

**Project sheet for propositions for “Best of success stories”
in current Lifelong learning programmes**

Please indicate to which programme your proposition for a “success story” refers and send it to the respective mailbox by 30 October 2006 with the reference: **LLP success story** “*name of the programme*”

- Comenius - school education: EAC-Unite-B3@ec.europa.eu
- Grundtvig - adult education: EAC-Unite-B3@ec.europa.eu
- Erasmus - higher education: EAC-Unite-B4@ec.europa.eu
- Leonardo da Vinci – vocational training : EAC-Unite-B5@ec.europa.eu

Proposition made by:

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I. PROJECT DESCRIPTION¹

Project title:	EU-Excert, a Framework for Workplace based, Vocational Education in Explosives Industry
Acronym:	EU-Excert, EU-Excert II
Contract number:	2003-S/03/B/F/PP-161014, SE/06/B/F/PP-161036
Project web site:	www.euexcert.org
Start date:	15.10.2003, EU-Excert II: 01.10.2006
End date:	14.10.2006, EU-Excert II: 30.09.2008
Coordinator/Promoter:	KCEM

Partners name: Sweden: APeL FOU AB, Lärcentrum Masugnen, YFIND, Nordic In - The Nordic Union

¹ Please propose only projects where the promoter/coordinator can still be contacted

GB: Cranfield University
Italy: Nitrex
Norway: Nammo Raufoss A/S
Finland: Kemia
Tjeckoslovakia: University of Paradubice
Germany: Sprengschule Dresden
Estonia: Technical Inspectorate
Spain: Union Española de Explosivos
Portugal: University de Coimbra
France: EFEE

EXECUTIVE SUMMARY

Description of project:

There is a perception and anecdotal evidence that as a result of changes in the security environment in Europe due to the end of the Cold War, major contraction of the defence sector and downsizing and rationalising of defence industries have taken place. Concomitantly the European competence in this key technological area has been eroded. This has been explicitly identified in several member nations where a high proportion of the most experienced and knowledgeable personnel are retiring or nearing retirement. Urgent efforts are therefore underway to replenish this expertise. This loss of expertise has resulted in an increase in accidents involving explosives not only in Europe but also on a world wide basis. These accidents generally result in loss of life, damage to buildings, equipment and the environment at a cost of many millions of euros. The aim of this pilot project has been to establish a training and education programme aimed at restoring and maintaining the competence of all workers engaged in the production and use of explosives. To achieve this aim the partners in the programme have conducted a comprehensive analysis of the European explosive business. They have identified for each member state, the size and scope of the explosives worker community, and the competencies and skills required by these workers. This has been accomplished through close consultation with stakeholder organisations in each of the member nations. The training and educational needs of the community for explosive workers have then been determined in relation to the required competencies. A comprehensive programme of education and training have been developed utilising the widest range of training and educational methods, ranging from traditional classroom-based teaching, workplace learning and electronic learning. These have been developed and delivered by a range of educational establishments, including universities and higher education institutions, professional bodies, trade union organisations and specialist further educational authorities. Pilot training and education programmes have been developed and tested in several member nations. The results of the work have been widely disseminated through a programme of reports, demonstrations and presentations to stakeholder groups in the member nations. A network of interested individuals and organisations will be encouraged to promote the concept of a world class European explosives community.

This project will continue in EU-Excert 2 and will implement and further develop the work carried out in this project in particular the “Transfer of Innovation”.

Target group:

The following target groups have been identified:

- Health and Safety Boards and advisers, and Government Agencies (i.e. MoD)
- Army, Air Force and Navy, Police and Fire Brigade

- Government and private research establishments, educational establishments and forensic laboratories
- Manufacturing companies for defence and commercial explosives (ie air bags)
- Demolition and construction industries, off-shore oil industries, fireworks, mining and quarrying
- Disposal of explosives

These organisations have benefited from this project in that it has provided a method for training and retraining new employees. This project has also provided workers with the skills needed for the explosives industries.

Results and impact:

The results of this project includes a comprehensive competency framework which describes and categorises the competencies of workers engaged in the manufacture or use of explosives or who work in closely related areas where knowledge of explosives science, technology, procedures or legislation is essential. The competencies are underpinned by a training and education programme which identifies the curriculum of subjects, topics and knowledge necessary to generate and develop the competencies. A range of products including work based learning programmes, e-learning packages using both the internet and CD-ROM, and conventional teaching materials have been developed and tried in partner nations. Reports on the effectiveness of these have been published in English which is the project language.

A network of interested parties is being established in the partner nations and in other European nations. A regular project newsletter is circulated to all parties who register an interest in the outcomes of the project. An analysis has been made of the size and scope of the explosives community in Europe and the current age distribution of the workers has been undertaken. The training needs of workers have also been developed.

