



**Gareth Long Project Management**

*Evaluation and guidance services  
for transnational projects in education*

**November 2011  
EXTERNAL EVALUATION REPORT**

**SOLTEC**

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*Gareth Long and Lydia Pavlopoulou, GLPM*

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## **1. Introduction:**

The evaluation strategy was based upon an approach that addressed the needs of all key actors involved in project activity, including both internal personnel and the target groups and end-users. The method embraced both internal and external evaluation procedures. The external and internal evaluation procedures were managed by sub-contracted consultants (Gareth Long, Annachiara Pecchini and Lydia Pavlopoulou) and by a project partner (Solidarnosc) respectively and external evaluation focused mainly on:

- \* the progress of the initiative as a contracted project**

- \* the performance of the partnership**

whilst internal evaluation focused mainly on:

- \* the actual outcomes as they are likely to benefit the end-users and wider education and training sector.**

This external evaluation is the final report of the process and follows three others: one presented in January 2010, covering the evaluation strategy, the evaluation tools and the results of the kick-off meetings, the second one presented in July 2010, reporting about the second project meeting and the partners' responses to the evaluation survey. The third document was the most detailed, covering the progress made towards the contractual outcomes and the performance of the partnership during the first year of the project and was presented to the partnership as a mid-term review before the drafting of the Progress Report. The full methodology behind the approach to external evaluation should be accessed through the reading of all these outcomes together.

**Please note: this final evaluation report has been presented early to the project in order for time to be provided to consider the key comments and recommendations and to act upon them and so it is acknowledged that the final**

forms of many outcomes will be completed in the period between October 2011 and submission of the project's own final report.

## **2. Progress made towards the contractual outcomes and respect of the project work plan:**

### **i) wp1 Management and coordination (Lead partner 1 – CGIL)**

The overall management of the project has been successful during the project duration. As identified elsewhere in this evaluation, the evaluators were interested in this project both in its own right and as a “test case” based on their experiences of the challenges of varied consortia collaborating. The starting partnership appeared ideal to realise the project effectively – there were key skills from the general vocational training field combined with those “at the front line” of delivering solar energy installation and maintenance training; and a mixture of experience in collaboration in such EU-based projects. The evaluators considered that it would be a challenge to manage such a diverse partnership and encourage it to function across national, cultural and sectoral borders without becoming too centralised in a management approach that would end up diffusing the broad range of skills and experience. Partners 1 and 2 deserve special credit for their joint leadership of the project in this respect especially. Bfw worked in close collaboration with the applicant in order to ensure good management and coordination. The division of management tasks between P1(CGIL) and P2 (Bfw) was identified during the application assessment phase as being a little unclear as P1 was indicated as the leader of WP1 but in actual fact, it was P2 taking care of the overall coordination. In order to avoid any misunderstanding and in light of the higher human resources capacities and financial management experience of P2 (Bfw) **the partnership had the intention to propose a change of beneficiary to the EACEA.** Discussions with the EACEA on this issue took place and a formal contractual amendment approved.

Bfw has utilised its long experience in vocational training and in the development of qualification programmes, especially in growing sectors such as renewable energy, as well as in running regional, national and transnational projects. This has been supported well by high levels of commitment from the partners. The external evaluators witnessed especially in the first year but also in the second, a real dynamic in terms of active discussion on the content and form of training. The partners have been encouraged to input very directly and to reinforce this with important and very relevant and topical input from the end-users with whom they have worked on a daily basis. By its very nature, this has meant significant challenges to the overall management and it is clear that a balance has had to be struck between constant improvements and updating of materials and approaches with a need to ensure that outcomes are completed on-time and in-line with what was foreseen in the original application. To achieve this and in a way that allowed for appropriate piloting and additional improvements is a very significant achievement by the partnership as a whole an indicative of effective management.

At the kick-off meeting **the partnership was made clear about the programme** and the tasks included in each WP and the related outcomes to be reached. A clear work plan was also presented and discussed to ensure effective teamwork within the consortium from the beginning of the project. The administrative and contractual requirements of such a transnational initiative have been re-visited at meetings since the first and in the periods between meetings, so that the challenges presented by some delays, the need for amendments and for example, the late developing issue of the PT partner's contribution to a module and copyright issues, have been managed as effectively as possible in the circumstances. Again, the team at P1 and P2 deserve credit for this.

