



Executive Agency, Education, Audiovisual and Culture



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

Final Report

Public Part

## Project information

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# 1. Executive Summary

The furniture industry in Europe is a major player on the global market. Despite the importance of the Furniture industry in Europe economy, the industry has continuously lost jobs due to various reasons.

Assuming that improvement of the design/innovation/training factor can improve competitiveness; strengthen the flexibility and the cooperation among companies in furniture industry the aim of the SISMILE project was the creation of a new job opportunity to the furniture sector via developing a specific learning system about design application which is directly related with human life.

Current education programs do not cover the sector's innovation needs. Generally they focus on technical or designing issues according to daily trends and materials.

Therefore if we consider that the sector is mainly based on SME's which have not employed well-educated or let's say higher-educated staff, the design approach generally has been based on copying other designs.

One of the tasks of the SISMILE project was to develop an online multinational training course, targeting non-structural risk mitigation inside buildings against earthquake for the furniture workers and manufacturers.

The project's subject is a cross-border and transnational issue which has not been focused via education programmes until now. 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 the target group, specified earlier.

Special guests at partners' meetings, such as Ms Hitomi Murakami from Yamaguchi University, Japan at the meeting in Varna, presenting "Recent studies on seismic indoor safety and countermeasures in Japan and some notes for SISMILE Web Learning System" and Dr. Maki Koyama – Associate Professor at Kyoto University, JAPAN, presenting her study: "Review of Indoor Earthquake Risk and Countermeasure Studies in Japan" contributed a lot to the background of the contents of the learning material.

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 via offering specific knowledge on earthquake awareness, non structural hazards and basic NSM (non-structural mitigation measures).

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. TU-Varna offered to apply as a target group a group of young designers - students, having the task of being trained in non-structural elements design too.

The project consists of several stages, related to the defined work packages. 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 knowledge acquisition application technology in furniture design in different cultures and

countries, including knowledge about materials and the last one's aim is to bring up the seismologic differences in different countries. The results were used during the process of the production of the eLearning contents.

Target group members were involved in all steps of the project process. After the design and development of the e learning platform, tools and contents, it was tested by pilot groups of target sector to define strong and weak points of it.

During the development of the e-learning contents European Quality Standards and European Qualification Framework were kept in mind so that furniture workers and public could easily understand them.

The e-learning package was designed and created by the cooperation of 8 organizations from 7 countries. E learning was created as multilingual in 7 languages. (it is available at the web site: [www.sismileproject.eu](http://www.sismileproject.eu)).

The structure of the e-learning contents in 7 languages includes a real-world video simulation, showing the effects of the correct or false designed non-structural elements upon the inhabitants during earthquakes. Multimedia contents, such as video, graphics, images, text were created too.

Great attention had been paid on the feedback from pilot users in the form of self-assessment quizzes in 7 languages.

Specially designed survey provides feedback from pilot users too. Currently 278 pilot users are given entry to the e-learning contents. Guests are kindly invited to join the project contents providing their details to the national coordinators.

The training programme will be used as a part of current informal, non-formal and formal training systems, as well as individually. It can be easily appended and used in other similar applications too.

It fully corresponds to the life-long learning practice – „ any time”, „ anywhere” and “any speed of learning”.

## Table of Contents

|   |           |
|---|-----------|
| <b>1. EXECUTIVE SUMMARY.....</b>              | <b>4</b>  |
| <b>2. PROJECT OBJECTIVES.....</b>             | <b>7</b>  |
| <b>3. PROJECT APPROACH.....</b>               | <b>8</b>  |
| <b>4. PROJECT OUTCOMES &amp; RESULTS.....</b> | <b>10</b> |
| <b>5. PARTNERSHIPS.....</b>                   | <b>15</b> |
| <b>6. PLANS FOR THE FUTURE.....</b>           | <b>18</b> |
| <b>7. CONTRIBUTION TO EU POLICIES.....</b>    | <b>19</b> |

## 2. Project Objectives

The SISMILE (Increase vocational skills to face the earthquake risk inside of buildings) project aims to create an online training environment and contents, such that to increase the vocational skills of the workers and / or craftsmen, who are responsible to produce and/or install the non structural elements (furniture) inside buildings, which in turn are the cause of high risks to life and property safety during the earthquakes. In such a way small family companies would be more competitive on the market, offering new quality safe goods (furniture) plus the consultations how to fix them and guarantee a safe home place during earthquakes.

