



# METHODOLOGY GUIDE FOR INNOVATION TRANSFER

## BIOTRANSF PROJECT

### 2010-1-ES1-LE005-21204



**Work package number 3:**

The aim is to set up the basis for a proper transfer of contents and methods in order to get a clear methodology for the transfer.

**Activities:**

- 3.2. Elaboration of a draft Guide on the methodology transfer.
- 3.3. Consulting with partners regarding the methodology.
- 3.4. Elaboration of a final Guide to transfer methodology and contents.

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# 1. INTRODUCTION

One of the objectives of the BIOTRANSF project is the promotion of informal e-learning in the field of renewable energy, in detail in the subarea of bio-mass production and use. Jay Cross (2006) argues that “formal training and workshops only account for 10%-20% of what people learn at work, and that 80% - 90% of our learning takes place outside formal settings. Most corporations overinvest in formal training while leaving the more natural, simple ways we learn to chance.”

In the most European countries there have been some moves to recognise informal learning. Most efforts have been expended on trying to assess and certify informal learning. There is growing interest in informal learning from the corporate world, driven by the desire to capitalise on the intellectual assets of the workforce, to manage organisational knowledge and in recognition that informal learning may prove a cost effective way of developing competences.

The BIOTRANSF project is the result of a research developed in 2008 by APROEMA. The research was called “Evaluation 360º: professional training for human resources working in environmental management sector”. This research was part of a wider strategy for the internal training in environmental companies. The aim of the research was to assess the degree of implementation, quality, appropriateness and level of participation in continuing vocational training of environmental management professionals belonging to APROEMA.

The general objective of BIOTRANSF project is to enhance and innovate the lifelong training of professionals working in the environmental sector, by transferring the experience developed by the project promoter in Spain to other European countries.

The specific aim of the project is to transfer the results and innovations of the e-learning course on biomass production developed by the Spanish promoter APROEMA to the other European partners and develop a new training tool to be implemented in the countries involved in the project.

The present document is part of the development of the project, particularly; it corresponds with work package 3 “Setting up contents and methodology”. The aim of the work package is to set up the basis for a proper transfer of contents and methods. The idea is to get a clear methodology for the transfer.

## **2. PRESENT POLICY AND PRACTICE OF INFORMAL LEARNING**

### ***2.1. European policy***

The European Council has recognised the value of informal learning. This kind of learning is important because it:

- is complementary to the formal education and training system;
- has a participative and learner centred approach;
- is carried out on a voluntary basis and is therefore linked to trainer's needs and interests;
- takes place in a wide and varied range of settings.

Non formal and informal learning are important elements in the learning process and are effective instruments for making learning attractive, developing lifelong learning and promoting the social integration of trained people. The participation, active citizenship and social inclusion are promoted. It is of practical relevance to the labour market by helping to acquire knowledge, qualifications and other key skills.

The validation of non formal learning is a key element in national lifelong learning strategies developed by countries participating in the EU's »Education and Training 2010 Programme«. As they report, countries are at different stages in developing systems to support this validation – some of them have established systems, while others are only beginning to develop provision in this field.

A number of steps have been taken at European level. An inventory of validation of non formal and informal learning has been produced on behalf of the Commission, with a detailed survey of developments in European countries.

The Cluster on the Recognition of Learning Outcomes – the largest of the eight education and training clusters – supports countries in developing national qualifications frameworks and systems for the validation of non formal and informal learning. The Cluster uses peer-learning activities to exchange the good practices and channel collective efforts. A priority is the development of operational guidelines to support countries in using the 2004 Council Conclusions on Common European Principles for the identification and validation of non formal and informal learning.

All actions are closely linked to the European Qualifications Framework.

