



" SISMILE: Increase Vocational Skills To Face Earthquake Risk Inside Of Building"

Progress Report

Public Part

Project information

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Executive Summary

The aim of the SISMIILE project is to develop a new education program about non-structural risk mitigation inside buildings against earthquake for the furniture workers and manufacturers. As a result of the project, an e-learning system will be created. The main goal of the training program is to increase vocational skills and knowledge of the workers and manufacturers and in parallel of this to increase the employability rate and/or condition of these groups.

The history of Europe is full of the earthquake disasters which cost hundred thousands of life and millions Euro of properties. The earthquake risk still continues and it will never end and the population in earthquake area is more than 260 million people now.

In general, non-structural components and building contents become hazardous when they slide, break, fall, or tip over during an earthquake.

Partners were chosen from earthquake prone countries in Europe for the project. Greece, Italy, Spain Turkey are located in Euro – Mediterranean area, Bulgaria and Romania are located in East Europe, all countries are under the high risk of earthquake. Belgium was taken to the partnership as representatives of target group which is described above from other countries.

The project's subject is a cross-border and transnational issue which has not been focused via education programmes until now. Via reaching the aim of the project, the loss' degrees of life, property and sustainability caused by earthquakes will be decreased.

The workers and manufacturers will be trained in the furniture industry about designing and application techniques of non-structural elements. Trained workers and manufacturers will apply these techniques to the buildings in European risk areas and will decrease their risks and will get profit.

The project consists of several stages. The first stage was about understanding different dimensions related with project activities. There were three different approaches; first one is aimed to understand workers/manufacturers social-economic, educational and occupational status, the second one's aim is to define different application techniques in furniture design in different cultures and countries included knowledge about materials and the last one's aim is to bring up the seismologic differences in different countries. These results will be used during the process of the production of the eLearning system.

Target group members will be involved in all steps of the project process. After development of the e learning tool and content, it will be tested via a pilot group of target sector to define strong and weak points of it. Besides during the development of the e-Learning, European Quality Standards and European Qualification Framework which the furniture workers and public could easily understand.

So far, the project logo was designed, the project website was created. Analysis of target group preferences and analysis of cultural – national differences were realized by all partners. Analysis of the seismic differences in target countries was accomplished by partner P1 and analysis of the good practices and know-how of the third country was realized by P1 and P2. Additionally all related partners prepared a

report about design habits of householders in partner countries. All analysis reports were published in the web site.

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1. Project Objectives

The SISMILE (Increase vocational skills to face the earthquake risk inside of buildings) project aims to create an online training programme to increase the vocational skills of the workers and / or craftsmen who are responsible producing and/or installing non-structural elements (furniture) causing high risk inside the buildings against the life and property safety during the earthquakes.

“Designing nonstructural elements inside of building against the earthquake risks” has not been considered as an important subject for furniture production in Europe until this project.

Non-structural risk mitigation studies in the furniture industry area for furniture workers and manufacturers had not been exploited so far in Europe.

European statistics on earthquake disasters are directly linked to the size of the possible return of the project results. This project will bend over on this subject and through this it will kill two birds with one stone. Firstly the furniture industry will have new subjects to work on and increase the area of employment and secondly the risks caused by non-structural elements during the earthquakes will be decreased.

Orderly the project results will have cascade objectives;

- 1) The workers and manufacturers in furniture industry will be trained about the application techniques about non-structural elements inside the buildings against earthquake risks
- 2) Trained workers and manufacturers will apply these techniques to the buildings in European earthquake risk area and will get profit from it
- 3) This profit will increase the employability in the furniture industry
- 4) Application of these techniques will decrease the risks and the losses' of life, properties and sustainability.

2. Project Approach

The project consists of several stages. A survey was realized by the partnership to understand the target group's level of education, what kind of methodology they would like to use in learning, what are their computer knowledge and usage (home, on job, etc.) levels and habits are and what are their educational necessities exactly. Various levels of analysis were conducted, such as cultural and national differences; what kind of materials are used in different countries in furniture design (walnut, oak, chestnut, hornbeam, birch, massive, plastic, metal, etc.), what are their resistance rates against different seismic shakes, what kind of seismic impacts they have, what are the educational applications related with the subject in each country. The survey considered in three different approaches; one is to understand workers/manufacturers social-economic, educational and occupational status, the other one's aim is to define different application techniques in furniture design in different cultures and countries included knowledge about materials and the last one's aim is to bring up the seismologic differences in different countries.