**The communication among the partnership was frequent and effective** in order to keep them motivated and involved throughout the project even between meetings. It is clear that partners were not passive and felt empowered to begin new discussions or new

considerations of approaches, to re-clarify their roles and to prompt action by others that affected the progress of the work packages led by them. The issue of communication between meetings was identified as an area of concern by some of the partners in early evaluation surveys undertaken and featured in the July external evaluation report. **The extra "mini-meeting" which took place in Frankfurt in August in order to finalise the competence profile and the increase in communication between partners as well as between co-ordinator and partners was a positive response, as was continued specific skype and other meetings to address key aspects.** The co-ordinator has been proactive in "delegating" queries directed to it by partners that would be better suited to being answered by other partners. Everyone has been clear about the administrative and financial rules as well as on individual tasks concerning the implementation process. Inevitably, in the first year the approach was that each partner focused on its specific national tasks, whilst having direct input into the transnational creation of the competences and content; whilst **in the second year a strong transnational collaboration developed which was essential to achieve the expected results.** The initial hampering of some of the communication because of EN language issues experienced especially in the first half of the first year, appears to have been less of an issue in the remaining period of the project.

**The organisation and the structure of the meetings has been good in terms of planning, logistics, content and methodology chosen.** The first meeting was initially dominated by the coordinator in order to set the context and the project aims including presentations on the development of the European solar energy market, the EU objectives in the renewable energy sector until 2020 and the need for the skills and competence development of the workers in this sector. The subsequent meetings were more shared in terms of preparation and delivery of content. The active and fruitful interaction that took place since the first meeting indicated that the partnership could successfully establish a discussion methodology that proved to be a winning element to

make the project progress in an effective way. As was identified in the interim evaluation report, a particularly impressive element at the meetings **was the interventions of the invited specialists in the field of solar energy** demonstrating the potential of the project in engaging with stakeholders to bring new developments. Also, the agendas were organised in a way that encouraged active participation of all participants, with significant time dedicated to sub-group discussions regarding the development of the competence profile, national certificates and the steps to be taken towards a common structure of the module, etc.

**Administrative and financial issues have been discussed and partners have been informed about the contractual requirements.** Given the large and diverse partnership to be managed, it was clearly effective that at Bfw for example, at least 4 persons worked directly on the project, each of them with specific responsibilities in terms of finance, coordination, communication and administration matters. This type of institutional ownership of a project, and a genuine appreciation of the demands of management in such an initiative is a model for other projects to follow.

The agenda and the minutes of project meetings are detailed and published on the website. A restricted area has been created for collecting all documents linked to the management (administrative, financial, communication) and to the implementation of the WPs (methodology, guidelines etc). **However, at the time of this report (October 2011) this area urgently needs updating to include the final conference and meeting and skype meetings post January 2011.**

The partners' perceptions about the management and the progress of the project activities was monitored through an internal evaluation questionnaire distributed after each meeting and in both cases it proved the satisfaction of the partnership. This methodology has also proved to be very useful for the evaluators to make suggestions

for improvement during the implementation of the project and it is also a tool to keep the partnership committed, motivated and informed.

## **ii) wp2 Needs analysis and development of competence profile (Lead partner 5 – SREP)**

The development of this WP took longer than foreseen. After presenting a draft competence profile for installation and maintenance of PV equipment, **each partner country had to interview 5 stakeholders** to verify their needs in terms of staff qualifications and the relevance of the draft profile proposed. Partners agreed on the necessity to include multi-actors' point of view through the interviews involving 5 different perspectives:

- producers of solar components
- installation companies (developers)
- companies who promote plants (investors),
- trainers
- trade unions.
- The methodology and guidelines for undertaking the interviews were discussed in the meetings and **all partners followed a template questionnaire and a template report** in order to more easily compare the collected data. The content of the questionnaire and of the report has been prepared carefully to be relevant to the development of the curriculum and the training materials planned in the framework of this project.

