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Qualifications for the European Bakery Industry-QBake

Final Report Public Part

517866-LLP-1-ES-LEONARDO-LMP

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Executive Summary

In the last few years, the Food Industries have experience a dramatically increase in the implementations of new technologies and the use of new raw materials. Being the largest industry in the EU, it is vital for Food companies to improve their technological level in order to remain competitive and ensure the quality and safety of their products. These changes also imply that the companies must train their employees in the understanding and use of these new technologies.

QBake (Qualifications for the European Bakery Industry) is a Leonardo da Vinci Development of Innovation Project, funded by the EC through the EACEA. The main objective is to develop an appropriate training course for employees of the sector who otherwise will not have the opportunity of updating their knowledge and skills with respect to new Technologies implemented in the Bakery Industry. The Project will develop the course and validate it with a group of trainees, who will obtain the Europass certificate, acknowledging their new competencies.

ACTIVITIES

Coordination and quality management: the project has implemented coordination and a quality plan to manage all activities.
Training needs analysis (TNA): a predictive training analysis study has been performed by the participating RTDs and later compared with the results of a TNA performed with a series of bakery companies in the 4 participating countries (Greece, Romania, Spain and the United Kingdom)
Development of training materials. Based on the TNA results, the consortium have undertaken the building of a training program (including materials, methodology, implementation considering work duties, validation tools, etc).
Training Trainers' Workshop. A workshop was organized in Campden BRI facilities to train at least 2 trainers from the 4 participating countries. The trainers will be selected among some experts in the participating countries and will review the training program.
Validation of training program. A series of training sessions will be carried out in the different countries to test the appropriateness and relevance of the training program. The program will be delivered with a group of selected trainees, all employees of the bakery sector. Some months after the training sessions, an impact analysis will be conducted to assess the effectiveness of the training in the workplace.
Dissemination of project activities and results. A series of dissemination tools and activities are programmed along the project lifetime and some of them already implemented. A multilingual blog on bakery technology provides companies in the sector with an insight into the new technologies and developments, as well as information on Vocational Education and Training in Europe. The project website (www.qbake.eu) offers general information on the project as well as updates and news. The Associations included in the consortium use their networks to disseminate project news.
Exploitation. After the project lifetime, the RTDs will be able to exploit the developed product in their countries. Also, a Transfer of Innovation project is projected in order to transfer methodology, results and know-how to other countries.

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1. Project Objectives

The main objective of Qbake Project is to establish a working methodology to give a rapid response to training needs as changes happen in the industry and transfer the results obtained to other sectors and industries.

In particular, the specific objectives achieved during the project life are the following:

- Development of a new methodology for developing industry-oriented training strengthen relations between industry and RTDs (Research and Technology developers)
- Involvement of professional associations to ensure a wider impact of the methodology developed and the effectiveness of the training
- Design a specific training programme for bakery industry workers
- Promotion of closer cooperation between the industry, RTDs and training providers

The present project contributes to spread updated knowledge in bakery technologies according to specific needs to a wide number of food industry.

Thanks to the methodology followed it has been possible to design a tailor-made training pilot course which covers the technological subjects of most interest showed by the bakery industry after the training needs analysis.

A total of 155 companies from different countries were involved in the training needs analysis, well in excess of the initial target of 80 companies.

A total of 68 trainees from different countries have been involved in the validation of the training programme whose contents have been produced based on the training needs analysis and the foreseen level of the employees which should have a basic knowledge in bakery and/or years of experience. The initial target of trainees as of about 60 trainees, thus the project has complied with the objective.

Potential impact: the methodology followed to prepare a tailor-made training course designed for the bakery industry can be transferred to other Food Industry Sectors. In addition, the training modules prepared by experts in bakery technologies and in training will be commercialised in future training courses.

All outcomes required by the project were completed, including the creation of a web page (www.qbake.eu) and a multilingual blog http://qbakeproject.wordpress.com/ and a project brochure as part of the dissemination activities.

