Erasmus+ KA2 Capacity Building in Higher Education

Annex V - Technical Implementation Report
(Progress report on implementation of the action)

Annex VI – Financial Statements
(Statement of the costs incurred and Request for Payment)

561735-EPP-1-2015-1-PT-JP
(Project No. / Agreement No.)

Reports and Pre-financing	Deadlines
• Progress report on implementation of the action (Annex V) • Statement of the costs incurred and Request for payment (Annex VI)	When 70% of the 1st pre-financing has been spent but not later than **15 October 2016** for 2 year projects **15 April 2017** for 3 year projects

Structure of the Report

Annex V	Declaration
	Narrative sections
	Statistics and Indicators
	Example showing how to fill in the tables of achieved/planned outcomes
	Table of achieved/planned results
	Check-list
Annex VI	CBHE 2015 – Annex VI - Financial Statements (Excel file)

Please send Annex V and VI (word and excel file) according to the following instructions:

a) Two paper copies: one original (with original signatures) and one copy; sent by the deadline by registered mail (date as per postmark) to:

Education, Audiovisual and Culture Executive Agency (EACEA)
Erasmus+ : Higher Education - International Capacity Building (Unit A4)
Mr Ralf Rahders
Head of Unit
BOUR 02/17
1, Avenue du Bourget
BE-1049 Brussels

For Annex VI, please send **only** the spreadsheet "Costs incurred & 2nd prefinancing"

b) One electronic version of both files (word and excel) to be sent to EACEA-EPLUS-CBHE-PROJECTS@ec.europa.eu when submitting the paper versions of the report.

For Annex VI, you must send the complete excel file.

An electronic Acknowledgement of receipt message will be sent via email upon reception of the paper copies.

DECLARATION

This declaration should be completed and signed by the following people:

1. the contact person at the Coordinator (institution);

2. the person who is legally authorised to represent the Coordinator (institution).

We, the undersigned, certify that we have submitted all the required documentation, including the documents mentioned in the checklist.

We certify that the information given in the "Progress report on implementation of the action" and the "Statement of the costs incurred and Request for payment" is correct to the best of our knowledge and complies with the requirements of the provisions of Article I.4 and II.23 (Annex II) of the Grant Agreement.

Furthermore, we confirm that the information provided has been compiled in close cooperation with all the Beneficiaries who have received a copy of all the documents submitted hereby.

We are aware that amendments to these documents will not be accepted after the date of submission.

Name of the Coordinator (institution): Instituto Politécnico do Porto (IPP).....

Name of the contact person of the Coordinator	Name of the legal representative of the Coordinator
Gustavo Ribeiro da Costa Alves…….	Carlos Fernando da Silva Ramos……..
Position: Adjunct professor	Position: Vice-President for International Affairs ..
Place: Porto, PORTUGAL	Place: Porto, PORTUGAL.....
Date: 28th October 2016.....	Date: 28th October 2016 .....
Signature:	Signature: .....

Stamp of the Coordinator (institution):

NARRATIVE SECTIONS

This document comprises the following narrative sections:

Section 1	**Quality of the project implementation**
Section 2	**Impact and sustainability**
Section 3	**Quality of the cooperation**
Section 4	**Relevance**
Section 5	**Horizontal issues**

It is mandatory to complete all sections in full and to address all the questions applicable to the project.

Guidance notes on completion of the sections are found within the sections themselves.

SECTION 1: QUALITY OF THE PROJECT IMPLEMENTATION

1) Activities implemented

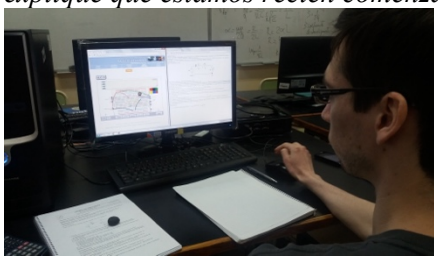
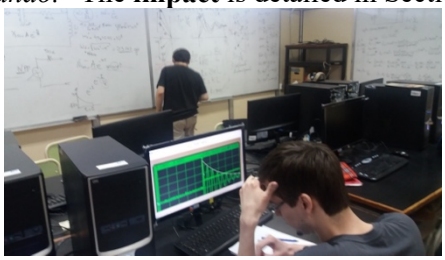
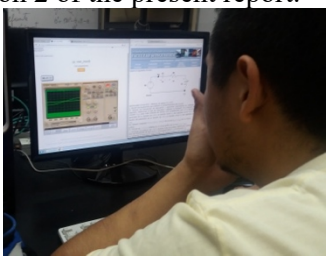
Summarise the activities implemented so far addressing in particular the following issues:

- Extent to which these activities are in line with (or diverge from) the work programme, timetable and partners' share of responsibilities presented in the application;
- The applicability, added value and impact for the partner countries involved of the activities implemented so far
- Describe any obstacle/difficulty encountered and the measures taken to address them.

Maximum 3800 characters

All the activities done in the reported period are fully described in the five tables of achieved/planned results, and are in line with the project proposal work programme and partners' share of responsibilities. The major issue is related to the VISIR acquisition and installation, which is delayed in four, out of the five project partner institutions that will receive this system. The causes for the delay are related to bureaucratic difficulties faced in Latin America, such as customs clearance and taxes exemption. Nevertheless, as all the European partners have a VISIR system and given its remote nature, no delay was caused in Training Action 2 and in the 1st didactical implementations, part of WP 2.

The **applicability**, **added value** and **impact** for the partner countries involved of the activities implemented so far are a major, and objectively verifiable, aspect of the this project. Regarding **applicability**, a number of project partner institutions are already using the VISIR remote labs, installed in the programme partner institutions of Higher Education, in selected courses (in electrical and electronics Engineering). The Pontifical Catholic University of Rio de Janeiro is already using its own VISIR system, acquired and installed with the support of the VISIR+ project, in a number of courses, as reported in table Work Package 2, Activities carried out to date, Activity Nº 2.2. The **added value** is measured against the students' acquisition of experimental skills, following a scaffolded process that combines simulations, hands-on, and remote labs. This process follows an enquiry-based teaching and learning methodology that promotes students' autonomy, based on the use of technology-enhanced educational tools (i.e. simulations and the VISIR remote lab). An example of the applicability and added value of VISIR comes from a teacher (Alejandro Colombo) who immediately used it (http://www.ing.unp.edu.ar/electronica/asignaturas/ee016/), with his students, after attending Training Action 2, held at the National University of Rosario (UNR), Argentina and delivered by Javier García-Zubía and Unai Hernández-Jayo, from the University of Deusto, Spain, from 12-15 September 2016: "*... hace media hora terminamos de realizar la experiencia utilizando VISIR+ sobre el circuito RLC. Resultado muy pero muy bueno!!!. Los alumnos se adaptaron al uso en forma rápida, resultó efectivamente muy intuitivo y se desempeñaron sobre la protoboard sin inconvenientes, entendieron rápidamente cómo trabaja el laboratorio remoto, no tuvieron ningún problema a la hora de configurar los instrumentos, de hecho en más de una oportunidad se adelantaban a mis indicaciones. Se completaron todas las experiencias y los alumnos trabajaron en el mismo ámbito (sala de computadoras) cada uno en forma independiente. Ya me han expresado interés de poder realizar todos los laboratorios utilizando VISIR. Les pedí un poco de paciencia y les expliqué que estamos recién comenzando.*" The **impact** is detailed in Section 2 of the present report.

The **major difficulty** related to equipment acquisition is being tackled in different ways, according to the partner institution's country, legal status, and dimension. PUC-Rio (Brazil), a private, non-profit institution had no problem in acquiring the equipment in the planned timing. UFSC (Brazil), a federal public university already received part of the equipment, the other part is retained in customs, due to a strike. IFSC (Brazil), a federal, public, technical university is currently ordering the equipment, and the two national, public universities in Argentina (UNR and UNSE) are currently pending on legal authorisations for tax exemption in the equipment acquisition process.