### ***2.2. Opportunities on developing projects to recognise informal learning***

There are many opportunities on developing projects in the area of informal learning focusing on e-learning. There are many significant advantages of e-learning, such as:

- **Convenience and Portability**
  - Courses are accessible on your schedule;
  - Online learning does not require physical attendance;
  - Learning is self-paced (not too slow, not too fast);
  - You're unbound by time - courses are available 24/7;
  - You're unbound by place - study at home, work, or on the road;

- Materials can be read online or downloaded for reading later;
- **Cost and Selection**
  - A wide range of courses can be chosen to meet the needs;
  - Degree, Vocational, and Certificate programs;
  - Continuing Education;
  - Individual courses;
  - Wide range of prices to fit your budget;
  - Go back to school to get a degree, learn a new skill, learn a new craft, or just have fun;
  - From art to zoology you can do it all online in a price range to fit your budget;
- **Flexibility**
  - Online learning accommodates your preferences and needs;
  - Instructor-led or self-study courses can be chosen;
  - You can skip over material you already know and focus on topics you'd like to learn;
  - The tools best suited can be used to the learning styles;
- **Higher Retention**
  - Online learning will draw you to topics you like and enjoy. Studies show that because of this and the variety of delivery methods used to reach different types of learners, retention is frequently better than in a traditional classroom;
- **Greater Collaboration**
  - Technology tools make collaboration among learners much easier. Since many projects involve collaborative learning, the online environment is far easier (and often more comfortable) to work in since learners don't have to be face-to-face;
- **Global Opportunities**
  - The global learning community is at your fingertips with online learning. The technologies used give online instructional designers the ability to build in tools that take you to resources you may never see in a traditional classroom.

For those wishing to establish projects and initiatives in this field, it is important to research existing policy and to establish which programmes may already be established to support and encourage innovatory projects. Such programmes and projects may involve a wide range of different governmental and non-governmental offices and agencies, including education and training bodies, sometimes at federal or state level, at other times at regional or local level.

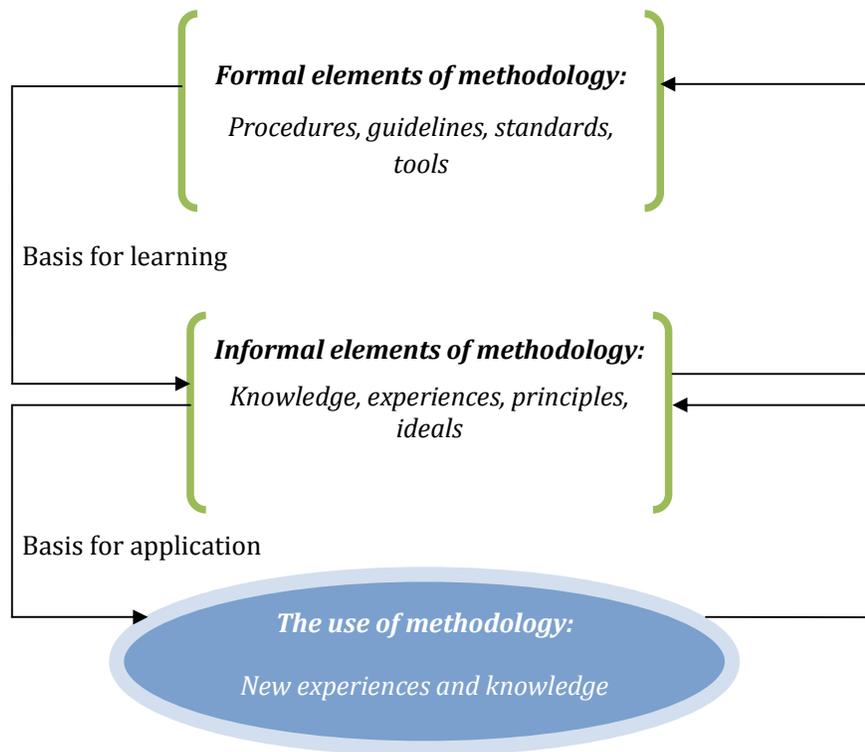
With such actions in implementing new policies to recognise non formal and informal learning, international contacts and projects may be of considerable value, in allowing mutual learning between initiatives in different countries in Europe and further away.

### **3. THE BIOTRANSF METHODOLOGY FOR TRANSFER**

The BIOTRANSF methodology and tools were designed in order to support e-learning in bio-mass production. With the BIOTRANSF project we thought to take the tools and processes for recognising informal e-learning and adapt them for use with different groups of learners in different countries.