Orderly the project results will have cascade objectives:

- 1) The workers and manufacturers in furniture industry will be trained in 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 areas 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.

Designing of the nonstructural elements against the earthquake risks inside buildings” 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 of Europe are a virgin area for furniture workers and manufacturers.

There are three types of risk associated with the earthquake damage of non-structural elements: loss of life or injury to building occupants, loss of property especially in commercial buildings where the cost of non-structural elements may be high as 75 percent of the total cost of the building, and impairment or loss of function of an important building or lifeline structure, for example, telecom center, which should be functional just after an earthquake.

In spite of all these consequences, over the years, design of non-structural elements was overlooked as compared to the design of structural elements because the focus of engineers had been the prevention of structural failure first, and also because the non-structural elements are not permanently attached to the buildings and often added after the construction is complete.

Understanding the size of the possible return of the project results, it is necessary to perceive the figures in Europe related with earthquake disasters. This project will bend over on this subject and via this will “kill two birds with one stone”. Firstly the furniture industry will have a new task to work on and increase the area of employment and secondly the risks caused by non-structural elements during the earthquakes will be decreased.

### 3. Project Approach

A survey was realized by the partnership to understand of what is the target group's educational level exactly (through specially designed questionnaires), what kind of methodology they would like to use in learning, what are their computer knowledge and usage (at home, at the workplace, etc.) and what are their educational necessities exactly.

Besides the cultural and national differences, an analysis was performed to specify 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 was based on 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.

There isn't any training in this or similar subject in the current programmes in informal, formal and non-formal education systems in partner or non-partner countries in Europe. The non-European countries such as USA (FEMA) and Japan have already looked into this matter and created some education programmes but in Europe unfortunately there is no example.

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, were transferred to the project, using the approach of e-learning design, based on self reading, supported by trainers and self assessment on the created on-line study materials.

The new approach to training had been based on the thorough knowledge experience on seismology plus the experience and knowledge in e-learning training systems' design, backed up by professional knowledge in design, production and testing of non-structural elements.

All these major indicators were met during the process of the design and production of the e-learning package, which is the main output of the project.

According to the test results the product was revised and now is ready for the final distribution.

The tasks' distribution to partners, based on the aims and objectives includes the following, related to the e-contents stages:

- Creating content
- Technical infrastructure
- Creating the system (Set-up database and e learning system)
- Designing the content to LMS
- Creating cartoon Character
- Design of the NSM Scenario
- Preparing Cartoon booklet
- Creating Short movie
- Preparation of the NSM application Guide book
- F.A.Q
- Usage of LMS (for user)

- Description of housing contents for all countries (combine the all countries housing style report)
- creating certification criteria + International standards
- Preparation of multiple choice questionnaire (test) and answers + FAQ of the content
- Additional contribution to the detailed content
- Preparing glossary
- Translation of the content

The production phase was realized by cooperation of the target group members and after development of the e-learning tool and content was tested by 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.

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

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

## 4. Project Outcomes & Results

The main product of the project is an **e-learning tool and contents** to increase individual awareness of the workers and manufacturers in the Furniture sector about nonstructural earthquake risk mitigation for use in partners' countries. E-learning tool is available at web site [www.sismileproject.eu](http://www.sismileproject.eu).

Development of the content and technical structure of the e-learning has started just after the second meeting, held in Athens. The partners have discussed the general structure and decided the concrete heading details of the content in the second meeting.

The first step was 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 was 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 acted as "consultancy group" and helped 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 e-learning 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 etc.

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 about 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 on the web site to provide a source to the researches.