All these results were major indicators during the process of the production of the e-learning which is the main output of the project.

During the analysis stage, knowledge and experiences of the third country Japan, which is well known about earthquake risk mitigation studies and training activities in the world, was transferred to the project.

The production phase is being realized by cooperation of the target group members and after development of the eLearning tool and content it will be tested via a pilot group of target sector to define strong and weak points of it. Actually, target group members have been always deeply involved in all steps of the project process which has main steps such as DEFINE →PLAN →DO →CHECK →REVIEW →REALIZE, thanks to the Federation and VET partners. According to the test results, the product will be revised and will be ready for the final distribution.

An e-learning program covering the indoor non-structural mitigation has been also developed in this project in the framework of European Quality Standards which the furniture workers and public could easily understand.

During the development of the product, the European Qualification Framework (EQF) is used as an indicator which helps to the exploitation of the product in different countries and different organizations.

The Project has been implemented since November 2011, the events which are listed in following are realized;

- First kick of meeting was held in 14-15 December 2011 in İstanbul
- Partners contracts has been signed
- The common points of the e-learning were defined.
- Quality management plan was prepared
- The questionnaires which were used during the Target Group and Sector survey were developed.
- The project logo was designed at the beginning of the project and is being used in all materials of the project.

- The project web site (www.sismileproject.com) was created and published. It is available in seven different languages. It includes the general information about the project, partners, e Learning package and other outputs. Also it is expected to be a gateway to reach the eLearning system.
- The analysis on TG and TS members were realized.
- The analysis of cultural – national differences were realized by all partners.
- Analysis of the seismic differences in target countries was accomplished by partner P1
- The study visit of P1 and P2 to the third country (Japan) was realized in February 2012.
- Second partner meeting was held in April in Athens in 4-5 April 2012
- A report on designing habits of the householders in each country was prepared by the partners
- The analysis results were reported by each responsible partner and were presented in the second meeting to the partnership in Athens.
- The study visit to the third country (Japan) was reported by P1 and P2 and presented in the second meeting by P1
- All reports was unified and published in the web site to provide a source to the researches
- The dissemination activities have been started (press releases, meetings, workshops, web sites, search engines, etc.)
- So far, Bulgarian and Romanian partners printed SISMILE project brochure and poster in their native language, whereas the Romanian partner also printed the brochure in English in addition and presented the SISMILE project at the national meeting.
- The Italian partner attended the architectural fair and presented the project as a poster on their stage in Italy.
- After the second meeting, development of the content and technical structure of the eLearning has been started and still continuing.
- The dissemination activities are continuing.
- The third meeting was held in Varna in July 2012
- The draft content of e learning tools was discussed by the partners in third partnership meeting

At the end of October, the project has reached its mid-term. Now the most important issue of the project is the development of the content. All VET provider partners have a role in this development stage. The tasks were divided between partners at the third meeting held in Varna in July 2012.

3. Project Outcomes & Results

The main product of the project will be an **e-learning tool** to increase individual awareness of the workers and manufacturers in the Furniture sector about nonstructural earthquake risk mitigation. It will be used in partners' countries.

Development of the content and technical structure of the eLearning has started just after the second meeting and will be ended by the fourth meeting. The partners have discussed the general structure and decided the concrete heading details of the content in the second meeting.

The first step will be dedicated to the elaboration of the structure of the e-Learning, documenting the main chapters or sections and the different tools available on the final training (dictionary, practical instructions, introduction notions, tests, references, communication in case of problem faced during the training on the e-Learning, etc.). The second step will be fruit of the collaboration of different groups of partners, adding in each group VET-seismological partner and target sector representatives in order to produce a relevant and adapted final e-Learning training package. In this point the target group and sector participants of the analysis will act as "consultancy group" and will help to the development.