Methodology for transfer includes activities in order to reach the desired result. It is defined as set of activities arrangements, with which the project group agrees. The BIOTRANSF methodology will be adapted to the needs of project partners from different partner countries. With the use of the methodology the users will be learning and gaining new experiences, thereby the methodology will be enriched by itself.

**Figure 1: Elements of methodology for transfer**



This transfer guide is designed to further that process by providing information based on our experiences in order to allow others to use the BIOTRANSF tools and processes in their teaching and learning.

We believe that BIOTRANSF tools and processes have great potential in helping learners reflect on their informal e-learning and experiences. But, of course, all tools require some adaptation for particular learners from different countries, for particular learning and teaching contexts.

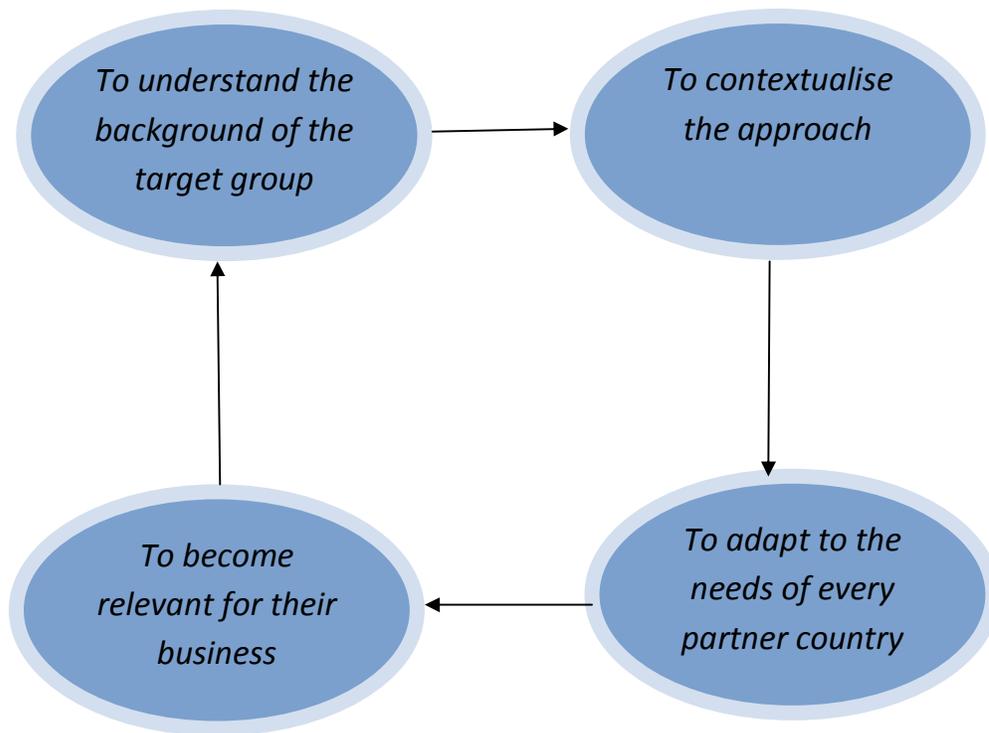
## 4. TRANSFERING BIOTRANSF PROJECT IN PRACTICE

The BIOTRANSF partner organisations took the original tools of research “Evaluation 360°: professional training for human resources working in environmental management sector”, and adapted them for trialling with a range of different partner countries. The aim was to test the applicability of such tools for use and to determine what changes would need to be made, alongside examining processes for adaptation change and transfer.

The final step will be to summarise the recommendations arising from the work of others wishing to adapt and build on the BIOTRANSF experiences in their own countries and context.