**Analysis of the seismic differences in target countries** was 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.

The most important issue of the project is the development of the content. All VET provider partners had a role in the development stage. The tasks were divided between partners the third meeting.

After the second meeting, development of the content and technical structure of the eLearning has been started.

P1 prepared draft content of e learning tool. P2 created a SISMILE character, P7 draw icons and images, P3 designed the content to the LMS. All partners prepared questions for the test, P1 revised all partners questions, and also images for the system. P3 created the quizzes and uploaded the questions to the system in all languages. All partners translated the content to their languages. P1 and P2 created movies. Handbook was created by P1 and P2 with the contribution of the P5 and P7. Glossary was prepared by P5.

During the implementation of project the following performance indicators and methods were used to evaluate the quality of the project;

|  | <u>Possible performance indicators which were used</u>  |  |  | <u>Methods which were used to check the targets</u>  |   |   |
|--|---|--|--|--|---|---|
| <b>THEMES</b>                              | <b>PROCESS</b>  | <b>PRODUCT</b>   | <b>OUTCOMES</b>  | <b>PROCESS</b>   | <b>PRODUCT</b>  | <b>OUTCOMES</b>   |
| <b>INNOVATION</b>                          | - process novelty confirmed by transnational partners   | - product novelty confirmed by transnational partners<br>- 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<br>- Target group and target sector's feedback form at the end of piloting stage | -beneficiaries' feedback form at the end of piloting stage<br>- target group and target sector's feedback form at the end of piloting stage | - monitoring the outcomes (by the questionnaires)           |
| <b>PARTNERSHIP TRANSNATIONAL DIMENSION</b> | - regular communication between partners<br>-full involvement of all partners<br>-partners perceive positive benefits from transnationality | - 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<br>- participant observation<br>- short questionnaire to partners every quarter                | - monitoring production of outputs within time scale and to appropriate quality<br>- Interviews with key stakeholders                       | -focus group with partners (one or two partnership meeting) |

|   |  |  |   |   |  |  |
|---|--|--|---|---|--|--|
| <b>VALIDITY &amp; IMPACT ON TG</b>      | <ul style="list-style-type: none"> <li>- involvement of representatives of the target group</li> <li>- have target group representatives been consulted?</li> <li>- have target sector representatives been consulted?</li> <li>- have target group members been able to influence the product?</li> <li>- have target sector members been able to influence the product?</li> </ul> | <ul style="list-style-type: none"> <li>- does the product meet the needs of the target group in each country?</li> <li>- does the product meet the skills needs of employers in furniture industry?</li> </ul> | <ul style="list-style-type: none"> <li>-evidence of enhanced employability and/or further training for target group of beneficiaries</li> </ul>   | <ul style="list-style-type: none"> <li>-notes of consultations</li> <li>-beneficiaries' feedback form at the end of piloting stage</li> <li>-focus groups with beneficiaries</li> </ul> | <ul style="list-style-type: none"> <li>beneficiaries' feedback form at the end of piloting stage</li> <li>- focus groups with beneficiaries</li> </ul> | <ul style="list-style-type: none"> <li>-tracking of beneficiaries</li> </ul>         |
| <b>DISSEMINATION &amp; VALORIZATION</b> | <ul style="list-style-type: none"> <li>-involvement of employers, education institutions, VET providers, foundations, associations, municipalities silent partners</li> <li>- have these stakeholders been able to influence the product?</li> </ul>   | <ul style="list-style-type: none"> <li>- do stakeholders consider the products (e-learning, website, dissemination event) useful?</li> </ul>   | <ul style="list-style-type: none"> <li>- 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?</li> </ul> | <ul style="list-style-type: none"> <li>-notes of Employer Consultations</li> </ul>  | <ul style="list-style-type: none"> <li>questionnaire/feedback form at dissemination event</li> </ul>   | <ul style="list-style-type: none"> <li>- interviews with key stakeholders</li> </ul> |

Regular transnational Partnership Meetings were held during the project as follows:

1. Meeting      December 2011      Turkey
2. Meeting      April 2012              Greece
3. Meeting      July 2012                Bulgaria
4. Meeting      January 2013            Spain
5. Meeting      May 2013                Romania
6. Main dissemination conference October 2013    Italy