As a part of the project; two surveys were realized to understand the condition of the vocational training and target group (workers and manufacturer in the furniture sector) and target sector (restoration) in partner countries. One of them is called "**Analysis of target group preferences**" which aimed to understand furniture workers/manufacturers social-economic, educational and occupational status and at the same time their preferences about training clearly. This knowledge helped to develop the training content suitable to all aspects of the target group and sector. It is important to know what the general average of the TG in educational, occupational and personal level is and what are the national or cultural differences to create the eLearning suitable their understanding and usage.

The other one which is called "**analysis of cultural national differences**" aimed to understand the cultural – national differences in current furniture design and production training and sector in partner countries. Especially what kind of materials are used in these countries, what kind of application techniques they have, what their traditions in usage of the furniture are... Understanding these differences provide to cover all aspects of the countries or nations in the final product.

Additionally the partners decided to do a research about the design habits of the householders in each partner country to understand weak points in designing houses according to the nonstructural elements risks against the earthquake. Each partner prepared a report on it.

The analysis results were reported by each responsible partner and were presented in the second meeting to the partnership. All reports was unified and published in the web site to provide a source to the researches.

Analysis of the seismic differences in target countries were realized by P1. This analysis aims to understand seismologic differences of each partner country. What kind of shakes they have, where are their locations, the possible effects of the seismic shakes, what are their densities... To learn the responses of these

questions, it is important to provide that the product suits to all kinds of seismic events in partner countries.

Another research was about understanding know-how and good practices related with the issues in third countries. P1 and P2 did a visit to Japan and met with the expert organizations and people. This visit gave chance to the project to observe good practice in workplace, besides to gather important and necessary information for the content. Besides Japan partner prepared a detailed report about the good practices, know-how about nonstructural risk mitigation and presented in Varna meeting to the partnership which was also used during the development of the content. These two activities helped to the content for having quality as much as in developed countries which are outside of Europe area.

During the implementation of project until the mid-term, following performance indicators and methods were used to evaluate the quality of the project;

	<i>Possible performance indicators which were used</i>			<i>Methods which were used to check the targets</i>		
THEMES	PROCESS	PRODUCT	OUTCOMES	PROCESS	PRODUCT	OUTCOMES
INNOVATION	- process novelty confirmed by transnational partners	- product novelty confirmed by transnational partners - product novelty confirmed by the target group and target sector	- do the various stakeholders agree that SISMILE has a novelty with its development and/or introduction of new concepts and/or practices?	- Beneficiaries' feedback form at the end of piloting stage - Target group and target sector's feedback form at the end of piloting stage	-beneficiaries' feedback form at the end of piloting stage - target group and target sector's feedback form at the end of piloting stage	- monitoring the outcomes (by the questionnaires)
PARTNERSHIP TRANSNATIONAL DIMENSION	- regular communication between partners -full involvement of all partners -partners perceive positive benefits from trans-nationality	- product quality confirmed by transnational partners	- has the partnership brought long-term benefits (e.g. insights into vocational debates in other countries or further collaborative projects)?	- analysis of communications between partners - participant observation - short questionnaire to partners every quarter	- monitoring production of outputs within time scale and to appropriate quality - Interviews with key stakeholders	-focus group with partners (one or two partnership meeting)
VALIDITY & IMPACT ON TG	- involvement of representatives of the target group -have target group representatives been consulted? - have target sector representatives been consulted? - have target group members been able to influence the product? - have target sector members been able to influence the product?	- does the product meet the needs of the target group in each country? - does the product meet the skills needs of employers in furniture industry?	-evidence of enhanced employability and/or further training for target group of beneficiaries	-notes of consultations -beneficiaries' feedback form at the end of piloting stage -focus groups with beneficiaries	beneficiaries' feedback form at the end of piloting stage - focus groups with beneficiaries	-tracking of beneficiaries
DISSEMINATION & VALORIZATION	-involvement of employers, education institutions, VET providers, foundations, associations, municipalities silent partners - have these stakeholders been able to influence the product?	- do stakeholders consider the products (e-learning, website, dissemination event) useful?	- do the various stakeholders see that SISMILE may have a medium and long term impact e.g. through transferability to other sectors or target groups?	-notes of Employer Consultations	questionnaire/feedback form at dissemination event	- interviews with key stakeholders