Detailed comment on the results of this wp were made in the interim external evaluation report and so will not be repeated here. Instead, the recommendation is to ensure that that documents and results of the activities are fully available for assessment by the EACEA in the internal password-protected area as there is significant evidence in this process of the detailed and methodical approach – and again, evidence of the successful

balance being achieved of detailed and thorough analysis taking place on a truly transnational level and with the involvement of representatives of various sectors in the field, with a practical realisation of what can be achieved by a single project in a time-constrained working environment. At the time of this report, the link to the interview in IT was not working, there was no link to interviews in PL, drafts of the competences in PL were not available, nor the final versions in PL and PT. If the activities in PL were actually different given its role as internal evaluator, then this needs to be made clearer in the final report process to ensure it is not identified as an omission.

**iii) wp3: Development of the Structure of the module (Lead Partner ISQ) and**

**iv) wp4 Development of the curriculum (Lead partner FIA-UGT)**

**v) wp5 Development of training materials and glossary (Lead partner IAL)**

Solid preparatory work was done in WP2 for the development of the structure of the module, curriculum and supporting tools. However, as mentioned before, discussion took longer than planned to finalise the competence profile, this process being the main focus of the second meeting in Spain. For the remainder of the project, the partnership worked hard to complete the module based on the finalised competence profile. The interim evaluation report identified the fact that **many projects have a successful first year experience but have problems in the second as planning and development evolves into practical realization.** Whilst there certainly were challenges, and revisions to the module content and format – particularly in achieving a complete whole that was responsive to each different national and cultural environment whilst still specific and detailed enough to be of value to the “front-end users”.

Translation of the final structure of the module will be in ES, IT, PT, and DE in order to give feedback at a national level and link the learning units proposed to NQF by using the research done on the national certificates. At the time of this report, the results of

this are presented in the internal section in **WP 4 – Curriculum Development of curriculum and training guide**, as follows:

### **Curriculum**

- **english** 25.10.2010, 02.02.2011
- **spanish** 24.10.2010

### **Modules and Units**

- **english** 16.12.2010 (Excel) / 16.12.2010 (Word)
- **spanish** 16.12.2010 (Excel) / 15.12.2010 (Word)

### **Extended version of the Modules**

- **english** 17.12.2010
- **spanish** 15.12.2010

### **Course Guide**

- **english** 21.10.2010
- **spanish** 20.10.2010

If these are finalised versions they should be identified as such and any remaining national language versions included and presented as a matter of urgency and certainly for the project's own final report.

### **vi) wp6 Piloting the course (Lead Partner BfW)**

The piloting took place in the spring of the second year, with drafts for the plans and agenda circulated in March, revised and amended before completion and use at the Extremadura meeting / pilot in May 2011. The content and results of this, together with information on the follow-up discussions at the final meeting and final project conference can be accessed on the project Moodle platform (owned by bfw) at:

<http://www.campus-bfw.de/course/view.php?id=198> (registration and password required). Whilst on the one hand, the amount of discussion on the competence profile, the curriculum format, duration and scope of the course, learning environment, etc was extensive throughout the project and especially so in the first year, neither the Moodle platform nor the project web-site at the time of this report featured information on the impact of the pilot or feedback from the test users. Ms Ulrike Langer has posted some clear evaluative questions relating to especially the course content, but with to-date, no replies. If the discussion of the pilots and consideration of their impact has taken place largely away from the platform or web-site, then it is important that the information is recorded in a clear and transparent way both for the consideration of the EACEA assessment process of the final report and also for the wider sector as a whole (any confidentiality issues notwithstanding) in order to effectively realise the full transferability of the outcomes and recognise the extent of the European added value. The content of the learning material on the platform is impressive as far as it goes, but the extent to which the focus is balanced between the Installation and Maintenance and Repair elements is not so obvious and in addition to a process that ensures that all content and feedback on content and processes is supplied on the site, it is recommended that it is organised for final presentation in a format more user-friendly in terms of course organisation, sequencing and progression.

Information on the way in which the test users regarded both the content and format of the course is very important to include, both as evidence of the effective consideration of end-user opinion, but also in terms of reflecting the extensive and detailed discussion and consideration that took place within the partnership on this issue and which was addressed at length in the interim external evaluation report.