2) Quality Assurance measures

Please describe the quality assurance (QA) measures applied to the activities implemented so far as well as the measures foreseen for upcoming activities.
You should address in particular the following elements:

- Provide the electronic link to the project quality assurance plan, if available;
- Describe the functioning of the internal QA (i.e. composition of the team(s), roles and actors involved; type and frequency of measures envisaged; feedback mechanisms in place; etc.), the measures already implemented and the remedial actions taken if any;
- Describe the functioning of the external QA (i.e. identity of the external evaluator(s) and criteria used for their selection; type and frequency of measures envisaged; feedback mechanisms in place; etc.), the measures already implemented and the remedial actions taken if any;

Maximum 3800 characters

In VISIR+, every project activity of the preparation and development work packages, 1 and 2, respectively, is covered in the Quality management work package 3. This is depicted in the Framework matrix for Quality Management available through this link. Regarding the implemented activities, both the Training Action 1 and the Training Action 2 have been evaluated through Satisfaction questionnaires. The reports are available through the project Dropbox folder (direct links are provided within this intermediate report, see work package tables). The technical workshops delivered during the VISIR system installation are not yet evaluated, as only one was delivered at PUC-Rio (although data was collected). After all 5 VISIR systems are installed and the technical workshops delivered, a final evaluation of this activity will be made.

The 1st, 2nd, and 3rd implementations of the VISIR remote lab will also be assessed in quality terms. At this moment, only PUC-Rio has been able to report on the 1st implementation, through an internal report and also through a technical paper presented at the XLIV Congress of the Brazilian Association for Engineering Education (COBENGE2016).

The internal QA is a responsibility of IRICE-CONICET, the project partner leading the Quality management work package 3. María Isabel Pozzo and Elsa Dobboletta, from IRICE, have attended both the Training Action 1 (held in conjunction with the KOM, in Karlskrona, Sweden) and all occurrences of the Training Action 2 (held in Rio de janeiro, Araranguá, Florianopolis, Rosario, and Santiago del Estero), for evaluation purposes. The evaluation reports were then presented to and discussed with the project consortium during the 1st midterm general meeting, held in Porto and Vila Real, Portugal, 18-22 October 2016. Clara Viegas, Arcelina Marques, and Natércia Lima have been assisting IRICE's team in this task, given their experience in Engineering Education. The recommendations that form part of the TA2 evaluation report will be taken into account by the LA partners that will deliver the Training Action 3, at the premises of their associated partners.

The pros and cons of having an external QA were discussed in one of the Management Board web meetings. It was decided to postpone a final decision, depending upon the sort of feedback obtained from internal QA procedures. Additionally, the consortium considered that the review feedback from scientific papers submitted to conferences and journals would also help ascertaining the project quality dimension. To this respect, and although the project has only been running for 1 year, it is worth mentioning the following publications, which have been peer reviewed:

"*Spreading the use of remote lab VISIR over Latin America: VISIR+ Project – Preliminary results of the training actions*", abstract accepted for REV2017 (http://www.rev-conference.org/REV2017/); full paper version is due 21 November 2016.

"*Spreading remote labs usage: A System – A Community – A Federation*", 2nd International Conference of the Portuguese Society for Engineering Education (CISPEE2016), Vila Real, Portugal, 20-21 October 2016. **Best Paper award**.

"*Electronics remote lab integration into a MOOC – Achieving practical competences into MOOCs*", The Online, Open and Flexible Higher Education Conference (OOFHEC2016), organized by the European Association of Distance Teaching Universities (EADTU), Rome, Italy, 19-21 October 2016.

3) Project Visibility

- Please indicate the address of the **project website** and describe briefly its structure (including the purpose and content of sections restricted to the beneficiaries), the maintenance and updating plan in place, as well as the actions implemented for ensuring its visibility to all interested stakeholders.
- Describe and, if applicable, provide the electronic link to any information and support material produced by the project for visibility and promotion purposes.
- Explain how the consortium ensures that the visibility, exploitation and publicity obligations described in the grant agreement (*art. I.10.8, I.10.9*) are respected.

Maximum 3800 characters

The address of the project website is http://www2.isep.ipp.pt/visir/. The following pages form the structure: "Home"; "Consortium"; "KOM"; "Training Action 1"; "General Meeting 1"; "EU Docs"; and "Contact us". The rationale is to update the structure with the activities that will be done until the project end date, i.e. "Training Action 2" (information is still being compiled); "Educational modules"; "Training Action 3"; "General Meeting 2"; "Final meeting"; and "Dissemination". The project website is regularly updated by one member of the IPP project team.

Besides the website created by the project coordinator, some partners have also created web pages for disseminating information about the project, e.g. PUC-Rio - http://www.maxwell.vrac.puc-rio.br/VISIR/index.html.

The consortium has also agreed to create a Dropbox folder for sharing documents and information (e.g. personal contacts). Depending on the needs (e.g. intermediate report), it is possible to use a direct link to one document or one entire subfolder. There is also a close group, created in Facebook, which is used to share photos and videos among project elements, thus reinforcing strong social bounds among them. A Google Drive folder was also created by IRICE-CONICET for sharing documents and allowing a collaborative editing effort, among project partners.

The coordinator has also created a Project page in https://www.researchgate.net/project/VISIR. The page is update regularly with scientific publications about the project.

In addition, both the coordinator and one of the project members from PUC-Rio use their YouTube channels to share videos about the project, e.g. https://www.youtube.com/watch?v=ZmOOgfc9_Kk and https://www.youtube.com/watch?v=bQjJkFjl8R0 (both in Portuguese).

Furthermore, whenever appropriate, the project partners institutional websites are used to disseminate information and news about the project. The following list contains examples from IPP, ABENGE, BTH, UFSC, UNR, UDeusto, CUAS, UNSE, and IFSC. This action allows the project to be visible for the whole institution, thus reinforcing the motivation of the individuals or group working on it.

http://www.isep.ipp.pt/New/ViewNew/5111
http://abenge.org.br/noticias/abenge-participa-de-projeto-de-cooperacao-internacional-erasmus-de-inovacao-e-intercambio-em-educacao-
https://www.bth.se/eng/nyheter/conference-laboratory-work-internet/
http://rexlab.ufsc.br/news/?p=295
http://web.fceia.unr.edu.ar/es/tramites-mesa-de-entradas/88-novedades/noticias-de-la-fceia/887-capacitación-en-el-marco-del-proyecto-erasmus-visir.html
http://ingenieria.deusto.es/cs/Satellite/ingenieria/es/facultad-ingenieria/agenda-ingenieria/capacitacion-en-el-marco-del-proyecto-erasmus-visir/noticia
https://www.fh-kaernten.at/en/startpage/newsdetails/online-labs-for-brazil-and-argentina/
http://fce.unse.edu.ar/fceyt/es/content/se-dictará-taller-internacional-en-la-facultad
https://linkdigital.ifsc.edu.br/2016/09/02/36793/

As for visibility, exploitation and publicity obligations described in the grant agreement (art. I.10.8, I.10.9) the following images provide examples of compliance:

Keynote presentation at COBENGE2016
28.09.2016, Natal, RN, Brazil

Presentation at CISPEE2016
21.10.2016, Vila Real, Portugal

Poster@CyT2016
26.10.2016, UNR

4) Equipment

- Describe the equipment(s) already acquired by the project and, if applicable, present the timetable and type(s) of equipment still to be acquired (by and for whom).
- Justify how equipment items have been used in the project activities (for teaching, learning, research, the provision of new services, etc.) for the different target groups (specifying the nature of these target groups and the estimated number of final beneficiaries of the equipment on a yearly basis) and describe the actions implemented (/foreseen) for maximising their usage;
- Indicate where it has been installed.
- As compared to the proposal, what changes have occurred (/do you foresee) for the purchase and/or usage of equipment?