Transnational Partnership Meetings which were held until the mid-term of the project as follows;

The meeting schedule was realized as follows;

1. Meeting December 2011 Turkey
2. Meeting April 2012 Greece
3. Meeting July 2012 Bulgaria

4. Partnerships

Project partners;

1. Kandilli Observatory and Earthquake Research Institute / Turkey (P1)
2. Pera Fine Arts / Turkey (P2)
3. Technical University of Varna / Bulgaria(P3)
4. Romanian Society for Lifelong Learning / Romania (P4)
5. The Institute of Training & Career Guidance (IEKEP) / Greece (P5)
6. European Furniture Manufacturers Federation / Belgium (P6)
7. Palazzo Spinelli Istituto / Italy (P7)
8. AIDIMA Furniture, Wood and Packaging Technology Institute / Spain (P8)

The structure of the partnership is formed on the necessities of the Project process.

P1 is fully responsible for administration and co-ordination of the project resources, including budget spent and efforts utilized, Monitoring and control of the workplan and preparation of detailed workplans, organization of the kick-off meeting, contracting, Coordination and monitoring of the work among the partners, Compilation and issuing of reports, Structuring a consortium communication, including deliverables, and swift communication between the Sismile Project and the EC officers.

In the implementation stage there are several different activities to realize this aim;

1. Analysis of the target group preferences
2. Analysis of cultural-national differences
3. Analysis of the seismic differences in target countries.
4. Analysis of the good practices and know-how of the third country

The first survey aimed to understand the target group members clearly, were realized by P2, P3, P4, P5, P6, P7, P8.

The second analysis aimed to gather information about national-cultural differences about furniture design and production education in European countries were realized by P2, P3, P4, P5, P6, P7, P8.

After these analysis;

The partner P1 is one of the most prestigious seismologic institutes of Europe, has great experience in earthquake science, P1 is responsible for analysis of the seismic differences in target countries. The analysis was finished and presented to the partners in the second meeting in Athens by KOERI (P1).

P1 and P2 were responsible for analysis of the good practices and know-how of the third country. Visit to japan was realized in February 2012 by the partners, the study was reported and presented in the second meeting.

P3, who has great experience in development of eLearning systems, is responsible for WP3 which is development of the content and technical structure of the eLearning system, will ensure the realization by all partners of an e-Learning tool viable on internet with attractive format and visual multimedia elements. P3 will collaborate at each step with the partners, by emitting recommendations on the formats and ways of producing the knowledge and content that will be useful and transferable to informatics format.

P2 is responsible for ensuring the testing and revising parts of the project.

P2, P3, P4, P5, P6, P7 and P8 will realize the testing activity. P6 has also responsibility to widespread the testing phase to the non-partner countries which have earthquake risk. P1 will be responsible to revise the eLearning package according to the technical and content aspects.

P4 has responsibility to ensure that the project realizes all activities about quality assurance as promised in the proposal. P4 will control the works of the external evaluator, the applicant and the partners. It has already organized an evaluation activity after each partnership meeting. The questionnaires which were prepared by P4 distributed to the partners and the feedbacks were reported by again this partner. These reports were used to increase the quality of project implementation.

P6 is responsible to control if the dissemination activities have been realized according to the promises in the proposal or not. P6 also has responsibility to organize the main dissemination conference in Brussels/Belgium and ensuring the involvement of the target sector/group members to the dissemination activities.

P1 has responsibility to develop the logo, web site. P2 and P4 have responsibility to develop dissemination materials, brochures, posters and promotional materials, and P6 promises to develop its own dissemination materials for its country. P2, P3, P4, P5, P7 and P8 will organize a small dissemination conference in their own country.