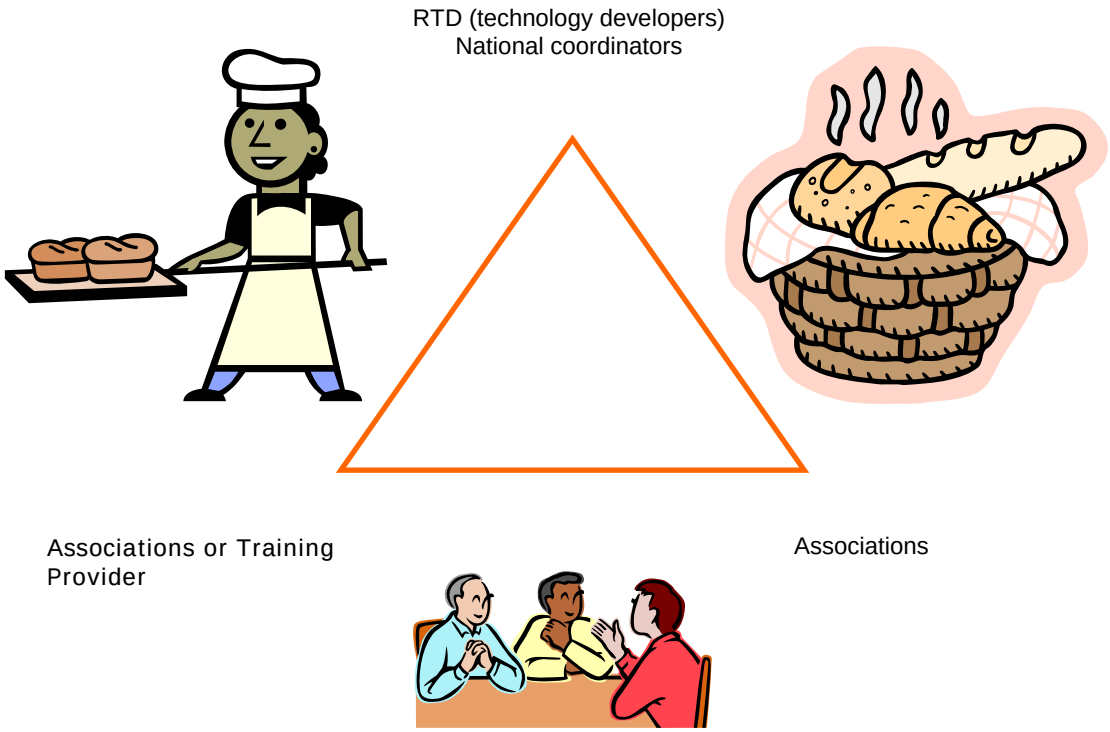
2. Project Approach

The approaches to carry out QBAKE project have been the following:

Firstly, to carry out the project successfully the partners integrating this project follow a common triangle structure in each country.

In the vertex of the triangle are placed the different type of members: RTDs, Associations (related to food Industry and in particular to bakery Industry) and training centres. These members are interrelated in order to obtain the best results for the project.

The RTDs as the technological partners and training providers coordinate the activities of the other two partners in each country and make sure that the objectives in each task are correctly achieved. The main roles of the associations involved are to reach as many companies as possible interested in participating in the project and help the RTDs/training providers.



Secondly, the project covers different activities divided into 8 Work packages (WP)

WP1 and WP2 correspond to management activities to assure the quality of the whole project.

WP3-WP6, correspond to implementation activities: the training needs analysis of the Bakery food industry crossing that information with innovative aspects coming from RTDs which are constantly developing new technologies to improve food products; the development of training materials based on the training needs analysis and the implementation of the training materials in training course in each country.

In particular, to address the training needs analysis (TNA), a questionnaire in word format was developed and distributed to all the RTDs to collect all the necessary information, such as a list of the needs in industrial bakery, according to the trends in technologies, processes and products. A spreadsheet was developed to process the information collected from the participating RTDs.

On the other hand, AINIA and INNOPAN with the assistance of the other partners prepared an engagement model to co-ordinate actions between the associations and the RTDs. A questionnaire was developed and distributed to the Associations and the RTDs. The questionnaire was delivered in the four languages of the consortium partners (Spanish, English, Greek, and Romanian) by the respective national coordinators.

INNOPAN supported by AINIA, ROMPAN, CAMPDEN and SEVT, as associations, and EFET in its capacity as the Greek Central Competent Food Authority, following the engagement model, contacted their bakery sector associates and other bakery industries in order to engage them in a survey to confirm:

- Training needs for bakery Level 2 workers.
- Preferred methods of training (classroom, pilot plant, ICTs, e-learning, other)
- Preferred duration and scheduled times of training / Balance with work duties / workload
- Estimate nº of workers who require training in this area
- Other areas where training is required (other than those in this project) for L2 workers.
- How they communicate their needs to training providers.
- Whether it is possible to implement a cascade-training system in their companies for L2 workers

The contact person for the survey was the Human Resources / Training Manager of the company. In smaller companies the Quality Manager or the owner of the companies was involved in filling out the questionnaires.

The target was 20 industrial bakery companies per country.

Thanks to the analysis of the bakery Industry's training needs four top subjects (four training modules) were selected to be part of the pilot training course.

The four modules selected are the following: Fats (functionality & substitutes), Shelf life, Sourdough technology and improving agents.

These four modules were shared among the RTD partners, preparing one module each either with own personnel (Campden BRI and IBA) or subcontracting external trainers (AINIA and EFET).

Once the training materials have been prepared, the following step was to discuss about how to improve them in a trainers' training Workshop held in the premises of Campden BRI.

And afterwards, the training materials (presentations' contents, test to assess the knowledge acquired by the trainees and videos) were approved by Campden BRI and the following steps were to validate them in a training pilot course held in each country (UK, Romania, Greece and Spain) organised by the correspondent RTDs (Campden BRI, IBA, EFET and ainia)

The training materials have been implemented in each country in their own language.

At the end of the training course, an evaluation questionnaire was delivered to the trainees to evaluate the satisfaction of the training in terms of: Aim & Knowledge gained, the speaker's performance, quantity&quality of the presentations and training material, suitability of the facilities and management of the organisation, as well as, the agenda and dates.

Finally, in order to assess the usefulness of the training received and establish corrective actions for the future, another evaluation has been carried out some months after the end of the training course. This assessment has been done by delivering and collecting a "follow-up questionnaire" filled in by the trainees.

In general terms, the training has successfully covered the expectations of the trainees although some improvements could be done to fully accomplish with the different baker's groups needs (technical staff, quality and research staff, artisanal bakers, etc.)

And WP 7and WP8, referred to the dissemination and exploitation of the results.

Different dissemination activities were carried out through the project's life. A project web has been designed to upload information related to the project and about the partnership, as well as a blog was designed to upload technical information, news, press releases, events, etc. related to Bakery Industry.

3. Project Outcomes & Results

The results achieved have been the following:

- Study of potential tools for predicting training needs in Technology in the Food Sector
- Comparative study of the training needs in baking technologies in 4 countries
- Development of training materials for specific training needs in baking technologies, in particular Fats, Shelf life, Improving agents and Sourdough technology.
- A model for engaging the companies in the sector in participating in training need detection, program development and preparation of the validating training course
- An website and multilingual blog related to training needs in technology for the bakery sector
- Implementation of training pilot course in four countries (UK, Romania, Greece and Spain) in each language.
- Analysis of the results of the training based on evaluation assessment and follow-up questionnaires to evaluate the usefulness of the training and areas of improvement.