Main Theme covered by the project:

Category 1: Transparency, the European Qualifications Framework EQF

Category 3: Recognition of competences and qualifications, ECVET

Category 4: Sectoral cooperation

II. COMPLIANCE WITH SELECTION CRITERIA²

1. **Relevance³:**

The project makes a real contribution to the objectives of the programme and the programme actions

Criteria for Leonardo da Vinci

The project makes an outstanding contribution to the development of the European labour market and the transformation, modernisation and adaptation of the European education and training. It

² Please describe and explain in which way your proposition complies with each of the specific items/sub-criterion; please try to be as concise as possible

³ Please note that the criterion « relevance » is defined for each programme; please describe the relevance for the programme for which you make a proposition and delete the others

fully complies with the Leonardo da Vinci programme actions because of at least one of the following reasons:

- it improves the skills and competencies of people, especially young people, in initial vocational training at all levels in a remarkable way;

Improving the skills and competencies of people through the provision of a training and education programmes specifically linked to the competencies. The qualifications derived from the competencies recognised by employers and regulators throughout Europe, thus aiding worker mobility and status.

- it improves the quality of, and access to, continuing vocational training and the lifelong acquisition of skills and competencies, with a view to increasing and developing adaptability, particularly in order to consolidate technological and organisational change;

Although the explosive sector is highly regulated due to the hazardous nature of the materials, the competencies of the workers in the explosives sector is not regulated in detail. It is a fact that no measurable qualification which is linked to competencies exists in Europe for workers in the explosive sector. The only training given to explosives workers is in-house training which is not transferable between companies and countries; this training has no status or recognition. Due to the increase in skills shortage it has come to the attention of the explosives sector that, not only is there a lack of competent people but there are no standards to which to measure these competencies. From the outcomes of the EUExcert project (S/03/B/F/PP-161014) and the EU-Excert conference it was evident no European country had competencies for workers in the explosives sector.

The European market is regulated by directives that define boundaries for activities within companies, for example the ‘Seveso directive’, which specifies the environmental standards within which the explosives sector must adhere to. This directive also requires people who handle explosives to be competent. The rapid integration of the different member states in the EU, often caused by transnational mergers both in the Defence and Civilian sectors, not only requires competent people but also necessitates the standardisation of these competencies in explosives.

It is of a fundamental interest for the European Explosives Sector to overcome the national borders and the language borders that separates the different member states.

- it promotes and reinforces the contribution of vocational training to the process of innovation in an excellent manner, with a view to improving competitiveness and entrepreneurship, also in view of new employment opportunities;

By providing workers with improved understanding of their technology they will be better equipped to contribute to product development and process improvement. Development of the competencies and delivery of the training programme will require close cooperation between universities, vocational training institutions and large and small business.

Please explain in which way and how

2. Innovation and originality⁴:

⁴ This criterion is probably less valid for some decentralised actions

- The project developed the following new solutions for education and training needs and/or new approaches in teaching and learning:

Developing a European standard for occupation and a tool for competency assessment and planning for learning initiatives within the explosives industry. At the present time this does not exist at a European level.

Setting up a Foundation and a board for monitoring the standards, with a view to issuing European Explosive certificates.

- The project developed the following innovative solution to actual problems for which the “classical” approaches have failed to find an answer:

Developed a competency framework for the explosives sector within the European market, which is based on demands from the companies and employees. This is a very novel idea and has not been used in the European explosives sector.

Developed a close cooperation between companies within the same sector in the European market in order to write a glossary of terminology for the explosive sector.

- The project anticipated needs of the future as regards labour markets and/or education/training systems as follows:

Creating a workforce that can transfer their competencies into a European certificate within the explosives sector.

These innovative concepts will lead to the transfer of knowledge between companies and European countries, and provide the workers with the necessary skills and experiences to go into new jobs, and also move between organisations’ resulting in a more mobile workforce.

- The project corresponds entirely to the lifelong learning approach for the following reasons:

These innovative concepts will lead to the transfer of knowledge between companies and European countries, and provide the workers with the necessary skills and experiences to go into new jobs, and also move between organisations resulting in a more mobile workforce.

3. Impact⁵:

- The project has a real impact at transnational, national, regional local and/or sectoral level for the following reasons:

The development of a European competence for workers in the explosives sector will increase the

⁵This criterion is probably less valid for some decentralised actions

opportunity to sustain changes in the European market through a more flexible workforce and will ensure compatibility on the global market.

The competency framework will reduce the time for developing pedagogical models for adult learning, since the competency framework requires flexible solutions for workplace learning and training.

The transnational project has developed cooperation between education suppliers within the partner countries and developed cooperation between companies in Europe and within each partner country.

- The following sustainable results were developed:

An analysis of the explosive business throughout the EU identifying for each member state, the size and scope of the explosives worker community, from top management level, to technician and process worker level.