Maximum 3800 characters

The project supports the acquisition of 5 VISIR systems by 5 partner country Institutions of Higher Education, i.e. PUC-Rio, UFSC, and IFSC, in Brazil, and UNR and UNSE, in Argentina. Each VISIR system comprises the following equipment:
- 1 PXI system, manufactured by National Instruments
- 1 switching matrix, manufactured by Grepehall/Ingvar Gustavsson
- 1 Personal Computer (PC) with a PCIe expansion slot

It is possible to have different systems configurations. A minimal configuration comprises a PXI system with 4 instrumentation boards (Digital Multimeter, Oscilloscope, triple-output DC Power Supply, and a Function Generator) and a switching matrix with 7 boards. A more powerful configuration comprises a PXI system with 5 boards (adds another Digital Multimeter) and a switching matrix with 11 boards (adds one more Multimeter board and 3 new 2ComponentsBoards).

The current situation (as in 27.10.2016) is:
- PUC-Rio has acquired the minimal configuration in July 2016 and installed it in August 2016 (see http://www.maxwell.vrac.puc-rio.br)
- UFSC has acquired the minimal configuration in October 2016. The PXI system is already at UFSC premises. The switching matrix is waiting for clearance at the Brazilian customs.
- UNR has already ordered and paid for both the PXI system and the switching matrix. It is currently waiting for the result of a tax exemption request, before receiving its equipment.
- IFSC and UNSE are in the process of acquiring the whole VISIR system.

Teachers and students of the partner country institutions and their associated partners are using the VISIR remote lab in teaching and learning activities. The Training Action 2 involved more than 100 teachers. The consortium is still compiling data concerning the number of students **effectively** using VISIR. A rough estimation, at the present moment, places the number at a few hundreds. It is expected that when all 5 VISIR systems are installed more than 1000 students will be served, every semester, on a regularly basis. In order to maximise its use, the project has already engaged a number of associated partners that will use the VISIR systems installed at the LA partners, without costs.

The original proposal already mentioned the possibility to have different VISIR system configurations (see section H.2). As it was not possible to foresee the exact situation for each partner, concerning exchange rates, tax exemptions, etc., when effectively ordering the equipment, the proposed budget was set to a number that would allow different options. This means the consortium decided to go for the minimal configuration in order to speed up the process and, depending on the exact amount being spent and the acquisition process timing, it will then consider the possibility to go for the more powerful configuration, on a 2nd acquisition phase. Concerning the usage, there has been no changes.

For Curriculum Development projects

5) Bologna principles

- Explain to what extent the new curriculum takes into account the principles set out in the Bologna process (e.g. integration in the 3 cycles, definition of learning outcomes in accordance with a national or European Qualification Framework EQF, application of student-centred approaches, compatibility with European Credit Transfer System ECTS and with the European Standards and Guidelines ESGs for QA, etc.)

Maximum 3800 characters

The VISIR remote lab favours a student-centred approach, concerning the acquisition of experimental skills. It allows students to perform experiments on a 24/7 basis from anywhere (with a client device connected to the Internet). The LA partners that will receive the VISIR system will update the target courses curricula in accordance to the availability of this complementary educational resource, i.e. allow students to run a given experiment before actually doing it in a hands-on lab; to repeat a given experiment as many times as wished, after doing it in the hands-on lab; to compare results obtained from simulations, hands-on and remote lab (i.e. VISIR), etc. Likewise, teachers can also "take the lab into the classroom", for providing results from real experiments while explaining the theoretical framework and/or principles ruling the physical phenomena under analysis.

Furthermore, there will also be an emphasis in specifying the practical component of each target course in terms of the learning outcomes, specifying in particular which are better enable by simulations, hands-on, and remote labs [1]

[1] J. R. Brinson, "Learning outcome achievement in non-traditional (virtual and remote) versus traditional (hands-on) laboratories: A review of the empirical research," Computers & Education, vol. 87, pp. 218-237, 2015.

6) New/updated courses

For each of the courses intended to be developed (/updated) for the benefit of the partner country Higher Education Institutions (HEIs), specify

- The title of the course, its volume (when applicable, in ECTS),
- The HEIs (or other type of training organisation) that will include the course in their curricular/training offer, and the degree/diploma it will be part of
- The level of development reached as compared to the final product
- Describe for each of the partner countries involved, the recognition and accreditation procedures to be followed and the activities already implemented in this respect. In case the Partner Countries involved are Bologna signatory countries, explain to what extent the accreditation process will be done in accordance with the EQAR (European Quality Assurance Register) Guidelines.

Globally (i.e. for the totality of the courses intended to be developed/updated) and as compared to the proposal, express in percentage the level of achievement so far concerning

- The **development**/update tasks
- The **recognition/accreditation** tasks
- The percentage of courses already **implemented/delivered** to the target group(s)

Maximum 3800 characters

By the moment this report is being written, the requested information is being compiled concerning the 2nd semester of the Brazilian and Argentinean 2016 academic year. Concerning the 1st semester, only a small number of courses in the LA partner institutions used VISIR, mainly with the support of the European partner institutions, i.e. IFSC used the VISIR@IPP remote lab, and PUC-Rio used the VISIR@CUAS remote lab. The information is available through the following link https://www.dropbox.com/s/fvqjjxnpmvipkjw/Table%20Didactical%20Implementations.xlsx?dl=0.
The delay in the implementation stage, i.e. updating the target course curricula, is caused by the delay in acquiring and installing the VISIR remote lab in the partner country Institutions of Higher Education, as previously explained.

Teaching / Training Activities

7) Mobility for Teaching, Training and/or project research activities[2]

Describe the type and objectives of the teaching / training / research carried out and the mobility flows linked to them.
Explain the methodologies adopted by the partnership for informing, identifying and selecting the participants who have been or will be involved in these activities.

[2] Please note that this section **does not concern the mobility implemented for project management purposes**

Maximum 3800 characters
VISIR+ entails 3 Training Actions. The objectives of each training action are two folded: 1) to train the participants in effectively using the VISIR remote lab for supporting the students' acquisition of experimental skills; 2) to help the trainees developing their own educational materials for later training others teachers in using VISIR (multiplier effect).

The 1st Training Action (TA1) was held in Karlskrona, Sweden, 1-3 February 2016, in parallel with the project KOM. It targeted 2 teachers from each partner country Institutions of Higher Education (IHE) acquiring and installing the VISIR remote lab in its premises. The contact person of each Institution, i.e. PUC-Rio, UFSC, IFSC, UNR, and UNSE, selected these teachers.

The 2nd Training Action (TA2) was held at the premises of the previously mentioned partner country IHE, and was delivered by the programme country IHE that already have a VISIR system, i.e. (CUAS -> PUC-Rio; IPP -> IFSC and UFSC; UNED -> UNSE; and UDeusto -> UNR). The contact person of each hosting IHE selected its own teachers and also invited two or more teachers from the associated partners (see project proposal) to attend TA2. In addition, CONFEDI (the Argentinean Federation of Engineering Schools Deans) divided the Argentinean country in six regions and appointed one responsible, in each region, for informing, identifying and selecting additional participants, from other Argentinean Engineering Schools, to attend TA2.

The 3rd Training Action (TA3) will be held at the premises of the Associated partners (during the 2nd or 3rd quarter 2017) and will be delivered by teachers from the partner country IHEs that have already used VISIR in their courses. They will be assisted the members of the programme country IHE who delivered TA2. The participants will be informed, identified and selected with the assistance of the partner country IHEs, their associated partners, and also CONFEDI, in Argentina, and ABENGE, in Brazil.

SECTION 2: IMPACT AND SUSTAINABILITY

1) Awareness raising, dissemination, sustainability and exploitation of the project results

Explain briefly the actions already taken (as well as those envisaged until the end of the project) for raising awareness and contributing to the dissemination, exploitation and sustainability of the results achieved (/products delivered) by the project. In particular:

- Provide an electronic version of the project **Dissemination and sustainability/exploitation** if available;
- Explain the role (and commitment) taken by the partner country beneficiaries in this respect and the concrete measures taken for:
  - ensuring the visibility of the project at **all level**s (i.e. department and faculty, institution, local and regional, national, international);
  - guaranteeing the **sustainability** of the project outcomes beyond the project lifetime (specify the funding sources if known) …)
- Please add a list of realised deliverables/project products

Explain and justify any change as compared to the dissemination and sustainability measures envisaged in the application.