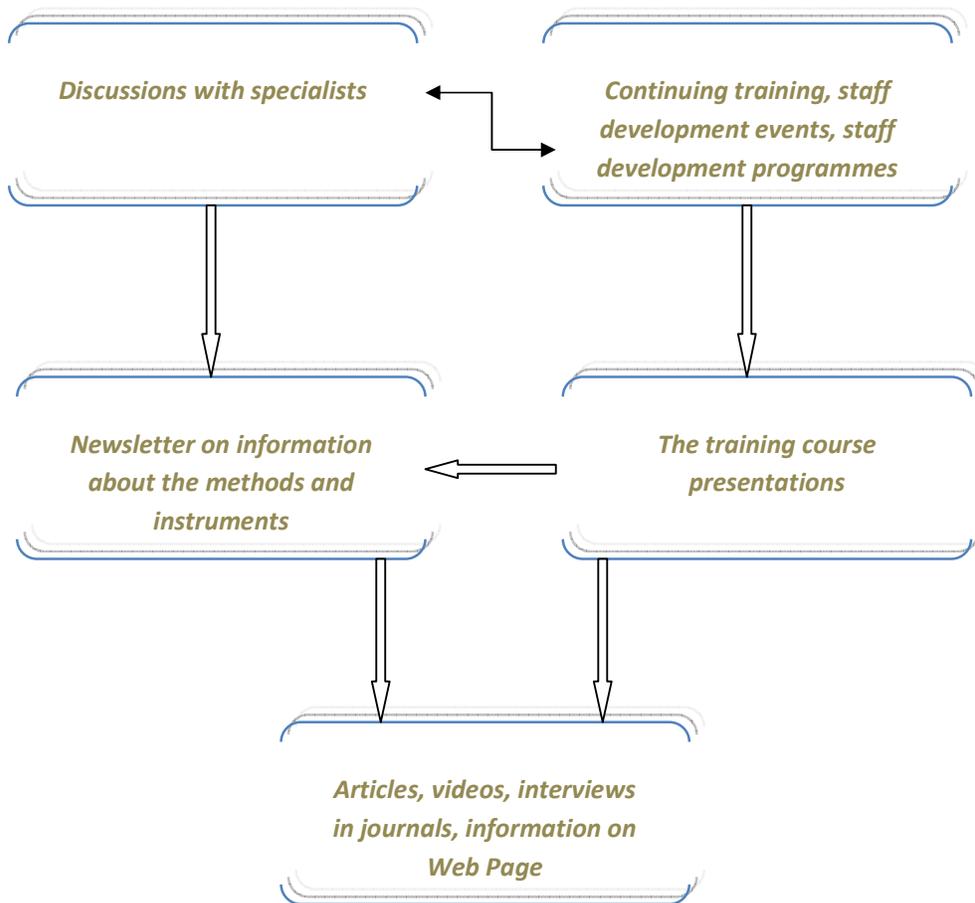
The picture below illustrates **the process of transfer at the level of practice**. This means adapting and testing existing methods in other partner countries and for new target groups regarding their needs. The target group will be the experts in the field of renewable energy, especially in biomass production.

**Figure 2: Transfer at the level of practice**



**Transfer at the level of the educational institutions and administration** aims at introducing tested methods to a broader audience. The collected experiences will be discussed with specialists. Continuing training and staff development events should enable specialists to become familiar with the methods and motivate them for their own implementation. Staff development programmes and material for the implementation will be prepared. Information about the methods and instruments will be disseminated through a newsletter. In order to promote the training course presentations will be held on conferences. Also articles, videos and audio interviews will be published in journals and on BIOTRANSF Web Page.

**Figure 3: Transfer at the level of the educational institutions and administration**



**The main conclusion is that transferring any methodology, tool or process from one country to another or from one target group to another requires some process of adaptation.**

## **5. DETAILED WORK PLAN FOR INNOVATION TRANSFER OF BIOTRANSF PROJECT**

The protocol that should be taken for the development of the transfer will have the following steps:

### ***5.1. Translation of the documents***

The leader of the project will translate into English the content of the training course as well as other interesting documents. The main objective is to share the information between partners in a language understood by all.

### ***5.2. Development documentation summary***

Once the documentation is translated a summary will be developed in order to give to the partners a first approach to the tool that will be transferred. The objective is to make understandable in a first stage the information of the training course by the partners.

### ***5.3. Sending the summary and the documentation translated to the partners***

We will send the summary and the documentation translated to the partners in order to allow them to check all the details related to the training course and the tool that will be transferred.

### ***5.4. Revision of the documentation by the partners***

Once the translation and the summary are done and revised by the partners, they will meet online through a virtual class. This method allows seeing each other and sharing files on internet with the participation of one moderator, which will be the coordinator of the project. The objective of this activity is to check in detail all the information related to the tool and to solve all doubts and questions. The coordinator will support the partners in the revision of the documentation.