The implementation of the project activities started with the training needs analysis, followed by the development of the training materials, a trainer's training workshop to produce the final training materials and ended with the validation of the training programme, as it is explained as follows:

The training needs analysis involved food industry and RTDs and led to the preparation of a programme that will be implemented during the validating training course

EFET, as leader of the WP, performed the RTDs questionnaires to forecast training needs from the research point of view with the assistance of the other partners in the project. In addition EFET carried out the analysis of the answers obtained from the bakery industry regarding gaps in their technological knowledge.

The results of this process are the following:

19 technological trends or know-how were identified by the RTDs, such as fats in bakery, sodium reduction in bakery products, sourdough technology, flour fortification, organic bakery, etc. Out of the 19 technological trends identified by the RTDs, 15 technological trends were also identified as existing trends and corresponding training needs by the Training Needs Analysis (TNA hereafter) conducted in Task 3.2 (confirming training needs analysis). This gives a forecasting accuracy of about 80%. That means that the RTDs managed to forecast correctly 4 out of 5 training needs identified and confirmed by the TNA. The forecasting methodology developed by the consortium has been validated and its accuracy can be considered satisfactory.

The original target was 20 industrial bakery companies per country.

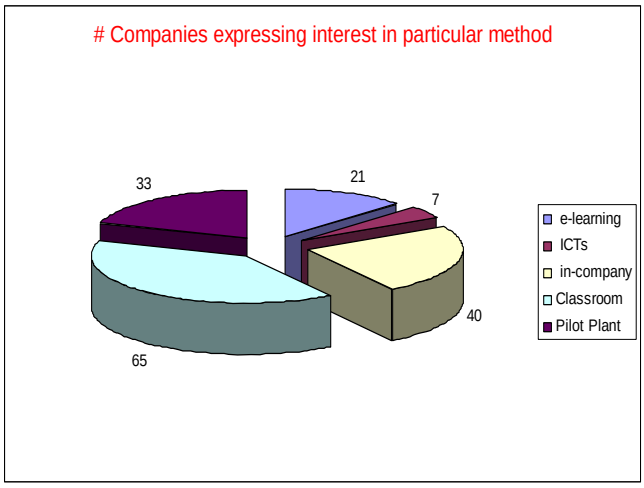
All the results from the survey were translated by the national coordinators and forwarded to EFET. A spreadsheet was developed by EFET for the collection and processing of the data.

The consortium managed to have 155 enterprises form the bakery sector participating in this procedure, 20 of whom were Spanish, 20 were Romanian,18 were British and 97 were Greek.

The results of the TNA conducted with the utilisation of the data processing of the spreadsheet data are the following:

1) We came to the conclusion that the majority of the participating enterprises understood well baking technology, but most of them still have training needs.

2) The data collection and analysis demonstrated that the Pilot Plant training method is the most popular one, amongst the training methods available for the bakery enterprises.
Followed by In-company training and classroom training was their second and third choice. Finally, e-learning was the fourth choice by the enterprises, while ICTs (Information and Communication Technologies) was the last one, stating that they would adopt this method of training, although it is not the preferred one.



3) In general, it seems that enterprises' personnel is more available for training during the months of February, January and May, rather than during summer months.

4) When it comes to the total duration of training, the preferred duration is 3 days. Next in ranks is the option ''more than 5 days'', and last in rank is the option ''4 hours/day''

5) As far as scheduled time of training and balance with working duties is concerned, is estimated that the most satisfactory time period would be the option ''weekdays working hours', followed by weekends and ''weekdays after working hours''.

6) The training needs of the enterprises were identified after sharing the information among the partners from the different countries.

Taking the above conclusions into account, a training program was agreed selecting four main technical modules.

So, it was concluded that the main training needs of the bakery industry in the 4 participating countries can be categorized and grouped in the following 4 main groups (modules), in order of demand:

1. Shelf life issues (water activity, packaging, preservatives)
2. Improvement agents (oxidizing agents, gums, enzymes, emulsifiers)
3. Fat issues (functionality, substitutes)
4. sourdough science & technology

The training needs analysis report acted as a basis for the development and delivery of in-country training programmes.

Thus, **the development of the training materials** was carried out.

There was a previous division of the work between the RTD partners. Each RTD was in charge of one of each topic or module, Campden was in charge of preparing the module of Improving agents by own staff; IBA was in charge of preparing the module of Shelf life by own staff; EFET was in charge of Fats module and launched an official call to recruit trainers and AINIA was in charge of Sourdough technology module.

The preparation of the training contents was done by trainers (at least 2 per country) selected according to the following criteria: with expertise in bakery food sector, in training, and English written/spoken to be able to attend **the trainer's training workshop** to discuss about the content of the training materials.

Due this task European mobility was promoted, exchanging experience between trainers coming from different regions and Linguistic diversity (the trainers are writing/speaking English, French, Spanish, Italian, Greek, Romanian)

During the workshop, discussions and comments regarding general aspects were carried out and finally the training materials were produced which include power point presentations and videos as well as questionnaires to assess the level of knowledge acquired by the trainees in each module.

Differences between countries were also discussed regarding specific local issues and contribution of the trainers with their experience, deciding on common language and common terminology.

Once the training materials were prepared and validated by Campden BRI, a programme was designed and scheduled by the partners. Thus, the following planned activity within the project's life has been **the validation of the training programme** in each country in their own language for that the training materials were translated.