Maximum 3800 characters
This aspect has been partially described in Section 1, point 3) Project visibility. Two additional details concerning the sustainability and exploitation of the project should be mentioned here.
1. Following the visit of representatives from the Rectors Council of Brazilian Federal Institutes and representatives from the Brazilian Ministry of Education to the Polytechnic of Porto, on October 10th, 2016 (*), one element from the delegation contacted the project coordinator to ask for instructions on how to join the project, namely on how to acquire and install one VISIR system at his institution, i.e. the Federal Institute of Espírito Santo, ES, Brazil.
2. Following the Training Action 2 delivered at UNSE, Argentina, from 12-15 September 2016, one participating element (selected by CONFEDI) also contacted the project coordinator to ask for instructions on how to join the project, namely on how to acquire and install one VISIR system at his institution, i.e. the Regional Faculty of Buenos Aires, of the National Technical University, Argentina.
The question of enlarging the number of Institutions of Higher Education in Argentina and Brazil equipped with a VISIR system has not yet been discussed in detail, inside the VISIR+ consortium. It

should be considered at this moment that the partner country partners are still acquiring experience in using their own remote lab, where the shift towards supporting and training other institutions will only occur during the planned Training Action 3. An important aspect, worth mentioning, is that VISIR is a highly sustainable educational resource. This is evidenced by the large number of students who have been using it, e.g. a few thousands at IPP since September 2010, with very low running costs to the hosting institution (less than a few tenths of Euros per year). It is precisely this aspect (high reliability, low running costs) that favours the sustainable dimension of VISIR+.
Finally, the list of realised deliverables/project products is available from the tables respecting Work Packages 2, 3, and 4. The list is still short due to the delay partner country institutions are facing in acquiring and installing the VISIR remote lab, which effectively impairs the development of the Educational Modules that will evidence the partners experience in adapting this technology-enhanced educational resource to their course curricula.

(*) See time stamp 1:31 at https://www.youtube.com/watch?v=IN1Rwr8P5WQ

SECTION 3: QUALITY OF COOPERATION

Organisation of the project teams

1) Project management

Describe **the project management procedures** and in particular

- The process for finalising the Partnership Agreement and, if applicable, the difficulties encountered (and solutions found) in this process
- The management tools used (e.g. dashboards/roadmaps, data/information collection and sharing systems, etc.)
- The performance indicators established
- The internal communication mechanisms adopted (i.e. language, meetings, on-line…) and the decision making processes chosen.
- Explain any modification or adaptation of the project management approach as compared to the application

Maximum 3800 characters

The ERASMUS+ CBHE project coordinators meeting held in Brussels, Belgium, from 27-28 January, 2016, provided material for the VISIR+ project coordinator to share with the consortium partners, in the project KOM, held in Karlskrona, Sweden, from 1-3 February 2016. This material included guidelines about the Partnership Agreements that were discussed in the project management board meeting. The consortium decided to opt for bilateral Agreements, i.e. signed between the Coordinating Institution and each project partner. Regarding the European partner institutions there were no problems. Regarding the Latin American partner institutions there were some problems mainly due to Language (documents written in English that had to be translated into Portuguese and Spanish); institutional bank account details; and changes in the person legally responsible for the institution (e.g. proposal submitted by a certain Rector and Partnership Agreement signed by a newly elected Rector). All problems were solved at the cost of additional time and communication efforts.
The management tools used include a project Dropbox folder shared among all project members, and Google docs for collaborative work.
The performance indicators follow the original proposal, in order to allow for an effective monitoring procedure. The consortium seeks to establish relevant qualitative thresholds for the project, with public and institutional recognition being elected as important performance indicators. Examples are: i) presenting the project in TV news, and ii) obtaining recognition of excellence from peers, e.g. Best Paper award at the 2nd International Conference of the Portuguese Society for Engineering Education, among others.
The consortium established a timely meeting schedule with videoconferences every 2-3 months. Besides this formal communication mechanism – involving the members of the project management board – the Skype, mobile phone, and WhatsApp contacts of every project member are shared through the project Dropbox folder (in a private mode). The presential meetings held so far (KOM and 1st midterm general meeting) provided the opportunity to build the group, namely to create new and

strength existing interpersonal bounds, especially during social moments. This is a key aspect for a successful project implementation, as seen by the coordinator.

There are neither modifications nor adaptations of the project management approach described in the proposal. The decision mechanism was agreed in the KOM and is part of the meeting minutes.

2) Involvement of partners and stakeholders

- Describe the share of **responsibilities between partners** and in particular the role given to Partner country partners.
- Explain how **less experienced partners** are involved and, if applicable, why some partners are less (/not) involved.
- Explain how the **partner country needs** (for HEIs, the target groups or the society at large) are taken into account by the management teams
- Explain how and to what extend the Public Authorities (at national, regional or local level) from the partner countries have been involved in the project implementation. Specify their role and the nature of their contribution.
- Explain how and to what extent **students and other external stakeholders** are involved in the project management and/or implementation. Specify the type of stakeholders, their number, their role and the nature of their contribution

If applicable, explain to what extent the project contributes to increased cooperation between universities and non-academic sectors of the society?

Maximum 3800 characters

The project comprises five work packages, led by different partners (3 European, 2 Latin American). The partner country Institutions of Higher Education were responsible for locally organizing Training Action 2, with program country institutions defining the training contents and schedule. Training Action 3 will be fully organized by the partner country institutions, with the program country institutions participating as quality monitors.

Less experience partners (in terms of collaborating in European funded projects) like IFSC and UNSE were entrusted the same tasks done by other, larger and more experience partners such as UFSC and UNR. Providing the right atmosphere of group support is the key to a successful integration, allowing these partners to attain the same results, while acquiring relevant experience in ERASMUS+.

The consortium, as explained in Section 5, is gradually approaching the public authorities. Results of these dissemination and exploitation actions are expected to emerge during 2017.

Financial management

3) Management of the grant

- Describe the **grant management procedures** in place and explain how the partners have been familiarized with the rules for managing the grant.
- If applicable, describe how the specific **concerns, needs or constraints of the partners (**particularly from Partner countries) have been taken into account
- How is the project coordinator informing the consortium members on the use of the grant? Please specify the internal methodology used to communicate the financial reports on the use of the grant.
- Explain any difficulty encountered (or that could be encountered) for what concerns the management of the grant (transfer of funds to partners, reimbursement of costs, tender procedure…).

Maximum 3800 characters

The grant management procedures are fully described in the Partnership Agreements. This document was presented during the KOM and later discussed via e-mail, effectively allowing all partners to familiarize with the rules for managing the grant. In addition, the project coordinator shared the materials given during the Erasmus+ Capacity Building in Higher Education Project Representatives Meeting held in Brussels, 27-28 January 2016.

The major constraining aspects faced in the project emerge from the equipment acquisition process considering the nature of each partner (public – private, non profit), applicable national legislation, (non-) existence of a local representative of the equipment manufacturer, fixed date for calculating the exchange ratio, etc. Partner country institutions not located in central cities, like UNSE, located in Santiago del Estero, Argentina, face additional problems with the fixed travel unit cost approach.