### ***5.5. Adapting the contents of the training course to each partner's context***

Each partner should adapt the content of the training course previously translated into English to their own language and context, specially those parts related to legislation and national examples. It is not only the translation of the contents; the partners should apply a methodology and a full didactic approach to develop a proper pilot course.

### ***5.6. Meeting for the presentation and dissemination of the adapted materials***

Once the materials are translated to each partner's language and adapted to each country's context a meeting will be held in order to present each course. The aim of this meeting will be to present the changes and adaptation to the rest of the partners in order to get everybody's point of view before the start with the pilot course. The participation of all the partners in the meeting is crucial in order to develop a deep analysis of the changes developed by each partner.

### ***5.7. Implement the changes and recommendation***

**The changes and recommendations are supposed to be** developed during the meeting. After the meeting, every partner should include all comments and suggestions agreed in the meeting, developing the last adjustments in the content before the pilot test of the course.

### ***5.8. Training of the partners in how to pack all the contents of the training course in SCORM (Sharable Content Object Reference Model) format***

The SCORM format will be used to upload the contents into the platform. This format is a set of technical standards for e-learning software products.

The training for the conversion the contents in SCORM format will be developed by the technological partner (CLICTIC). The methodology for the training will be based on two tools:

- Attending seminar for adapting contents;
- Virtual class where the contents learned during the seminar will be reinforced.

After this training, CLICTIC will provide permanent assistance to the partners for the conversion of the contents in SCORM format.

### ***5.9. Development of the virtual environment platform***

The training courses will be held using the virtual environment platform, CLICTIC will be in charge of this part of the transference. A pilot test of the platform will be also implemented in order to check if all the links and templates work well.

### ***5.10. Uploading the contents and developing a working test***

Once the platform is ready the contents will be uploaded by CLICTIC, so, the partners should send to CLICTIC the contents of the training course adapted and in SCORM format. Once CLICTIC uploads the contents and tests the tool, it will be ready for use. The partners can start then with the pilot course in each country.

### ***5.11. Changes and adjustments***

Each partner should check if the platform has work well in their language, and if some modifications or improvements are needed, it will be developed by CLICTIC, the partners can suggest all the modifications or improvements that they consider.

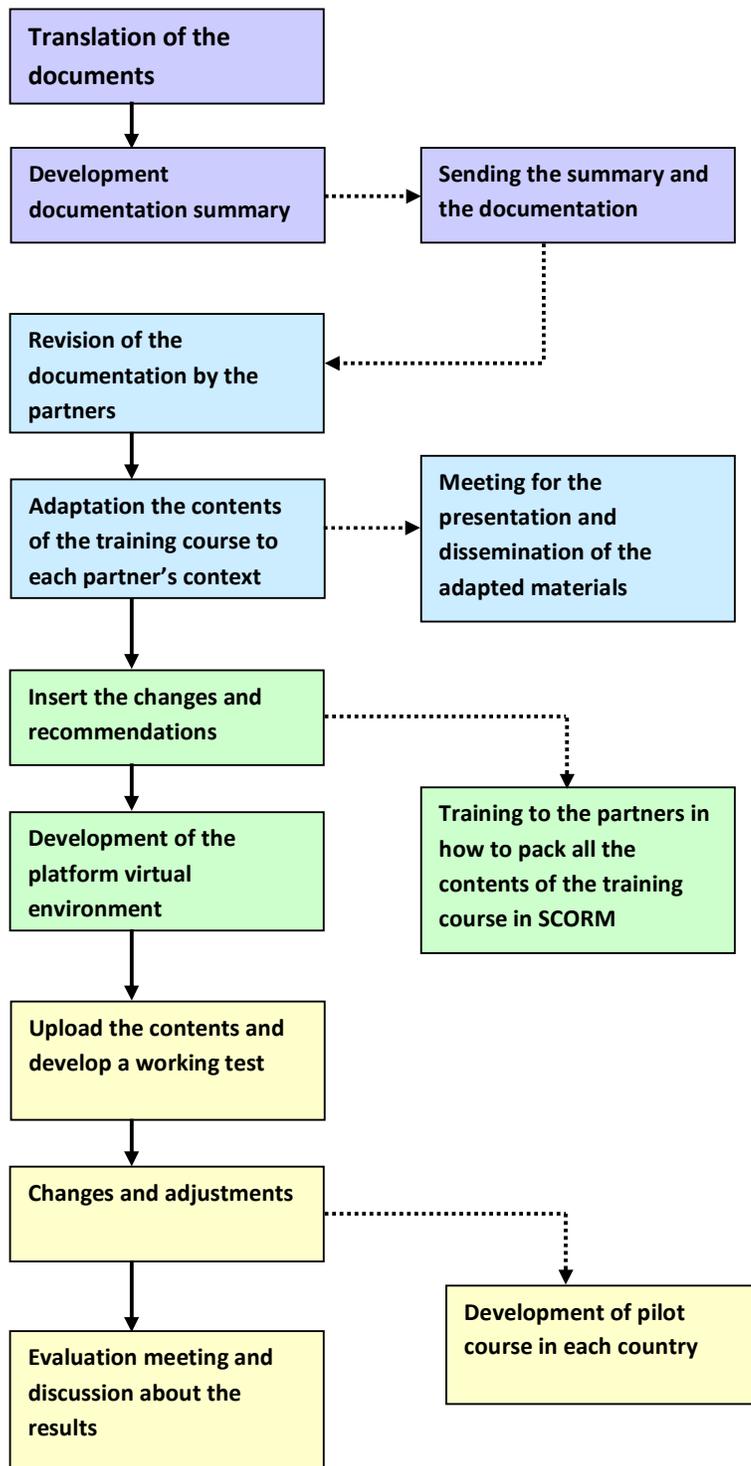
### ***5.12. Development of pilot course in partner countries***