The training course was free to attend and hotel costs were covered by the project. The delegates in the training sessions were a mixture of technical staff (in some cases the owners) and artisanal bakers, able to transfer the knowledge and skills gained in the training course into their workplace.

The training course consisted of a well-balanced theoretical and practical sessions. It was designed to act as a catalyst for the emergence of know-how's and trainers amongst the public addressed. The proposed approach took into consideration:

- The goals of the course and of the programme
- The extension of the knowledge to deliver
- The limiting duration of the training and the characteristics of the attendees (due to their diversity)

The training course was designed to improve the knowledge and experience of participants and ensure common understanding of the EU requirements when applicable.

A team of tutors (minimum of two) was available to answer any questions the trainees might had. In order to maintain the interest of participants, tighten the relation tutor-trainee and allow for smooth delivery and assimilation of the knowledge, a well-balanced methodological-mix.

The training was carried out over 3 days, following the program agreed at the QBake project meetings. Days 1 & 2 were a mixture of theory and practical sessions. On Day 3, a test was delivered to assess the knowledge acquired on each of the four modules reviewed during the course.

The selection of the trainees was based the following characteristics:

- With technical background and understanding
- With a responsibility position in the company
- Between technician and manager
- Able to pass the information to the rest of the employees (cascade training)

Amongst 11-25 participants attended each of the training sessions organised in each partner's country (UK, Romania, Greece and Spain) with a total of 68 supported participants. In each training course, the participants came from different parts of the country, from different size companies (mainly SMEs) and different expertise due to the heterogeneity of the type of bakery products each company produces.

For the purpose of assessing the effectiveness of the pilot training course in trainees' workplace, a follow-up questionnaire was prepared and delivered to the trainees, between 3-4 months after the end of the training course.

The objective of this questionnaire was to gather data whether the training has been effective, has covered the trainees' expectations and have their feed back in order to make improvements in future training course for the bakery sector, based on the methodology and training materials produced within the QBAKE project.

The training course was successfully achieved although not in all cases, the contents have not been totally applied in their daily work.

One of the most important goals of the Project is the promotion of its activities and results.

The **overall aim** of dissemination workpackage was to start as soon as possible the dissemination of project information, activities and results in order to ensure the maximum visibility of the project.

In order to achieve this objective, all the partners and especially the associations, employed their channels of communication and their networks to reach all stakeholders relevant to the project. The tools which were planed to be used for this purpose were newsletters, websites, blog, publications, attendance and organization of events.

The main issues of the Dissemination Strategy have been the following:

- Ensure the promotion of project information and results to the relevant stakeholders at national and European level.
- Guarantee a continuous flow of information though a web site and the multilingual blog.
- Raise media awareness.

The dissemination Activities carried out throughout the project life since the beginning of the Project 1st February 2012 - 31st of January 2014, in which all partners have been involved:

- Preparation and use of a logo/acronym prepared by AINIA.

- Establishment and updating of Q-Bake website by AINIA

AINIA designed and established a website for the Q-Bake project at the link http://www.qbake.eu.

The web site is in English, Greek, Spain and Romanian. It makes the project known to the general public and consumers. Special attention is given to organising the material in a very simple way; this enables users to easily search for information and navigate the site, using it as an optimum working tool and an important source of information.

QBake web site contains almost all the information generated by the project and it is regularly updated. Furthermore, project partners contribute to the maintenance of the web site by sending relevant information on project activities.

- Production and distribution of information material.
  AINIA produced the Q-Bake *brochure* in electronic format and printed version which was prepared in English and translated in 3 national languages (Greek, Spanish and Romanian). The English and the translated brochure were printed and distributed among project partners and stakeholders. The brochure contains information on project objectives, work package activities and partners. Furthermore an usb stick was produced with the logo of the project.

- A blog initially created by AINIA was developed in order to disseminate information about the project. The blog is also used as a dissemination/exploitation element, to which other dissemination elements can make reference, as it is always useful to have an on-line site where stakeholders interested in the project can be directed to find information.

The content of the blog includes a description of the project and the consortium, public reports and journal publications related to the project and contact details. The blog is multilingual. All the information sent to SEVT who is responsible for its upload. The partners have to send one piece of information per month, in English or in its language whatever they believe that it is relative to project (articles, public reports, publications, etc).

All partners have contributed for publishing information.

The Blog was structured as follows:

- Recent Posts
- Pages

In the session of Pages developed the followings categories:

- About (general information for the project)
- Consortium (list of partners)
- Contacts
- Q-Bake Events
- Q-Bake at Media (uploading of articles, interviews, video, etc).

In the lifetime of the project has been published 74 articles in total, 13 people is following it and it had 2378 visits

Some of the dissemination activities per partner

AINIA – Spain

- Publication of articles
  - "Technological training for the Bakery Industry, heart of the competitiveness. Agrofood Sector Newsletter.
  - "Employees qualification in the Industrial Bakery Sector"
  - "A new project will improve training in new Bakery Technologies at European Level.
  - " 'QBake Project" within Leonardo Da Vinci programme
  - Ainia is involved in a bakery research European Project
  - "Programe en su agenda las mejores oportunidades de formación".

SEVT – Greece

SEVT has established a network with its members due to its organizational structure and thus it has developed validated and tested channels of communication and dissemination. These channels will be used to disseminate and communicate the project results to SEVT companies.

Methodology

The work of dissemination of the project results in SEVT members will focus on:

- Dissemination of project results via validated and tested channels (i.e. website, e-newsletter, SEVT newspaper, member mailing list, direct communication with companies, personal contacts, regular meetings between associations members, etc)
- Development of project webpage in SEVT website (a specific section on this project will be created on www.sevt.gr).
- Dissemination of project leaflet in SEVT events.