### **vii) wp7 Evaluation (Lead Partner Solidarnosc)**

The internal evaluation process has been carried out as planned in the application for the first year of the project; however evidence of continued coherence is not available at the time of this report. With regard to external evaluation, this report represents the final outcome based on the agreed sub-contract. Initially, the external evaluators also supplied the partner responsible for internal evaluation with ideas and draft forms for evaluating partner opinion on overall progress, meetings, extent of co-operation, etc. However, the reports based on material collated as part of the internal evaluation cannot be located on the platform or on the web-site at the time of this report and gain, it is strongly recommended that such evidence of activity (and the responses to it) are placed in an accessible environment (even if password protected) as soon as possible.

The other comments with regard to the evaluation process outside of external evaluation made in the interim external evaluation report remain valid at this time. The monitoring process from the internal and external evaluators are highlighted in the following sections of this report, concerning the dissemination and exploitation WPs.

### **viii) wp8 Dissemination (Lead Partner Energy-Cluster)**

**At the time of the interim external evaluation report, it was recommended that dissemination activities increase in both size and scope in the project's second year. Given that the web-site and platform need updating urgently, it is not clear currently the extent to which this has been achieved, although the external evaluators are aware of some activities that took place after being included in email communication and by being present at the project's second meeting in Badajoz in July 2010 and final conference in Berlin in September 2011. The project developed the dissemination material as proposed in the application early on (flyer, brochure, web-site) but the real impact of the material would have been improved if**

used as part of a national dissemination strategy for each country in tandem with an overall transnational strategy – this was one of the recommendations of the interim evaluation report.

At this stage, there are two main issues connected with valorisation specifically:

- i) the successes of the final conference
- ii) the challenges of the skills network

The final conference will be described later, but the skills network, again identified as a challenge at the mid-way point is vitally important to present clearly in the final report. The external evaluators suggested previously to “lower” the criteria / expectation of membership of the network in the context of a encouraging greater use, however they also appreciated the consortium’s wish to maintain the initial idea and to address membership and the engagement with the key stakeholders at a later date once there was more finalised content to access. This is an understandable and generally recognised effective approach when engaging with stakeholders in the private and public sectors on a large scale. However, it is also important to achieve a balance and to ensure an at least minimum fulfilment of the aims as contractually agreed based on the application. As with other key outcomes of the project, it is at present not easy to identify the current position of this network and the link on the web-site:

<http://www.soltec-project.eu/12.html>

is currently “under construction” and has been so for some time.

The project has successfully delivered the newsletters as foreseen in the application, although whilst the initial copies appear on the site in all partner languages, the final 2 are not including PL versions and in one instance, the IT version.

A description of the full project dissemination activities and their impact (especially that if the skills network) need to be included on wither the platform or web-site or at least in

a presentable form for consideration in the final report assessment process. The evaluators provided advice in the form of how other projects present their work with for example, associated partners, in the interim evaluation report.

#### **ix) wp9 Consultation meetings (Lead Partner CGIL)**

The WP was foreseen to be implemented between months 18-24, when project products were being finalised. There was significant project communication by email especially in the period September – October 2011, when a clear presentation from bfw was circulated on the final activities of the project (including these meetings) and partners prepared CDs to use in the meetings featuring project content) although these were in some cases slightly delayed waiting for all translated versions of the training manual in all partner languages. In October 2011, the PL partner responsible for internal evaluation also distributed a questionnaire to record the processes and impact of these consultation meetings and so it is assumed a full report will be presented as part of the final report package. Particularly important will be the process to record the impact in VET strategies and policies at regional and national level for each participating country.

### 3) The Final Conference

#### General remarks

The Final conference for the SOLTEC project took place 21.09.2011 – 23.09.2011. There were different venues organised in parallel, with in total of approximately 250 different stakeholders, labour market experts, beneficiaries and professionals involved in the fields of solar energy and photovoltaic activity. This figure in itself is a very impressive final outcome. During these events, there was an exchange of views, practices and experiences with regards to the skills for people involved in the solar energy sector, consideration of the learning demands and the situation in some European countries i.e. policies, infrastructure, training deficits etc.