Finally, the following aspects refer to the financial information provided in the Excel file, in specific:
- Regarding some expenses that took place close to the intermediate report submission date, due to internal procedures of several partners and suppliers, some documents could not be included before the deadline and will be added in the final report.
- The distribution of workdays per task and per work package has some inevitable differences in relation to the original proposal. These are mostly minor due to some adjustments that were necessary during the actual project implementation as well as different procedures and interpretations by individual partner institutions. The only significant difference is in the ABENGE staff due to the fact that the management board does not receive direct payment from the institution.
- CUAS spent in the period 01.01. – 30.09.2016 only 20% of the total staff costs of the project due to fact that the work of the team is related to the work of the Partner Country team at PUC Rio. Team members joined the project meeting as planned and provided a training action at PUC Rio, mentioned in the proposal as TA2. Preparation work as well as collaborative work took place in the meanwhile. More collaborative work will be repeated from now on taking into consideration the delay in delivering the hardware equipment to our Partner Country partners. Intensive support and collaborative work is planned in order to fulfil project expectations and to provide the best staff cost expenditure.

SECTION 4: RELEVANCE

1) Relevance in relation to project objectives

In comparison to the original proposal, describe **any change that may have affected the project relevance** and added value for the partner countries involved.
Explain or justify in particular:

- how the consortium dealt with internal and/or external constraints (e.g. legislative changes, labour market needs, lack of motivation/commitment of partners, lack of availability of staff, cultural differences, visa issues, exchange rate fluctuations etc.);
- to what extent the project is **still relevant to their national context** (how does it address the national strategies and policy development)
- how the activities implemented are contributing to reaching the project objectives as specified in the proposal in accordance with the following topics:
    - Improving quality of education and teaching (priority b)
    - Improving management and operation of HEIS (priority c)
    - Developing HE sector within society at large (priority d)

Maximum 3800 characters
There is a positive change regarding the added value for the partner countries, in particular in Brazil. Given the remote nature of VISIR and the increasing importance devoted to E-learning in Brazil, now also in the area of Engineering, there was a noticeable interest about the project, following the Plenary Keynote made during COBENGE2016. In particular, the Governing Body of ABENGE (the Brazilian Society for Engineering Education) asked the consortium to run a full-day workshop during COBENGE2017, in order to allow teachers from Brazil to know and practice with this remote lab, on site.

2) EU Education, Cooperation & Development policies

Explain:

- To what extent is the project aligned with the **EU Higher Education objectives** (cf Education & Training 2020, Bologna Process);
- How the project contributes to disseminating these policies and the tools attached to them (e.g. ECTS, Diploma supplement, EQF, QA, etc.) in the partner countries;
- if applicable, provide concrete examples on the project contribution to visibility and attractiveness of the **European Higher Education Area**;
- To what extent does the project contribute to the **EU Cooperation & Development policies;**

The synergies created between this project and other on-going or planned cooperation activities between the EU and the Partner Country partners.

Maximum 3800 characters

The project is fully aligned with EU Higher Education objectives, this being a particular aspect highlighted by the expert's assessment of the original proposal. The project has also attracted the attention of the Erasmus+ Office in two specific moments:

1) Mr. Clivio Casali, a program manager for the Education, Audiovisual and Culture Executive Agency (EACEA) of the European Union, visited PUC-Rio and was introduced to the project team; the team portfolio was presented to Mr. Casali as well as the main characteristics of the VISIR equipment and project.

2) Dr. Rubén Fernandez, contact person from UNSE in VISIR+, was invited to attend (and participated in) the ERASMUS+ Regional Seminar for Latin America, held in Lima, Peru, from 26-27 September 2016. https://erasmus-plus-regional-seminar-latin-america.teamwork.fr/en/programme. This allowed Dr. Rubén Fernandez to discuss, in person, project-related issues with Mrs. Eva Valle Casanova, the Project Officer assigned to VISIR+, who also attended the event.

Regarding synergies, it should be mentioned the newly approved PILAR project, funded by the ERASMUS+ Spanish Agency, which started last September 2016. PILAR will allow the VISIR nodes installed in Europe (BTH, CUAS, IPP, UDeusto, and UNED) to form a federation of remote labs, thus increasing its capacity to effectively serve a larger number of students and also offer a larger number of remote experiments.

SECTION 5: HORIZONTAL ISSUES

1) If applicable, explain how the recommendations given by the Agency (in the expert's assessment of the application, in the feedback from monitoring visits, in monitoring exchanges with the Agency, etc.) have been followed up

Maximum 3800 characters

A particular aspect mentioned in the expert's assessment of the application concerns the sustainability dimension, i.e. "*There is no evidence of the support of local or national authorities*". This particular aspect is being tackled through presentations to representatives of the Brazilian Ministry of Education, both during ministerial visits to IPP and to ministerial participations in COBENGE, as mentioned in Section 2. Regarding Argentina, the consortium is seeking a similar strategy, supported by CONFEDI, in particular in its 1st Latin-American Engineering Convention (CLADI 2017), to be held in Paraná, Argentina, 13-15 September 2017.

2) If applicable, describe how and to what extent the project addresses transversal (/cross-cutting) issues relevant for the EU and its partner countries (e.g. gender balance, sustainable development, migration, unemployment, social cohesion, etc.).

Maximum 3800 characters

The computer-mediated nature of a remote lab, such as VISIR, contributes to gender balance (there is no distinction, whatsoever, between genders) and to a sustainable development, i.e. increasing numbers of students are easily handled by the batch mode operation of this particular remote lab. Furthermore, VISIR supports both E-learning and Blended learning modalities, thus effectively contributing to the Brazilian and Argentinean realities, in terms of student population and country area (that combined together is larger than the whole area of Europe). This means VISIR facilitates the access to technology-enhanced educational tools, namely for acquiring and practising experimental skills, for students living in rural areas.

STATISTICS AND INDICATORS

This section aims to gather statistical data and indicators of performance for the period covered by this "Progress report on implementation of the action"

Main targets

	YES
Please indicate whether your project has links, targets or objectives related to	
Teacher training	✓
Vocational Education and Training	
Bachelor level	✓
Master level	✓
Doctorate level	

Training and mobilities

(please note that this section DOES NOT INCLUDE data on students/staff mobilities covered by the Special Mobility Strand component)

Enter the code of the partner country concerned in the first lines and figures in the second and third:

Training of partner country staff and students

(Country of origin: Brazil, Argentina)

Number of academic staff from the partner country's Higher Education Institutions trained/retrained

Please indicate the number of teaching staff (professors, assistants with teaching tasks, etc.) trained and/or retrained to the date of the report submission
and the percentage this represents as compared to your objectives at the end of the project

	Country Code: BR, IFSC	*Country Code: BR, UFSC*	*Country Code: BR, PUC-Rio*	*Country Code: AR, UNR*	*Country Code: AR, UNSE*
Number Male	8	31	4	18	33
Number Female	1	23	1	5	3
% compared to objectives	45	270	25	115	180

Number of non-academic staff from the partner country's Higher Education Institutions trained/retrained

Please indicate the number University administrative staff (librarians, staff from the International Office, IT specialists, etc.) trained to the date of report submission
and the percentage this represents as compared to your objectives at the end of the project

	Country Code: BR, PUC-Rio	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male	3				
Number Female	1				
% compared to objectives	200				

Number of staff from the partner country's non Higher Education Institutions trained/retrained

Please indicate the number of staff of non HEI (enterprises, NGOs, Chambers of Commerce, Government, local administration, etc.) trained to the date of report submission:

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					

and the percentage this represents as compared to your objectives at the end of the project

% compared to objectives					

Number of students from the partner countries who have attended programmes/courses developed in the framework of the project

Please indicate the number of students from the partner countries that have been trained and/or retrained in the programmes/courses developed by the project to the date of report submission:
and the percentage this represents as compared to your objectives at the end of the project

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

Academic/administrative Staff mobility

Number of partner country – programme country mobility flows of more than 2 weeks

(Country of origin:_____)

Please indicate the number of partner country staff mobility flows from the partner country to the programme country to the date of report submission:
and the percentage this represents as compared to your objectives at the end of the project

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

Number of programme country - partner country mobility flows of more than 2 weeks

(Host country:_____)

Please indicate the number of programme country staff mobility flows from the programme country to the partner country to the date of report submission:
and the percentage this represents as compared to your objectives at the end of the project

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

Number of partner country – partner country mobility flows of more than 2 weeks

(Country of origin:_____)