Each of the partners will implement the pilot course to determine the success of the final adjustment of the materials and transfer activity.

### ***5.13. Evaluation meeting and discussion about the results***

After the end of the pilot tests, the partners will have a meeting where they will check the platform and discuss the results. An assessment of the process and the results will be developing in order to suggest improvements and changes to make the tool more efficient.

Figure 4: Detailed work plan



## 6. TIME SCHEDULE

STAGES	2011												2012											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
2.1. Translation of the documents	√	√	√																					
2.2. Development documentation summary			√	√																				
2.3. Sending the summary and the documentation translated				√																				
2.4. Revision of the documentation by the partners				√	√																			
2.5. Adaptation the contents of the training course to each partner's context					√	√	√	√	√															
2.6. Meeting for the presentation and dissemination of the adapted materials										√														
2.7. Insert the changes and recommendations										√														
2.8. Training to the partners in how to pack all the contents of the training course in SCORM										√	√	√	√											
2.9. Development of the platform virtual environment													√	√	√									
2.10. Upload the contents and develop a working test															√	√								
2.11. Changes and adjustments																√								



## 7. TRANSFER OF PROJECT RESULTS

An appropriate dissemination strategy is a crucial part of transfer. Dissemination should be understood from the initial phases of the BIOTRANSF project as a process of awareness, information and exchange, which includes activities aimed at a variety of relevant target groups, so that they take an interest in the quality, the efficiency and the relevance of the innovation approaches and informal e-learning, and so that they become interested in using them.

The use of ICT tools, such as BIOTRANSF Website, newsletters and forums, for dissemination aims have great potential for the transfer of project results.

Dissemination of results will be carefully planned. We will answer to the following questions, so called 4 W:

- Which project results will be disseminated and benefited from;
- When will be dissemination of information and project results implemented;
- Whom are the activities devoted to;
- What kind of dissemination activities will be implemented and how will be they implemented.

The methods of dissemination of project results will be clear and will include all the objectives and activities, which are going to be implemented within the project duration and also after the project closure.

### *7.1. Dissemination of project results*

Dissemination of project results is understood as spreading of project information to the widest public.

The information on project results will be disseminated:

- **On local level:** to local institutions dealing with e-learning and biomass production;
- **On regional level:** to regional institutions dealing with e-learning and biomass production, to municipalities in Goriška region;
- **On national level:** to ministries dealing with education and training, and with renewable energy, to national institutions which have influence to the development of e-learning and renewable energy, to National Chamber of Commerce and Industry and its Associations;
- **On European (interregional) level:** dissemination of best practices within different working groups, cooperation in different international conferences and seminars.