Concerning the QBAKE Project dissemination activities, the following actions were performed:

- Publication of 7 articles in SEVT Newspaper:
  - Outcomes of the project meeting in Camden (No 138 - July 2012).
  - Selections of the Greek Trainers (No 139 - August 2012).
  - QBake Multilingual blog (No 142 - November 2012).
  - EFET one day conference for the Q-bake project (No 145 - February 2013).
  - Announcement of Q-Bake training programme (No 148 - May 2013).
  - Q-Bake Greek training programme (No 149 – June 2013)
  - Q-Bake training programme: follow up evaluation (No 156 - January 2014).

- Publication of Q-bake project summary to SEVT Annual reports of 2012 & 2013 (http://www.sevt.gr/magazine/ANNUALREPORT2012/index.html?pageNumber=35)

- Dissemination of q-bake brochure at the:
  - Greek ECOTROPHELIA contest (10/9/2012).
  - Brokerage Event organized by SEVT (10/12/2012).
  - General Assembly of SEVT (20/3/2013)
  - Maitre Seminar: Communicating Food Science (22-23/5/2013)
  - 3 CAPINFOOD Seminars: Food Chain Management, Knowledge

Transfer, ICT solutions for the food sector (6-7/6/2013, 13-14/6/2013, 26-27/6/2013).
- Greek ECOTROPHELIA 2013 contest (29/7/2013).
- ANUGA Fair – European ECOTROPHELIA contest (7/10/2013).

- Development of qbake webpages to SEVT website http://sevt.gr/site/content.php?absnode=125&mode=micro&this_child=339%20&sel=339.

EFET – Greece

- Organization of a:
  - Conference in collaboration with the Association of Bakers in Crete to inform about the Q-Bake Project and other issues concerning health, food safety and the current law concerning the bakery industry (27/5/2012, 30 attendees).
  - Meeting with the bakers' guild of Athens and suburbs for the implementation of the project "Qualifications for the European bakery industry" (27/9/2012, 46 attendees).

- Publication of:
  - 7 articles in Greek newspapers
  - 7 Press Releases
  - 1 interview in a sector magazine
- Dissemination of q-bake brochure and memory sticks
  - In the meeting with the bakers' guild of Athens and suburbs (SAAP)
  - In the Qbake pilot training course.

HELAFT– Greece

- Presentation via HELAFT web site
- Presentation via HELAFT facebook

Campden BRI - United Kingdom

- Dissemination of q-bake brochure and memory sticks, presentation of poster & walk about promotion
  - Campden Day (Open day for site) 500+ Visitors and members - Poster and leaflet handout June 2013
  - Campden Ectrophelia 2013 – display and walkabout promoting training to students from various universities in the UK, June 2013
  - Campden BRI – Cake Technology course (4 day on-site) – Leaflets and memory sticks given to 12 delegates May 2013
  - Campden BRI – Sour Dough Technology Course (3 day on-site) – Leaflets and memory sticks given to 9 delegates, July 2013
  - University College of Birmingham – Site visit from 25 students and lecturers from the Bakery training courses , leaflets and memory sticks handed out, July 2013
  - Novotron water activity seminar – onsite at Campden BRI – leaflets and memory sticks handed out Sept 2013
  - Campden BRI – Principles of Baking course (4 day on-site) – Leaflets and memory sticks given to 11 delegates Oct 2013
  - Anuga 2013 – Cologne Walk about promotion and leaflet drop during the expo Oct 2013
  - Campden BRI – 'Free from....' Conference held onsite, walkabout promotion and leaflet handout Oct 2013

- Campden BRI – Biscuit Technology course (4 day on-site) – Leaflets and memory sticks handed out onsite Nov 2013
- FIE – Frankfurt – Leaflets available on the Campden BRI stand at the Expo Nov 2013
- Campden BRI – Oats conference , leaflet display and memory stick handout Nov 2013

- Campden BRI website and mail shot to all members – prior to course in May, advertising the training Jan– May 2013.

IBA Bucharest – Romania

- Presentation of QBAKE project on the IBA's website.

- Publication of 5 articles.
  - "Flour based products – vector for a healthy diet" – October 2012 – Qbake blog
  - "Romanian Autumn Fairs 2012"-November 2012 - Qbake blog
  - "A new modern and innovative mill was opened in the city of Brasov" - December 2012 - Qbake blog
  - "Cozonac", a Romanian traditional specialty"- January 2013 - Qbake blog
  - QBake project, Journal "Brutarul"- March 2013

- Information regarding the QBake Project was disseminated during "GastroPan 2013 event -The Largest Specialized Exhibition in Romania" – April 2013

CEOPAN

The Spanish Confederation of Bakery Organizations (CEOPAN) is a non-profit Employers Union, gathering the 52 Provincial/Local Associations and Guilds of Bread Manufacturers and Retailers currently existing in Spain. Through these Associations and Guilds, CEOPAN represents 78% of the total Spanish bakeries, this 78% meaning 12,000 bakery industries, 42,000 stores and 160,000 employees.

CEOPAN disseminates relevant information to the Spanish bakery sector (99% composed of micro and SMEs) through three different means:

1. Information memos, which are sent to the Provincial Associations, so that they in turn may distribute them to their members. This method ensures that information reaches first-hand most traditional bakery SMEs throughout Spain.
2. The CEOPAN Newsletter, which is sent monthly to all member associations and delegates, as well as to all interested members, suppliers, bakery magazines.