The final major dissemination event of the SOLTEC project was organised along with the final conference of the AIRE project [www.aireweb.eu](http://www.aireweb.eu) (“Adapting and Installing an international vocational training for Renewable Energies”), which is a LEONARDO DA VINCI Transfer of Innovation Project, ending 24 September 2011. Such a synergy between related projects is a very positive approach. In order to maximise the resonance of the SOLTEC project, the partnership considered as beneficial to organise the final conference together with the AIRE event since SOLTEC and AIRE are implemented in the same field of action and the networking capacities of the AIRE coordinator in Berlin were important for the SOLTEC project to make the SOLTEC outcomes known to further beneficiaries and stakeholders. In fact, the number of attendees was significantly increased through the joint event and in this way a better exploitation of the results beyond the countries of the SOLTEC consortium was achieved. The organisation of such a conference with the number of participants, events, visits, presentations, social gatherings was a great challenge and was achieved to a great extent. The joint final conference sustained better promotion of SOLTEC, although the declaration of the conference costs in the final report can be more complicated taking into consideration

the number of joint events attended and common activities/expenses incurred i.e. dinners, buses for transfers etc..

### **22.09.2011**

The morning session took place in the building of the European Commission in Berlin. The panel was chaired by the following experts: Olivier Drücke, (Solarthermal expert consultant, Entrepreneur, former president of ESTIF), Miguel Bernar Carrion (Expert labour market, Extremadura), DorliesRadike - Thiel, (the coordinator of the AIRE project), Dagmar Winzier (research fellow at the Federal Institute for Vocational Education and Training BIBB), Hanna Schrankel IG MetallVorstand) and Nina Dechkova (PV expert Bulgaria). Both the venue and participating personnel were very positive in terms of achieving maximum impact, increasing the project profile and maximising the chances for sustainability and even influencing policy at a strategic level. Presentations were held by the panel about the situation in BG, DE and Extremadura and the issue of employability in the area of renewal energy sources. Overall, the discussions took place were relevant to the SOLTECs topics, however an introductory presentation of the SOLTEC project was absent, and such an inclusion would have helped raise the “plenary profile” of the project as opposed to awareness being raised initially in more individualised discussions.. The SOLTEC partnership was presented during the afternoon session in the Ministry of Foreign Affairs. In this session, all partners made a brief presentation of their organisation and mentioned their role in the SOLTEC project.

### **23.09.2011**

The final partners’ meeting took place 23.09.2011. At the beginning of the meeting, the impressions of the partners from the project were shortly discussed, such as the challenges and achievements of the implementation work. All partners were satisfied with the outcomes of the conference. The difficulties with the qualifications recognition at national level were mentioned by partners - the IT partner explained that in reality the

recognition can be more easily achieved at a regional level. Also in DE, because of the different federal state policies and administrative procedures, the recognition can be only achieved at regional level - but this is an ongoing process and seems to be fruitful because of the networking capacities of Bfw. The challenge is to promote the competence profile created through the European programme and offer something new beyond the existing national practices. Most of the Spanish partners declared that the SOLTEC project offered an added “European” value to the activities of their organisations. There was certainly an important transfer of know-how and exchange of different European practices. Again, it is very important that these final reflections are recorded at least in the form of meeting minutes, but preferably in a more detailed report, for inclusion with the final report.

Most of the remaining time was devoted to the tasks still to be accomplished and on the materials to be finalised. The coordinators made a presentation with the tasks still to be covered based on the project’s work-programme. Below is a short list of what still has to be done (as of September 2011):

WP3: The Competence Profile is complete and the translations ready: The NQF level and credit points are now to be finished.

WP4: Training handbook is ready in EN but translations must be done in the 4 languages. There will be 100 brochures printed in each of the 4 languages.

WP8: newsletter has to be published

WP9: Consultation meetings: there were 3 consultation meetings organised per partner and documented in EN. These contacts were important for the solar energy network and in order to take influence to ministers, trade union representatives from each country for the qualifications recognition.