Please indicate the number of staff mobility flows within the same partner country to the date of report submission:

and the percentage this represents as compared to your objectives at the end of the project

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

And between two different partner countries:

and the percentage this represents as compared to your objectives at the end of the project

Number Male					
Number Female					
% compared to objectives					

Student mobility

Number of partner country – programme country mobility flows of more than 2 weeks

Please indicate the number of partner country student mobility flows from the partner country to the programme country to the date of report submission:

and the percentage this represents as compared to your objectives at the end of the project

(Country of origin:)

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

Number of programme country - partner country mobility flows of more than 2 weeks

Please indicate the number of programme country student mobility flows from the programme country to the partner country to the date of report submission:

and the percentage this represents as compared to your objectives at the end of the project

(Host country:)

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

Number of partner country – partner country mobility flows of more than two weeks

Please indicate the number of student mobility flows within the same partner country to the date of report submission:

and the percentage this represents as compared to your objectives at the end of the project

(Country of origin:)

	Country Code:	*Country Code:*	*Country Code:*	*Country Code:*	*Country Code:*
Number Male					
Number Female					
% compared to objectives					

And between two different partner countries:

and the percentage this represents as compared to your objectives at the end of the project

Number Male					
Number Female					
% compared to objectives					

Links to European Higher Education policies

Please indicate whether the project contributes to the introduction (/promotion) of one or more of the following elements in the Partner Country university(/ies).
Please include a brief comment for each of the ticked items.

	YES
Diploma supplement	
Adoption of a system based on three main cycles, undergraduate (Bachelor), postgraduate (Master) and Doctorate	
Introduction of double/multiple or joint degrees	
Establishment of an ECTS system	
Promotion of quality assurance procedures at institutional or national level	
Qualification frameworks	
Lifelong learning policies and approaches	
Modular curriculum structure	

New teaching and learning methods	✓
E-Learning	✓
University/Enterprise cooperation	
Links between the labour market and degree programmes	
Links with other EU education programmes	

EQUIPMENT:
TYPE OF EQUIPMENT ACQUIRED
list (multiple choice)
a) books and pedagogic material
b) audio-visual equipment
c) Computers and software ☑
d) lab material ☑
e) others

CONSORTIUM MEETINGS
Estimated dates of consortium meetings until the end of the projects
1) 04/06/2016 – 08/06/2016 Faro, Portugal (in conjunction with expt.at'17)
2) 1Q2018 Porto, Portugal (Final project meeting)

TABLE OF ACHIEVED / PLANNED RESULTS

Title and reference number of the work package (WP1)	*Preparation*

Indicators of achievement and or/performance as indicated in the project proposal	*Staff Trained* *Installed VISIR Systems* *Local Technicians Trained*

Activities carried out to date to achieve this result:

Activity N°	Activity Title	Start date	End date	Place	Description of the activity carried out	Specific and measurable indicators of achievement
1.1	Training Action 1	01.02.2016	03.02.2016	BTH, Karlskrona, Sweden	A group composed by one element from each program country institution delivered training action 1 to two elements (teachers) from each partner country institution.	**Attendance list**. Satisfaction questionnaire **Photos**
1.2	VISIR System Installation	01.06.2016	31.08.2016	PUC-Rio, Rio de Janeiro, Brazil	Install the VISIR system and connect it to the institutional Learning Management System (LMS).	URL of the VISIR system @ PUC-Rio Menu option “Lab Remoto” in http://www.maxwell.vrac.puc-rio.br/#
1.3	Local Technical Workshops	25.08.2016	31.08.2016	PUC-Rio, Rio de Janeiro, Brazil	Run workshop with local technicians about VISIR matrix configuration and experiments / course / users management.	Attendance list Satisfaction questionnaire Photos

Activities to be carried out to achieve this outcome (before the end of the project)

Activity N°	Activity Title	Start date	End date	Place	Description of the activity to be carried out	Specific and measurable indicators of progress
1.2	VISIR System Installation	4Q2016	4Q2016	UFSC, Araranguá, SC, Brazil	Install the VISIR system and connect it to the institutional Learning Management System (LMS).	URL of the VISIR system @ UFSC
1.2	VISIR System Installation	1Q2017	1Q2017	Rosario, Argentina	Install the VISIR system and connect it to the institutional LMS	URL of the VISIR system @ UNR
1.2	VISIR System Installation	2Q2017	2Q2017	Florianopolis, SC, Brazil	Install the VISIR system and connect it to the institutional LMS	URL of the VISIR system @ IFSC
1.2	VISIR System Installation	1Q2017	1Q2017	Santiago del Estero, Argentina	Install the VISIR system and connect it to the institutional LMS	URL of the VISIR system @ UNSE
1.3	Local Technical Workshops	4Q2016	4Q2016	Araranguá, SC, Brazil	Run workshop with local technicians about VISIR matrix configuration and experiments / course / users management.	Attendance list Satisfaction questionnaire Photo(s)
1.3	Local Technical Workshops	1Q2017	1Q2017	Rosario, Argentina	Run workshop with local technicians about VISIR matrix configuration and experiments / course / users management.	Attendance list Satisfaction questionnaire Photo(s)
1.3	Local Technical Workshops	2Q2017	2Q2017	Florianopolis, SC, Brazil	Run workshop with local technicians about VISIR matrix configuration and experiments / course / users management.	Attendance list Satisfaction questionnaire Photo(s)
1.3	Local Technical Workshops	1Q2017	1Q2017	Santiago del Estero, Argentina	Run workshop with local technicians about VISIR matrix configuration and experiments / course / users management.	Attendance list Satisfaction questionnaire Photo(s)

Changes that have occurred in this result since the original proposal:

Delay in installing all VISIR systems and, consequently, in training local technicians. The delay is due to equipment acquisition bureaucracy, in public Institutions of Higher Education (IHE), both in Argentina and Brazil. At the present moment, only the Brazilian private IHE was able to successfully acquire and have the VISIR system installed, plus its technicians trained, locally.

Title and reference number of the work package (WP)	*WP2: Development*

Indicators of achievement and or/performance as indicated in the project proposal	*Teachers Trained* *Set of educational modules, using several resources, following an enquiry-based methodology* *Midterm Development Assessment* *Enlarged VISIR Facilitators Group* *Educational Modules Content*

Activities carried out to date to achieve this result:

Activity N°	Activity Title	Start date	End date	Place	Description of the activity carried out	Specific and measurable indicators of achievement
2.1	Training Action 2	22/08/2016	23/08/2016	UFSC	Training Action 2 for local staff and teachers using the VISIR@IPP system	**Attendance list** Satisfaction questionnaires
2.1	Training Action 2	24/08/2016	25/08/2016	IFSC	Training Action 2 for local staff and teachers using the VISIR@IPP system	**Attendance list** Satisfaction questionnaires
2.1	Training Action 2	05/09/2016	06/09/2016	PUC-Rio	Training Action 2 for local staff and teachers using the local installed VISIR system	**Attendance list** **Satisfaction questionnaires**
2.1	Training Action 2	12/09/2016	16/09/2016	UNSE	Training Action 2 for local staff and teachers using the VISIR@UNED system	**Attendance list** Satisfaction questionnaires
2.1	Training Action 2	13/09/2016	15/09/2016	UNR	Training Action 2 for local staff and teachers using VISIR@UDeusto system	**Attendance list** Satisfaction questionnaires
2.2	Educational Modules Design	20/01/2016	30/10/2017	PUC-Rio	Discussion, definition, and proposed structure of educational modules	http://www.maxwell.vrac.puc-rio.br/labremoto.php, menu entry “Lab Remoto”. User credentials: labremoto3 Login: allare3
2.3	Midterm Checkpoint	19/10/2016	21/10/2016	CISPEE, Vila Real (Portugal)	Evaluation of the development progress of the implementations	**Implementation Educational Descriptions**

Activities to be carried out to achieve this outcome (before the end of the project)

Activity N°	Activity Title	Start date	End date	Place	Description of the activity to be carried out	Specific and measurable indicators of progress
2.2	Educational Modules Design	20/01/2016	30/10/2017	IFSC, UFSC, UNR, UNSE	Set of educational modules development and implementations	Partners' LMS pages
2.4	Training Action 3	2Q2017	3Q2017	Associated partners	Enlarge VISIR facilitators group	Attendance lists Satisfaction questionnaires Photos
2.5	Educational Modules Delivery	4Q2016		LA partners	Set of educational modules comprising the use of hands-on, simulated and remote labs	Lesson plans – training materials

Changes that have occurred in this result since the original proposal:

Due to the initial delay in the project kick-off, all training actions were delayed at least one semester. The development of the educational materials is also delayed in most partners, with the exception of PUC-Rio, who already has its VISIR system working in situ.