3. The CEOPAN website, www.ceopan.es, which is permanently updated with relevant information about the sector and currently receives an average of 250 visits / day.

At international level, CEOPAN is a member of the INTERNATIONAL UNION OF BAKERS AND CONFECTIONERS (UIBC), the two-Sectors worldwide umbrella Organization gathering more than 50 Bakery and/or Confectionery National Associations from the five continents. Right now, the headquarters of UIBC are in Madrid and the Secretary General of CEOPAN is the Secretary General of UIBC.

UIBC represents more than 300,000 bakery and confectionery companies and 4,000,000 employees worldwide and carries out all kinds of information, training and promotion activities relating to the fields of Bakery and Confectionery.

Finally, CEOPAN is also a member of the EUROPEAN CONFEDERATION OF BAKERY, CONFECTIONERY, CHOCOLATE & ICE CREAM NATIONAL ASSOCIATIONS (CEBP) that gathers members from the following countries: Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Greece, the Netherlands, Hungary, Italy, Ireland, Luxembourg, Poland and Sweden, as well as observers from Norway and Switzerland.

Concerning the QBAKE Project dissemination activities, 6 different lines of action were considered:

- *Internal activities:*
  - News brief about the QBAKE Project, sent to the 52 Provincial/Local Associations and Guilds of Bread Manufacturers and Retailers, JAN/2013.
  - News brief about the training pilot course, sent to the 52 Provincial/Local Associations and Guilds of Bread Manufacturers and Retailers www.ceopan.es, MAY/2013.
  - News brief about the QBAKE Project to be distributed during the meeting of CEOPAN's Executive Board, MAY/2013.
  - News brief about the QBAKE Project to be distributed during the meeting of CEOPAN's Executive Board, JUN/2013.
  - News brief about the QBAKE Project to be distributed during the meeting of CEOPAN's GENERAL ASSEMBLY, JUL/2013.

- *The CEOPAN Website:*
  - News about the QBAKE Project in www.ceopan.es, FEB/2013.
  - News about the training pilot course+ meeting in Athens in www.ceopan.es, Mar+Apr/2013.
  - News about the results of the pilot course in www.ceopan.es, JUN/2013.
  - News about the meeting in Valencia www.ceopan.es, MAY/2013.
  - News about the next presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", www.ceopan.es, JUL/2013.
  - Presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulgerie-Pâtisserie", www.ceopan.es, SEP/2013.
  - News about the results of the Presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", Pâtisserie", in www.ceopan.es, SEP/2013.
  - News about the meeting in Bucharest and the finalization of the QBAKE project in www.ceopan.es, DEC/2013.
  - News about the meeting in Cologne of the QBAKE project in www.ceopan.es, NOV/2013.

- *Bakery sector magazines*
  - News about the QBAKE project in PANORAMA PANADERO, OCT/2013

- *The CEOPAN Newsletter (NL):*
  - News about the training pilot course in NL Nº44, (JAN-FEB/2013).
  - News about the results of the pilot course in NL Nº46, (APR-MAY/2013).
  - News about the next presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", in NL Nº47, (JUN-JUL/2013).
  - News about the results of the Presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", Pâtisserie" in NL Nº 48, (SEPT-OCT/2013).

- News about the results of the Presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", Pâtisserie", in the MONOGRAPH NL, OCT/2013.
- News about the meetings in Cologne and Bucharest and the finalization of the QBAKE Project, in NL Nº 50, (NOV-DEC 2013).

- *International dissemination activities*

Through CEOPAN website and bimonthly Newsletter, the INTERNATIONAL UNION OF BAKERS AND CONFECTIONERS (UIBC) has reported on the QBAKE Project to all its member Organizations so that they might disseminate it to their affiliated bakeries and confectioneries. The UIBC also has a Vocational Training Committee, which seeks to coordinate global vocational training plans in the two sectors and that is where this project was reported at the meeting that took place during the UIBC International Congress on September 14th and 15th in Granada (Spain). Since this Congress also held the General Assembly of the European Confederation of Bakery, Confectionery, Chocolate & Ice Cream National Associations (CEBP), its members also benefited from this presentation.

- News about the QBAKE Project in www.uibaker.org, FEB/2013.
- News about the next presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", www.uibaker.org, JUL/2013.
- Presentation of the QBAKE project in the Congress of the "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", www.uibaker.org, SEP/2013.
- News about the result of the Presentation of the QBAKE project in the Congress of "Union Internationale de la Boulangerie et de la Boulangerie-Pâtisserie", Pâtisserie", in www.uibaker.org, SEP/2013.

- *Impact In Different Media :*

1. La Tahona, nº 119 Sept-Oct 2013
2. Panorama Panadero, nº 411 Sept- 2013
3. Ainia (www.actualidad.ainia.es), aug- 2013
4. Ferré & Consulting (Blog ferreconsulting.com), Jun-013
5. Página web UIB (www.uibaker.org), Jun- 2013.
6. Marcaempleo.es, mar- 2012
7. ECYL (www.eucyl.jcyl.es), mar- 2012
8. Presspeople (www.presspeople.com), mar- 2012

Rompan – Romania

- Publication of 1 article in ROMPAN Magazine: - *News in the milling and bakery industry, distributed among specialists in the field.*

- QBAKE Project presentation and brochure were posted on ROMPAN's site http://www.rompan.ro/q-bake-prezentarea-proiectului/.