The Project has been completed in December 2013 . During the project period the following activities were realized:

The first kick of meeting was held in 14-15 December 2011 in Istanbul. Main activities were:

- Partners contracts had been signed
- The common points of the e-learning were defined
- Quality management plan was prepared
- Later questionnaires, 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](http://www.sismileproject.com)) was created and published, available in seven different languages. It includes the general information about the project, partners, e learning package and other outputs. Also it can be used as a gateway to reach the e-learning system.
- The analysis on TG and TS members were realized.
- The analysis of cultural – national differences was 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 about 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 were unified and published in the web site to provide a source to the researches
- Dissemination action plan was prepared by partners.
- The dissemination activities have been started (press releases, meetings, workshops, web sites, search engines, etc.)
- Bulgarian and Romanian partners printed the brochure and poster of SISMILE project in their languages, the Romanian partner also printed the brochure in English and also they were presented the SISMILE project to 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 e-learning had been started.
- Draft content in English was prepared by P1

The third meeting was held in Varna in July 2012

-The draft content of e learning tools was discussed by the partners in the third partnership meeting

The most important issue of the project is the development of the content.

All VET provider partners have a role in the development stage. The tasks were divided between partners the third meeting.

- Images, icons, videos were created for the e learning package.
- Translation of the content to the partners' national languages was realized

The fourth meeting was held in Valencia, Spain in January 2013. The details of the content and next steps of the project was discussed by partners in this meeting. In the fourth meeting, P6 declared the possibility of the dissemination meeting to be held in Italy due to the characteristics of the UEA.

Fifth partnership meeting was held in Bucharest in May 2013

The details and schedule of the testing stage was discussed and partners decided to transfer dissemination meeting to P7 instead P6 in the fifth meeting

Involvement of the consultancy group to the development of the content was realized. They reflected their opinion to the product.

The last dissemination meeting was held in Florence Italy in October 2013

Testing stage and dissemination issues was discussed in first day

The Second day a main dissemination conference was held in Piezza Delle Murate . almost 50 people from Furniture sector were attended to the conference. Project outcomes were presented by the partners. The audience were informed about SISMILE project,

Dissemination activities were carried out according a specially designed dissemination plan, covering the following required feedback information, provided by P2:

- List of Activities / Methods /Tools
- Aim(s)

- Date(s)/Duration/Frequency/Place/Level
- Characteristics of Target Group/Size/number of organizations/persons reached / persons involved
- Results / Impact/Overview

Dissemination activities from all partners included:

- News on partner's website
- Short messages about partners meetings
- Press releases
- Regular news about the project developments
- Pilot courses organization
- Taking and processing feedback from pilot users groups, available online and offline
- Ceremonious provision of certificates to participants
- Radio publicity etc.

Optimal use of results may be achieved through the continuous use of the web based training contents and processing results online and offline. For this a special option in the English version provides information to "guests", wishing to join the course. For this there exists a national coordinator/administrator in each partner country, responsible for signing up potential users.

Total number of assigned users currently is 278 (Jan. 2014). This accounts to around 40 users per partner. Guests' access is possible too.

## 5. Partnerships

Project partners;

1. Kandilli Observatory and Earthquake Research Institute (KOERI) / Turkey (P1)
2. Pera Fine Arts (PERA) / Turkey (P2)
3. Technical University of Varna (TUV)/ Bulgaria(P3)
4. The Association for Lifelong Learning in Rural Areas (AEPMR)/ Romania (P4)
5. The Institute of Training & Career Guidance (IEKEP) / Greece (P5)
6. European Furniture Manufacturers Federation (UEA)/ Belgium (P6)
7. Palazzo Spinelli Istituto (PALAZZO) / Italy (P7)
8. Furniture, Wood and Packaging Technology Institute (AIDIMA) / Spain (P8)
9. Yamaguchi University (P1TC)

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

P1 is responsible for management of the project according to the promised schedule and tasks, coordination of the project partners, contracting, reporting, organization of the kick-off meeting, management of the financial and administrative issues. P2 is responsible for on the communication and coordination of the project.