5. Plans for the Future

The project implementation has been realizing according to the proposal. All promises were realized on time as planned. Now the project is on the development stage of the content and eLearning system. The partnership is working on the production of the content details, translation of the content textual side, preparation of the visual elements like photos, illustrations, short movies, etc., preparation of the assessment side including questions for the exams. In parallel of this activity, the consultation group was created, the first version of the content will be sent to the consultancy group members to check the quality and understanding that it would be suitable to the all expectations. Then the system will be tested by the selected target group members in each partner country. The feedbacks of the target group members will be gathered and used to improve the quality of the products.

Also, the dissemination activities have begun. The web site and logo of the project have already been created. The multilingual web site includes information about the project, its aims and objectives and expected results, together with the reports created until now. From now on it will be updated according upcoming information. The partners have already presented the project in several activities and they will continue to do it as much as possible. A guide and other dissemination materials will be created in the second year of the project. At the end of the project, several small and one big dissemination conferences will be organized by the responsible partners. The final one was planned to be held in Belgium, since Belgium hosts the European Furniture Manufacturers Federation, however, during the partnership meetings, it was understood that it will be much useful if the final meeting would be organized in a country under high risk of earthquake. So in the second year, the partnership will decide the definite place of the final conference which will be probably Italy.

The partners have already organized three partnership meeting in Bulgaria, Turkey and Greece and two more will be organized in the second year. The following meeting will be in Valencia in the 29-30th of January, 2013. The last was planned to be held in Romania after the testing stage. After each partnership meeting, an evaluation activity was done by the Romanian partner to understand the meeting achieved the aims or not. The evaluation activities will be also continued in following meeting. The quality evaluation has been done internally until now but in the second year, it will be done also externally.

The management activities also have been realized as promised in the proposal by the great collaboration of partnership in the first year. The reports were presented in time, the financial recording was done by respecting to the rules of EC, the administrative and recording activities were done properly. The communication within the partnership was provided by emailing, Skype conferences, phone calls and the partnership meetings. In the second, it is aimed to continue to the communication activities as done in the first year.

6. Contribution to EU policies

As mentioned in the proposal, the furniture industry is one of the largest manufacturing industries of Europe which involves around 150,000 companies and around 1.4 million workforce. Despite the importance of the Furniture industry in Europe economy, the industry is in need to improve itself to compete growth economies (. Some of the weaknesses of the sector defined by European Furniture Manufacturers Federation are “skills shortages / ageing workforce” and “inadequate training” and threats are “saturation of the EU furniture market” and “competition from other goods & services”. Improvement of the design/innovation/training factor can improve competitiveness; strengthen the flexibility and the cooperation among companies in furniture industry. Currently industrial vocational high schools, apprenticeship education centers, higher education institutions, vocational training technology schools and other organizations have similar education programs which are absolutely not-covered the sectorial innovation needs. Within SISMILE, the partners has tried to create a new job opportunity to the sector representatives via developing an eLearning system about non-structural elements inside the buildings which are designed and realized by the furniture manufacturers. The non-structural elements are considered in risk level during the earthquake.

In the first year of the project, the partners realized the analysis on the target group members described as employees and employers in furniture industry in partnership countries to create a eLearning system which is totally suitable to the expectations, needs and habits of the target group. During the analysis, the project has been disseminated to the target groups and besides the stakeholders like local authorities, governmental organizations, educational institutes, etc. Also during the development of the results, some standards (EQF) were taken into account to provide widespread of the product to Europe.

Since 1900s more than 2 million people has died in earthquakes all around the world; more than 300 thousand of them are from Europe area. It is hard to say how many of them died because of non-structural materials however in some cases, the percentage increased to 50 %. Lots of EU member countries are under the risk of earthquakes now and the population in this risk area is nearly 260 million. Seismic disasters have been proved the deadliest of all European disasters over the past decade, and cost the continent 27 billion € in damage alone. The importance of citizen protection from the risks within EU policies is a high priority. The enlargement of the European Union enhances the importance of earthquake risk mitigation, since the acceding and candidate states are in many cases seismic sensitive countries. The partners were selected according to the earthquake risk distribution within Europe and as a result of the partnership structure, the Project has been disseminated in the higher earthquake risk area of Europe. The deliverables of the Project will not only be valuable to the furniture industry, but also to ordinary citizens in terms providing them necessary educational tools to promote awareness on earthquake hazard and damage mitigation.