- E-mails regarding The QBAKE Project sent to ROMPAN's members

- Information regardind the QBake Project were disseminated on the following events:
    - National Millers and Bakers Conference - March 2013
    - GASTROPAN 2013, International Exhibition for Bakery, Confectionery, Pasta and Food Service Industries –Bucharest, ROMANIA , April 2013

- National Millers and Bakers Conference - July 2013
- World Food Day - October 2013 - Ministry of Agriculture and Rural Development, Bucharest
- Expozitie Industria alimentara – November 2013
- ALIMENTA 2013, International Fair for Food Industry, October 2013 – Bucharest
- Conference for the project's results dissemination - Perfecting the employees and the managers in the field of new technologies in order to increase the adaptability of the workers and the companies from the field of milling and bakery - October 2013

- Dissemination of q-bake brochure at the:
  - General Meeting of ROMPAN members – Sinaia, January 2012.
  - GASTROPAN 2012, International Exhibition for Bakery, Confectionery, Pasta and Food Service Industries – Tg. Mures, ROMANIA , February 2012
  - The Symposium of the Association of the Romanian milling and bakery specialists (ASMP) – 2012
  - 2012, International Fair for Food Industry, October 2012 – Bucharest.

Finally, regarding the identification of VET authorities, RTDs' partners are responsible to identify all the possible competent authorities for VET in their country and to establish contacts in order to prepare the transfer of the project results.

Each country has identified the following VET authorities:

VET Authorities per country

Romania
Identification of 1 competent VET.
- National Authority for Qualifications - under Ministry of Education, Research, Young and Sport (http://www.anc.gov.ro/)

Greece
Identification of 3 competent VET.
- National Organisation for the Certification of Qualifications & Vocational Guidance (EOPPEP) (http://www.eoppep.gr).
- Organization for Vocational Education and Training (http://www.edulll.gr/?page_id=250).
- Manpower Employment Organization (www.oaed.gr).

United Kingdom
Identification of 1 competent VET.
- National Skills Academy for Food and Drink Manufacturing
  mailto:info@foodanddrink.nsacademy.co.uk

Spain

Identification of 1 competent authority in VET
SEPE (Public Service Employment who has the competences on vocational and educational training)

Contacts established with the VET Authorities per country

Greece
In Greece EFET has established contact with Manpower Employment Organization (transliterated acronym from Greek to Latin: "OAED") (www.oaed.gr). After an extended

briefing for the scope of the training course OAED and EFET decided that the QBAKE pilot training course should take place in the venue of the School of Bakery of OAED. This was a very strong incentive for interested participants and prompted two of OAED employees at the School of Bakery to participate. http://www.oaed.gr/images/EPAS/engepas.pdf

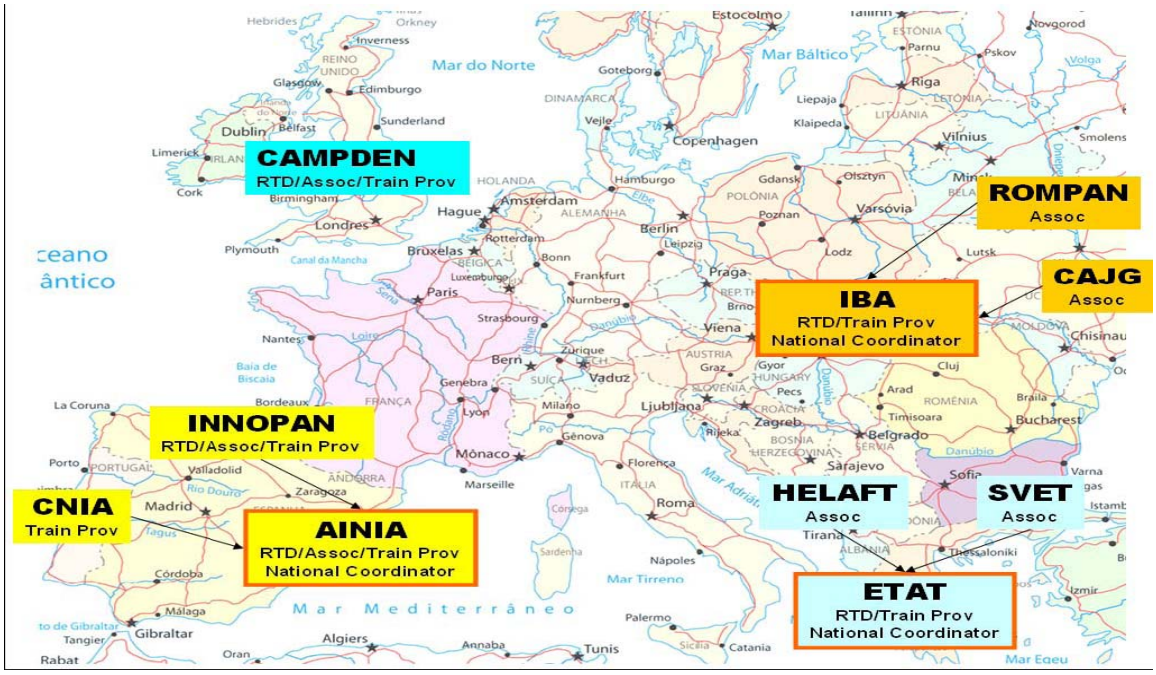
United Kingdom

The National Skills Academy for Food and Drink Manufacturing confirmed its strong interest for QBAKE project providing a letter of interest.

4. Partnerships

Due to internal re-estructuration some partners withdrew from the project and this is the final list of partners involved in the QBAKE project.

