation actions	 Analysis of the present blade situation Proposal of solutions by complexity level 	Concentrated on surface and blades fitting
C 5.2	Reviews and reparation of: GEARBOXES	Review of the gearbox situation Dismantling of gears and the gearbox as whole	- Review of gears - Oil analysis - Bearings	Dismantling Videoscopies procedures
C 5.3	Reviews and reparation of: MECHANICAL TRANSMISSION	Evaluation of the main mechanical components	- Main shaft - Low speed shaft - Bearings	Nondestructive tests
C 5.4	Reviews and reparation of: ELECTRIC	Evaluation of the electric components	GeneratorTransformerSwitchgear	Online
C 5.5	Reviews and reparation of: POWER ELECTRONICS	Analysis of power electronics and mainly the converter	- Converter - Condensators - Crow bars - Pic/control	Online
C 5.6	Reviews and reparation of: FOUNDATIONS	Evaluation of the civil works state	Review of cracks and defaults Proposal of solutions	Online
C 5.7	Reviews and reparation of off-shore	Specificities of the off-shore maintenance	Specific maintenance of critical components Dismantling	Main components
C 5.8	Off-shore access	Manpower and logistics	 Procedures to access Use of cranes 	Only access
C 5.9		Identification of the best methods to consolidate business	 Selection of the most appropriate products Procedures to optimize costs Follow up and feed back 	Online
C 5.10	New husiness apportunities	Methods to create new opportunities in the maintenance field	 Main lessons learned Selection of the products Creation of a business plan Follow up and feed back 	Online

Work Package 6 - Module D: Life Extension, Repowering and Dismantling

UTEC is not involved in WP6.

Work Package 7 – Training program Pilot experiences and follow up

This WP is intended to assure the training program meets the demands of the target groups. To do so, several partners will perform a series of pilot tests to present the WINDEXT training program and get their feedback.

UTEC tasks in this WP are:

- T7.1: Selection of the KPIs of the pilot tests and definition of the procedures In a first stage, UTEC will collaborate with the rest of partners agreeing what are the KPI's to perform the quality control of the training program, defining the procedures of pilot tests and helping to set the types of questionnaires and methodology of the pilot tests.
- T7.4 Final modifications to the training program

If UTEC is among the partners appointed in the final report of the activity 7.3, it will execute the changes outlined in this report, if feasible.

Finally, the partners appointed will have to inform to the consortium what changes have been applied. If some of them were not done (completely or partially), an explanation of the reasons will be issued by the responsible partner.

Work Package 8 – Project evaluation & Quality control

The main objectives of this WP are

- To monitor the project process.
- To evaluate the main deliverables quality against the project planning.
- To ensure that the project objectives are met with the required quality standards meeting the deadlines
- To analyse the project risks and foresee mitigating and corrective measures.







SGS leads this WP with the close collaboration of all the project partners and especially of the members of the Management Committee (MC), which will monitor the project throughout its phases.

The specific tasks of UTEC in this WP are:

• T8.5 Activity reports: Every 9 months UTEC will send to AEE and SGS an activity report.

Work Package 9 - Dissemination and results exploitation

This WP package main objective is to give visibility to the project and its major results, to create networks and promote the participation of stakeholders in the project activities, as the training contents we intend to develop will be done starting from the needs expressed by them.

UTEC tasks in this WP are:

- T9.2. Database of stakeholders & beneficiaries (DSB): UTEC will provide 30 contacts to create the database in the first year and 20 each subsequent year.
- T9.3. Web construction and feeding. UTEC will be responsible for contributing with news and information of European dimension and a regular update in its own language.
- T9.6 National WINDEXT dissemination events. UTEC tasks will be to promote the National events through the project website, different social networks, DBS, articles on specialized press, etc. and to organize a National Event in Uruguay with at least 30 attendees.
- T9.7 European WINDEXT Final Conference. UTEC tasks will be to promote the Final event in Madrid through different channels like the project website, different social networks, DBS, articles on specialized press, etc.

Leociela Do Heen

Annex IV PROJECT APPLICATION FORM