Title and reference number of the work package (WP)	*WP3: Quality Plan*

Indicators of achievement and or/performance as indicated in the project proposal	*Data collection plan* *Implementation results* *Training Actions assessment results*

Activities carried out to date to achieve this result:

Activity N°	Activity Title	Start date	End date	Place	Description of the activity carried out	Specific and measurable indicators of achievement
3.1	Data Collection Validation	15.10.2015	31.01.2016		Plan outlining of data collection strategy, tools and methodology that will be used throughout the project	Data collection summary Framework for quality management
3.2	Data Collection	2Q2016	4Q2017	LA partners	Analysis of the implementations results and impact	Scientific papers / presentations reporting implementation results #1, #2 Project partner reports on implementation results #1
3.3	Training Actions Assessment	01.02.2016	04.02.2016		Assessment of training action 1	Report
3.3	Training Actions Assessment	15.09.2016	31.10.2016	LA partners	Assessment of training action 2	General report on TA2 Report on satisfaction questionnaires

Activities to be carried out to achieve this outcome (before the end of the project)

Activity N°	Activity Title	Start date	End date	Place	Description of the activity to be carried out	Specific and measurable indicators of progress
3.2	Data Collection	2Q2016	4Q2017	IPP/IRICE	Analysis of the implementations results and impact	Scientific papers / presentations reporting implementation results Project partner reports on implementation results
3.3	Training Actions Assessment	3Q2017	4Q2017	IPP/IRICE	Assessment of training action 3 and overall impact	General report on TA3 Report on satisfaction questionnaires

Changes that have occurred in this result since the original proposal:

None.

Title and reference number of the work package (WP4)	*Dissemination & Exploitation*

Indicators of achievement and or/performance as indicated in the project proposal	*Local Dissemination Events List* *Publications in International Conferences and Journals* *Exploitation Plan*

Activities carried out to date to achieve this result:

Activity N°	Activity Title	Start date	End date	Place	Description of the activity carried out	Specific and measurable indicators of achievement
4.1	Local Dissemination	18.09.2015	18.09.2015	Porto, Portugal	Present VISIR+ to a visiting group of Rectors from Brazilian Federal Institutes of Science and Technology.	PowerPoint slides (output).
4.1	Local Dissemination	29.09.2015	29.09.2015	Porto, Portugal	Present VISIR+ at the 2nd Forum on Internationalization and Mobility.	https://portal.ipp.pt/personnel/News.aspx?id=7996
4.1	Local Dissemination	15.10.2015		WWW	Project coordinator website Project partners' websites	http://www2.isep.ipp.pt/visir/ http://www.maxwell.vrac.puc-rio.br/VISIR/index.html http://weblab.deusto.es/website/projects.html?
4.1	Local Dissemination	28.12.2015	28.12.2015	Porto, Portugal	Present VISIR+ during the daily news of RTP3 (a Portuguese cable TV channel)	https://www.youtube.com/watch?v=bQjJkFjl8R0
4.1	Local Dissemination	02.02.2016	02.02.2016	Karlskrona, Sweden	Disseminate project KOM	Project Partners' websites ABENGE, BTH, CUAS,
4.1	Local Dissemination	16.06.2016	16.06.2016	Aveiro, Portugal	Disseminate VISIR+ Project at the European University Foundation (EUF) OpenSpace 2016	Event website.
4.1	Local Dissemination	20.08.2016	15.09.2016	WWW	Disseminate VISIR+ Training action 2	Project Partners' websites IFSC, UFSC, UNR, UNSE, UDeusto, Flickr, and UNSE
4.1	Local Dissemination	18.10.2016	21.10.2016	WWW	Disseminate 2nd Project General Meeting	Project Partners' websites ABENGE and IPP-ISEP

4.1	Local Dissemination	10.10.2016	10.10.2016	Porto, Portugal	Present VISIR+ to a visiting group of Rectors from Brazilian Federal Institutes of Science and Technology and the Brazilian Ministry of Education.	https://www.ipp.pt/noticias/comitiva-ministerial-do-brasil-mec-e-conif-visita-p-porto
4.2	International Scientific Dissemination	24.02.2016	24.02.2016	Madrid, Spain	Run a workshop on VISIR, which included a presentation about the VISIR+ project, during the Remote Engineering and Virtual Instrumentation (REV) conference.	https://www.flickr.com/photos/mmmcro/albums/72157663425144194/page2/ http://www.rev-conference.org/REV2016/program.php
4.2	International Scientific Dissemination	11.04.2016		WWW	Disseminate VISIR+ in social research networks	https://www.researchgate.net/project/VISIR
4.2	International Scientific Dissemination	21.06.2016	23.06.2016	Seville, Spain	Present paper about collaborative activities between IFSC and IPP, within VISIR+ (use of VISIR@ISEP node in courses run at IFSC)	See paper 46 at http://www.taee2016.org/index.php/es/actas Powerpoint presentation
4.2	International Scientific Dissemination	28.09.2016	28.09.2016	Natal, Brazil	Plenary keynote about VISIR+ at COBENGE2016	http://abenge.org.br/cobenge-2016/2015/programacao_9 Powerpoint presentation
4.2	International Scientific Dissemination	05.10.2016	05.10.2016	E-mail	International Council for Open and Distance Education (ICDE) October Newsletter	
4.2	International Scientific Dissemination	20.10.2016	21.10.2016	Vila Real, Portugal	Present paper about VISIR+ at the 2nd International Conference of the Portuguese Society for Engineering Education Awarded Conference **Best Paper**.	http://cispee2016.utad.pt/post_conference.html Powerpoint presentation
4.3	Exploitation Strategy	15.3.2016	15.3.2016	Argentina	Disseminate VISIR+ in Argentina. Invite representatives to attend Training Action 2. + info at http://www.confedi.org.ar/wp-content/uploads/2016/04/Convocatoria-Participación-ERASMUS-VISIR-CONFEDI-2016.pdf	http://www.confedi.org.ar/erasmus-visir-convocatoria-abierta-hasta-el-15-de-abril/

Activities to be carried out to achieve this outcome (before the end of the project)

Activity N°	Activity Title	Start date	End date	Place	Description of the activity to be carried out	Specific and measurable indicators of progress
4.1	Local Dissemination	4Q2016	2Q2017	WWW	Disseminate installation of VISIR nodes at UFSC, UNR, UNSE, and IFSC	News at institutional websites, social media, press, etc.
4.1	Local Dissemination	04.06.2017	08.06.2017	WWW	Disseminate 2nd General project meeting	Institutional websites
4.1	Local Dissemination	2Q2017	3Q2017	WWW	Disseminate Training Action 3	News at institutional websites, social media, press, etc.
4.1	Local Dissemination	1Q2018	1Q2018	WWW	Disseminate Project final meeting	Institutional websites
4.2	International Scientific Dissemination	15.03.2017	17.03.2017	New York, USA	Present results of VISIR+ implementation activities at REV 2017	http://www.rev-conference.org/REV2017/
4.2	International Scientific Dissemination	04.06.2017	08.06.2017	Faro, Portugal	Run a workshop on VISIR+ activities and results at exp.at'17	http://expat.org.pt
4.2	International Scientific Dissemination	13.09.2016	15.09.2016	Paraná, Argentina	Present VISIR+ activities and results at CLADI 2017	http://www.confedi.org.ar/portfolio/1o-congreso-latinoamericano-de-ingenieria-cladi-2017/
4.2	International Scientific Dissemination	dd.09.2017	dd.09.2017	Joinville, SC, Brazil	Present VISIR+ activities and results at COBENGE 2017. Run a workshop with participants selected by ABENGE	
4.3	Define Exploitation Strategy	1Q2018	1Q2018	Porto, Portugal	Presentation, discussion and approval of the Project Exploitation Plan at the Project Final meeting	

Changes that have occurred in this result since the original proposal:

CONFEDI did not join the project has a partner (due to PIC validation issues). It participates as an associated partner, following a project amendment that replaced it by IRICE.CONICET, in the project consortium. Nevertheless, CONFEDI maintained its commitment towards VISIR+. See http://www.confedi.org.ar/el-proyecto-elective-seleccionado-por-la-union-europea-en-el-programa-erasmus/ for additional info.