P1	Asociación de Investigación de la Industria Agroalimentaria	AINIA
P2	Campden Technology Limited	CAMPDEN
P3	Hellenic Food Authority	EFET
P4	Institutul National de Cercetare – Dezvoltare Pentru Bioresurse Alimentare	IBA
P6	Patronatul Roman Din Industria de Morarit, Panificatie si Produse Ainoase	ROMPAN
P7	Confederación Española de Organizaciones de Panadería	CEOPAN
P8	Consiliul Judetului Galati – Camera Agricola Judetului Galati	GALATI
P9	Federation of Hellenic Food Industries	SEVT
P10	Pan-Hellenic Association of Food Technologists	HELAFT



The QBake project has been developed by a consortium of the following partners:

AINIA (Spain) – Project Coordinator – Food Research and Development Centre with previous experience in VET projects. Ainia also has participated in a number of R+D projects in Europe and in Third Countries.
Contact: Ms. Mª Paz Villalba - mpvillalba@ainia.es

Campden BRI (United Kingdom) – Campden BRI is an independent, non-profit distributing, food industry membership-based research and technology organization. Their main expertise is in the bakery and canning technologies.
Contact: Mr. Paul Catterall - p.catterall@campden.co.uk

National Institute of Research&Devolpment for Food Bioresources-IBA Bucharest (Romania) is a Food Research and Development Centre with expertise in the Bakery sector. It has wide experience in participating and coordinating projects.
Contact: Ms. Claudia Mosoiu - claudia.mosoiu@bioresurse.ro

The Hellenic Food Authority (Greece) is also a VET provider for Greek Food Companies, especially in Food Safety, Quality and Consumer Affairs. As a RTD, it has participated in a number of projects.
Contact: Mr. Vagelis MOURELATOS - vamourelatos@efet.gr

CEOPAN - Spanish Confederation of Bakery Organizations, the main national representative of the bread industry, with a large experience in the execution of vocational training plans and the development of specific training tools for the sector.

Contact: Mr. José Mª Fernández del Vallado y de la Serna mdominguez@ceopan.es

SEVT (Greece) is the Federation of Hellenic Food Industries is the official body representing the interests of the Hellenic Food and Drink Industries at National, European and International level. It has previous experience in project management and in involving the sector in project activities.
Contact: Ms. Fotini Salta - fotsal@sevt.gr

HELAFT (Greece), the Hellenic Association of Food Technologists is a scientific and professional organization. Its main activities include assessment of industrial needs, dissemination and mainstreaming and scientific research.
Contact: Mr Spiros Kontos - Spiros.kontos@gmail.com

Rompan (Romania), the Romanian Employers League of the Milling Baking and Flour Products Industry is an association devoted to the promotion and technical and economic development of the associate companies. ROMPAN is also a Center for Training, Evaluation, Professional development and Re-qualification for the Milling and Bakery Industry.
Contact: Ms. Daniela Voica - tehnic@rompan.ro

The Chamber for Agriculture of County Galati in Romania (CACG) develops training activities, technical assistance for the sector, project development and dissemination activities.
Contact: Ms. Adriana TODERITA - aditoderita@yahoo.com

The added value of this consortium has been the complementary among all partners with different activities linked to the bakery sector and training.

RTDs have been the technological developers whose activities are mainly focused on researching in new technologies with the objective of improving food products. Nevertheless, a gap between industry needs and the transfer of the new knowledge developed is noted by organisations.

The associations participating in this project have been the ones in charge of spreading out the results obtained and the validation of the training materials implemented in a pilot course.

Moreover, the cooperation between different European countries has enriched the implementation of the project as it has been possible to know the common training and dissemination practices in each country.

5. Plans for the Future

Exploitation of results	
Methods and mechanisms to carry out exploitation of results	Authorize the commercialization of training courses at national level: developing training courses for bakery sector and other food sector – in the same mode; Participations in training activities, in national and international projects Use the training material for the preparation of level 2 training material for small and medium size bakeries with the collaboration of professional organizations active in the Bakery sector. Dissemination of results from QBAKE project and other similar projects; Reporting QBAKE training as a sustainable activity for rural areas-within a structural funds project Projects regarding vocational training can be continued and the results obtained (of them and of QBAKE project) will be transmitted through different channels, at different levels, through publicity, information and prom ovation activities (to conferences, seminars, workshops). Participate in the ERASMUS + programme Use QBAKE training as a sustainable activity for rural areas-within structural funds project Draft of an easy reading Bakery Guidelines based on the training material produced in QBAKE, addressed to bakery sector (see deliverable 14 “exploitation recommendations” and supporting documents) Maintenance of the project website

6. Contribution to EU policies

Delivering added value at a European level was a goal required of the project by developing a forecasting training methodology of considerable impact within Europe from the Food Industry perspective, and from the bakery food industry in particular.

Knowledge transfer is key to preparing individuals for the new jobs or enhancing their current work.

The implementation of QBake project contributes to cover some of the specific objectives included within the Life Long learning Programme such as, contribution to promote creativity and competitiveness; to promote cooperation among countries; to encourage the best use of results, innovative products and processes and to exchange good practice.

Food Industry in general and SMEs in particular are willing to improve their competitiveness and training gives them knowledge and possibilities to grow.

QBake project contributes to give individuals the chance to improve their competences, knowledge and skills.

Qbake project gives food industry the opportunity of improving their knowledge by delivering a training course designed on the basis of a previous study about the training needs detected within employees.

Training is key to strengthening collaborations among institutions at European level, promoting the development of individuals, in our particular case, workers from the bakery Industry contributing to a better understanding of technology and transferring that knowledge into Industry improvements.

As a particular example of the contribution of QBake project to EU policies, let’s highlight that QBAKE is on line with the Lisbon Strategy focused on growth and jobs. As well as, recognising that knowledge (enhanced by new training methodologies) and the innovation are the EU’s most valuable assets.

7. Extra Heading/Section

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