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.

The partner P1 is one of the most prestigious seismologic institutes of Europe, it 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 are 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 e-learning systems, was responsible for WP3 which is development of the contents and technical structure of the eLearning system, P3 ensured the realization by all partners of an e-learning tool, available in Internet with attractive format and visual multimedia elements. P3 collaborated at each step with the

partners, by emitting recommendations on the formats and ways of producing the knowledge and content that had to be used in order to comply with IT format.

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

P2, P3, P4, P5, P7 and P8 realized the testing activity. P6 will widespread the activities realized within the testing and revising of the product to the non-partner European countries which are under the earthquake risk. P1 has responsibility to revise the eLearning package according to the technical and content aspects.

P4 had the responsibility to ensure that the project realizes all activities about quality assurance as promised in the proposal. P4 controlled 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.

In the original project proposal it was written that "...P6 is responsible to control whether the dissemination activities have been realized according to the statements in the proposal or not. P6 also had the responsibility to organize the main dissemination conference in Brussels/Belgium and ensuring the involvement of the target sector/group members to the dissemination activities". But during the project it was understood that there is no real risk and therefore there is no added value in a course on this subject in Belgium, so it would be much more logical to organize final dissemination conference in one of the countries that are more subject to the risk such as Turkey, Romania, Italy.

It was decided by partners to transfer the dissemination meeting to Italy instead Belgium.

P1 had responsibility to develop the logo, web site. P2 and P4 had responsibility to develop dissemination materials, brochures, posters and promotional materials, and P6 declared to develop its own dissemination materials for its country. P2, P3, P4, P5, P7 and P8 had responsibilities to organize small dissemination conferences in their own countries.

All planned actions were realized as planned.

The partnership worked hard 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 was sent to the consultancy group members to check the quality and understanding whether it would be suitable to the all expectations. Then the system was tested by the selected target group members in each partner country. The feedbacks of the target group members were gathered and processed in order to improve the quality of the products.

The web site and logo of the project had been created. The web site is multilingual and includes information about the project, its aims and objectives and expected results, the reports created until now.

A guide and other dissemination materials were created in the second year of the project. Several small and one big dissemination conferences were organized by the responsible partners. The final one was held in Italy with a great success.

The partners have organized five partnership meeting in Turkey, Bulgaria, Spain Romania and Greece. After each partnership meeting, an evaluation activity was done by the Romanian partner to understand the meeting achieved the aims or not. The quality evaluation has been done internally and also externally.

The management activities also have been realized as promised in the proposal by the great collaboration of partnership during the project time. 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.

Third country partner Yamaguchi University prepared the report about the current applications in japan and organized the study visit.

## 6. Plans for the Future

Some of the ways to reach sustainability of the project is:

- Implementing SISMILE training material, as part of the training program of newly opened course at vocational schools and Universities (P3 will implement SISMILE as part of a special course at TU-Varna.)
- Further development of SISMILE course contents, based on the feedback from users, implementing interactive technology
- Possibility for online training of users in vocational education
- Provision of course contents to other partner Institutions
- Creation of virtual scenarios, based on the up to date environments
- Provision of information on the SISMILE e-learning contents to public and business Associations
- Looking for possibilities of enlarging the scope of the e-learning contents, based on multi-country partnership, orientated to virtual reality, development of engineering, design and mass psychology issues.
- The partners will utilize Sismile e-learning system in their existing educational set-up, such as Interior Architecture Vocational Training at Pera, Interior Architecture and Restoration Vocational Training at Palazzo, and Earthquake Hazard Mitigation Trainings at KOERI-DPEU.

## 7. 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 employee and employers. Despite the importance of the Furniture industry in Europe economy, the industry has been needed 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, partners have created 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.

During 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.

The partners were created according to the earthquake risk distribution within Europe and as a result of the partnership structure, the Project has been disseminated in the risk area of Europe.