Title and reference number of the work package (WP5)	*Management*

Indicators of achievement and or/performance as indicated in the project proposal	*Management plan* *Assessment of planned activities* *Final report*

Activities carried out to date to achieve this result:

Activity N°	Activity Title	Start date	End date	Place	Description of the activity carried out	Specific and measurable indicators of achievement
5.1	Kick-off meeting	01-02-2016	03-02-2016	Karlskrona, Sweden	1st General meeting, meant to build the working group. Included the project management board meeting, with a Skype connection with the Project Officer, Mrs. Eva Valle Casanova.	Meeting minutes. Attendance list.
5.2	Project monitoring	15-10-2016	15-04-2018	Webmeetings; 1st midterm project meeting in Porto, Portugal	Project management board webmeetings (10/11/2015, 05/05/2016, 20/07/016, 20/09/2016) were held every 2-3 months, considering also presential meetings (01/02/2016 – Karlskrona, Sweden, and 19/10/2016 – Porto, Portugal).	**Partnership agreements signed between the project coordinator and all individual project partners.** Webmeeting minutes (#1, #2, #3, #4). Webmeeting video recordings (#1, #2, #3, #4). 1st Midterm project management board meeting minutes. Attendance list. Intermediate report.

Activities to be carried out to achieve this outcome (before the end of the project)

Activity N°	Activity Title	Start date	End date	Place	Description of the activity to be carried out	Specific and measurable indicators of progress
5.2	Project monitoring	15-10-2016	15-04-2018	Webmeetings; 2nd midterm project meeting in Faro, Portugal	Project management board webmeetings will be held every 2-3 months, considering also presential meetings (2nd mid term project meeting, to be held in conjunction with exp.at'17, 5-9 June 2017).	Webmeeting minutes Webmeeting video recordings 2nd Midterm project management board meeting minutes. Attendance list.
5.3	Final meeting	1Q 2018	1Q 2018	Porto, Portugal	Final meeting will conclude the project. The exploitation plan will be presented and discussed in this meeting, as well as the major lines for the project final report.	Meeting minutes. Attendance list. Final report.

Changes that have occurred in this result since the original proposal:

The project management board has unanimously agreed to simplify the formal management plan, by approving a set of rules and guidelines for the decision-making and conflict resolution processes. The rules and guidelines are part of the KOM minutes.
The project management board has identified the need to extend the project duration. The extension duration and the moment to submit the formal request to the ERASMUS+ Office were discussed during the 1st midterm project management board meeting (19-21 October 2016, Porto, Portugal). The consensual decision was to extend the project for 6 months and ask for the extension during the 1st quarter 2017.

CHECK-LIST

WHAT INFORMATION NEEDS TO BE SENT?

☒ **Declaration, duly signed by the contact person and the legal representative of the co-ordinator (institution)**

☒ **Report on implementation of the project**

☐ **Electronic versions of the QA Plan, the "Dissemination and Sustainability Plan" and any other project output that may illustrate the activities implemented**

☒ **Table on statistics and Indicators**

☒ **Table of achieved/planned results**

☒ **Statement of the costs incurred and, if applicable, the Request for Payment (excel file)**

REFERENCES

Gustavo R. Alves, André Fidalgo, Maria Arcelina Marques, Clara Viegas, Manuel Felgueiras, Ricardo Costa, Natércia Lima, Javier Garcia-Zubia, Unai Hernández-Jayo, Manuel Castro, Gabriel Díaz-Orueta, Andreas Pester, Danilo Zutin, Wlodek Kulesza, Ingvar Gustavsson, Luis Schlichting, Golberi Ferreira, Daniel de Bona, Juarez Silva, João Alves, Simone Biléssimo, Ana Pavani, Delberis Lima, Guilherme Temporão, Susana Marchisio, Sonia Concari, Federico Lerro, Rubén Fernández, Héctor Paz, Fernando Soria, Nival Almeida, Vanderli de Oliveira, Maria Pozzo and Elsa Dobboletta, "*Spreading remote labs usage: A System – A Community – A Federation*", 2nd International Conference of the Portuguese Society for Engineering Education (CISPEE2016), Vila Real, Portugal, 20-21 October 2016. **https://doi.org/10.1109/CISPEE.2016.7777722**

F. García-Loro, E. Sancristobal, M.J. Albert, R. Gil, G. Diaz, G. Alves, M. Castro. *Electronics remote lab integration into a MOOC – Achieving practical competences into MOOCs*. The Online, Open and Flexible Higher Education Conference (OOFHEC2016), organized by the European Association of Distance Teaching Universities (EADTU), Rome, Italy, 19-21 October 2016. **http://hdl.handle.net/10400.22/9567**

Luis C. M. Schlichting, José A. Anderson, Flavio Faveri, Daniel D. Bona, Golberi S. Ferreira, Gustavo R. Alves and Muriel B. Liz, "*Remote Laboratory: application and usability*", Congreso TAEE, Seville, Spain, June 2016. **https://doi.org/10.1109/TAEE.2016.7528355**

Clovis Antonio Petry, Fernando S. Pacheco, Manuel C. Felgueiras, and Gustavo R. Alves, "*Learning Objects for Demanding Themes in Electronics Teaching*", Congreso TAEE, Seville, Spain, June 2016. **http://hdl.handle.net/10400.22/9570**

Gustavsson, Ingvar; Nilsson, Kristian; Zackrisson, Johan; Claesson, Lena; Alves, Gustavo R.; Fidalgo, André V.; García Zubía, Javier; Hernández Jayo, Unai; Castro, Manuel; Diaz Orueta, Gabriel; García Loro, Felix, "*Lab sessions in VISIR laboratories*", Remote Engineering and Virtual Instrumentation (REV) Conference, Madrid, Spain, 24-26 February 2016. **https://doi.org/10.1109/REV.2016.7444499**

R.M. Salah, G. Alves, B. Datkiewicz, P. Guerreiro, I. Gustavsson, "*VISIR System @ BTH, DEUSTO, ISEP, and UNED Institutes: Assisting and Supporting Hands-on Laboratories to Serve Higher Education Students*", 8th annual International Conference of Education, Research and Innovation, Seville, Spain, 16-18 November, 2015. **https://library.iated.org/view/SALAH2015VIS**

Razwan Mohmed Salah, Pedro Guerreiro, and Gustavo R. Alves, "*A Federation of Online Labs for Assisting Engineering and Sciences Education in the MENA Region*", 3rd Technological Ecosystems for Enhancing Multiculturality (TEEM'15), Porto, Portugal, October 7-9, 2015, pp. 651 – 658, **https://doi.org/10.1145/2808580.2808680**

Alves, G., Viegas, C., Lima, N., & Gustavsson, I. (2016). *Simultaneous Usage of Methods for the Development of Experimental Competences*. International Journal of Human Capital and Information Technology Professionals, 7(1), 54-73, January-March, 2016. **https://doi.org/10.4018/IJHCITP.2016010104**