The mechanisms of dissemination of project results will be printed material, such as newsletters, press releases, brochures and flyers. Another important tool for dissemination of project results will be the project Website.

## ***7.2. Exploitation of project results***

Exploitation of project results is understood as using of project results in a way it can have positive impacts and effects to the development of e-learning and renewable energy usage. It is an activity which helps to maintain the sustainability of the project, and it continues after the project closure. It reflects the real project result or the level of the efficiency of the project.

The project results can influence:

- The system of modern methods of training or learning: improvement of system on national, interregional, European and international level;
- The institutions dealing with modern methods of training and renewable energy: getting new knowledge and experiences, changing the way of work, changing the personal development, establishment and enlargement of permanent partnership.

The mechanisms of exploitation of project results could be:

- Developed model of informal knowledge;
- Offer the developed training programme to the institutions dealing with training and education.

The exploitation of project results and its accessibility will be:

- Using Website also after the project closure;
- Integration of the project results in the national system of professional training;
- Transfer of project results to potential users;
- Organisation of thematic conferences and round tables in order to exchange the knowledge and experiences.

## **8. BIOTRANSF EVALUATION**

Evaluation is important for the BIOTRANSF project. It will be seen as contributing to the understanding of the process of transfer and to the utility and value of the different tools and methodologies developed. It will help illuminate problems and recognise good practices as a contribution to development of informal e-learning.

The evaluation will be implemented by each of the project partner involved in the process of transfer. One important step will be identifying the participants that should be included in the evaluation process.

Common aims and approaches of the evaluation will be developed. The individual tools and instruments for gathering and analysing data will be customised to the needs of the participants. Tools and instruments will be written and oral questionnaires, interviews with participants, organised meetings and focus groups will be conducted.

The following issues will be identified:

- **Reactions:** immediate responses, feelings and emotional reactions to the implemented activities.
- **Learning:** what knowledge and skills have been learnt; has the BIOTRANSF project resulted in the identification of new skills and knowledge based on e-learning.

- **Behaviour change:** what might be done differently; how could the project approach be improved in the future.
- **Group change:** what collective learning has taken place.
- **Ideological change:** change in values and attitudes of community; what does this approach mean for the way of developing training system.

The evaluation will be designed as an ongoing and accompanying process, and not just an assessment of outcomes at the end of the BIOTRANSF project.

## 9. CONCLUSIONS AND RECOMMENDATIONS

The BIOTRANSF project was designed with the aim of developing, testing and validating an innovative approach using ICT technologies and informal e-learning. The possibility of integrating the proposed project methods and instruments into local policies and into practice will be discussed. This includes also the transfer of methodologies, approaches and programmes to other target groups and to other non partner countries.

Innovation may involve the incorporation of new elements in the local, regional, national or interregional context, a new combination of existing elements or a significant change in the modes of the action.

Educational innovation is understood as a change that is introduced into practice with the aim of improving the functioning of the system. The BIOTRANSF innovation method means the change in a process. Business e-learning is not developed, and its promotion may cause the increased use of e-learning in practice considering of its benefits. The innovative approach is directed on the market, its demand, and on current needs in renewable energy sector.

There are some characteristics that probably will be involved in the transfer process:

- A positive attitude towards an interest in renewal and change;
- A dynamic project team that is capable of promoting informal e-learning and renewable energy;
- Human capital with an entrepreneur attitude, which is open to cooperation and the exchange of ideas, and is willing to collaborate in the improvement of working methods;
- A well developed relationship with the socio-economic environment meaning companies in the environmental sector, local and regional local administrations, training experts and others;
- The capacity to develop synergies and mutual cooperation with other actors in the socio-economic environment. Involvement of public administrations at local and regional level is particularly important;
- Flexibility and the capacity to adapt to transfer and changes in the socio-economic environment;
- A positive attitude with regard to the interregional and transnational dimension.

We all agree that local participation is a key aspect of success and the realisation of best practices in education projects and policies.

The sustainability of the BIOTRANSF project will be provided as we try to transfer the training course to other target groups and to other countries.