ISQ outlined difficulties it has with copyright issues in PT and declared an incapacity to draft the module / unit for which they were responsible. The coordinator explained that the module will have to be finalised either by engaging external staff for drafting the unit

by the PT institution, or otherwise by the coordinator, who will in this case engage a subcontractor. However, in this case the amount of money already paid to ISQ for the finalisation of the work will have to be reimbursed. This was a significant challenge presented to the project late on and at the time of this report, the team at Bfw are working very hard to ensure it is effectively resolved.

With regard to exploitation issues, the possibilities of how to offer the products after the end of the project were discussed. The partners agreed that the materials will be available on the site for free and only the courses to be offered by the partners will be charged. A copyright agreement will be drafted with the partners before the commercialisation of the products. Some of the partners i.e. the Cluster de la Energia de Extremadura expressed their intention to proceed with the commercialisation of the SOLTEC methodology after the end of the project.

The discussions that took place in the partner meeting demonstrated that the coordinators (Ulrike Langer and Dr.Monika Stricker) have a clear overview on the implementation of the work programme and tasks still to be accomplished. The contribution of the partners in the discussions was however quite limited, and only a few provided feedback on their future plans and their personal views regarding the project implementation. Still, apart from the reservations of ISQ regarding the copyright issue the commitment of the partnership has been maintained throughout and the promoters deserve credit for this, especially taking into account the change of beneficiary mid-way through the project.

The meeting finished with the presentation of a video prepared by the partner Cluster de la Energia de Extremadura demonstrating the beneficiaries' views of the pilot actions of SOLTEC. The external evaluators very strongly encourage the project to provide access to this as part of the final report - this video and any further evidence from the partners showing the exploitation of the outcomes and the beneficiaries' involvement.

### 3) Conclusions, recommendations and comments

i) **The decision to change beneficiary and co-ordinator was logical** and benefited the project overall as well as the two partners directly involved. It also complied with, and was an effective response to, the initial feedback from the EACEA assessors on partners' competence, capacity and areas of expertise. **The team at bfw has performed well in terms of co-ordination and then overall promotion of the project as beneficiary of the project** and this was mainly due to an excellent, motivated and hard-working team committed to the project. Whilst there have been concerns expressed over the extent of completed content currently presented on the website especially, the evaluators have witnessed clear and exhaustive communication and guidance being provided by Mahla Safari, Ulrike Langer, Monika Stricker and Mareike Weber.

ii) **As has been emphasised throughout the lifetime of the project in the external evaluation outcomes, there was a real and significant relevance of this project for the LLP generally and to the Leonardo Development of Innovation action specifically.** The multi-actor nature of the partnership in particular seemed perfect in composition to address the aims of the project, whilst it is also acknowledged that it presented real management challenges to ensure that approaches were varied, responsive and all-inclusive to the different actors engaged.

iii) **It is very important that all relevant outcomes** (and wherever possible, details of the processes to achieve this) **are presented properly and clearly on the web-site** and possibly also in the Moodle platform, even if password-protected where required. This means all outcomes, from the final version of the manual, to minutes of meetings.

iv) **The “later” elements of a project’s activities require specific attention** in the respect of iv) above – namely the final reporting of dissemination activities and clear plans

for exploitation and sustainability. The final meeting included the agreements after discussion of what will be available free and what will be commercialised, so this is necessary also to include clearly in the final report.

v) **All partners have remained committed**, as evidenced by their significant input into planning and discussion and participation at project meetings, although it was unfortunate that some issues of copyright were identified at a very late stage in the project when it seems apparent that they could have been addressed at an earlier stage. The internal evaluation activities and feedback from survey and questionnaires also could have had a higher profile in the ongoing processes.

vi) **An area of concern remains over the skills network and related to this, the way in which co-operation with associated partners and other bodies has taken place** and as importantly, been recorded and presented to the sector as a whole. It is recommended that this is addressed for the final report to do justice both to the hard work that has taken place in raising the profile of the project in the sector and also to ensure the most effective “exit strategy” and likelihood of sustainability.

vii) As well as being updated in terms of inclusion of final outcomes (and all translated versions of products in accordance with the application) the web-site needs attention in terms of topicality. **It will make it a more invitational site if it is updated in terms of descriptions of activity** (from future to past tense and inclusion of results) but also if more access links to additional information are included – again, this is especially relevant when it comes to the skills network.