A unique competency framework illustrating all of the required competencies for different positions in the explosive business. The framework includes 174 expert areas and will be used as a base for validation and education in the explosive business.

A comprehensive programme of education and training utilising the widest range of training and educational methods, ranging from traditional classroom-based teaching, workplace learning and electronic learning. The education will be developed and delivered by a range of educational establishments, including universities and higher education institutions, professional bodies, trade union organisations and specialist further educational authorities.

The development of modern learning techniques in the field makes it easier and more economic to provide education and training at workplace level. Better working conditions will ensure that the workplace becomes safer through a decrease in risk of accidents occurring due to a lack of knowledge, skills and experience of the workers for the safe handling of explosive substances.

- The project changed the following attitudes or behaviours:

The competency framework and the development of a European standard may have an impact on the legislation in Europe, as it will highlight the problems related to the explosives sector caused by the lack of legislation which regulates the requirements for basic occupational and educational standards in each country.

- The project has been transferred to different environments or has a high potential for such a transfer for the following reasons:

At the present time Sweden and UK have developed an infrastructure for adult learning that already provides learning opportunities based on new pedagogical methods – such as workplace instructors, mini learning centres and e-learning materials. Other European countries which do not have this type of infrastructure and if they wish so, can use the Swedish or UK system to deliver their education and training packages in the workplace.

It is possible to transfer the concept of developing a competency framework to other manufacturing industries on the European and world market; however it will require from them the desire to develop the whole package; from learning at work to the understanding of how to supply

training based on the demands from the employees, company requirements and competency assessment.

- The project changed existing education training systems, had an impact on the internationalisation and/or the curriculum or the pedagogical approach of the institutions involved:

Increase cooperation between the education providers and companies in the explosives sector leading to an education and training package which can be based on the company's training needs and the individual workers demands.

Accidents involving explosive substances can be simulated using modern e-learning techniques providing the workforce with the opportunity to gain experience without being subjected to the hazards.

The competency framework will reduce the time for developing pedagogical models for adult learning, since the competency framework requires flexible solutions for workplace learning and training.

4. Visibility:

- The project excelled in developing communication, dissemination and exploitation activities in the following way:

The results of the work have been widely disseminated through a programme of reports, demonstrations and presentations to stakeholder groups in the member nations. A network of interested individuals and organisations will be encouraged to promote the concept of a world class European explosives community. The project is being disseminated through a newsletter, publications, newspaper articles and has had a big impact on the explosive business.

- The project produced and presented the following convincing outcomes and visually attractive results:

As said earlier the EU-Excert project has developed a wide range of results:

An analysis of the explosive business throughout the EU identifying for each member state, the size and scope of the explosives worker community, from top management level, to technician and process worker level.

A unique competency framework illustrating all of the required competencies for different positions in the explosive business. The framework includes 174 expert areas and will be used as a base for validation and education in the explosive business.

A comprehensive programme of education and training utilising the widest range of training and

educational methods, ranging from traditional classroom-based teaching, workplace learning and electronic learning. The education will be developed and delivered by a range of educational establishments, including universities and higher education institutions, professional bodies, trade union organisations and specialist further educational authorities.

- The project had the following high multiplier effect and reached the following specific target public/stakeholders (policy-makers, social partners, civil society, teachers , local community...) please quantify:
 - Health and Safety Boards and advisers, and Government Agencies (i.e. MoD)
 - Army, Air Force and Navy, Police and Fire Brigade
 - Government and private research establishments, educational establishments and forensic laboratories
 - Manufacturing companies for defence and commercial explosives (ie air bags)
 - Demolition and construction industries, off-shore oil industries, fireworks, mining and quarrying
 - Disposal of explosives

- The project results were implemented by many users as follows:

Educational establishments, including universities and higher education institutions, professional bodies, trade union organisations and specialist further educational authorities.

5. Support of strategies:

- The project supports the implementation of major European policy approaches thus helping to put theory into practice and accelerate progress as follows:

Developing a European competency framework illustrating all of the required competencies for different positions in the explosive business, and a comprehensive programme of education including a wide range of training and educational methods, the project contributes to make lifelong learning in the workplace and in education systems more effective and inclusive. It also makes a substantial effort to facilitate validation in the explosive business. Thus people will be equipped with skills and competence that can be used in the labour market across Europe.

- The project helped and aids to implement the Lisbon strategy through the following activities/approaches and actions:

The project contributes to the Lisbon strategy in an innovative way by carrying out a qualified vocational training programme, which will play a pivotal role securing and maintaining the expertise in the European explosive business. The EU-Excert project is also creating a European network in the explosive business with impact on a transnational level facilitating mobility of the workforce.

The development of a European competence for workers in the explosives sector will increase the opportunity to sustain changes in the European market through a more flexible workforce and will ensure compatibility on the global market.

- The project supports the (Bologna, Copenhagen, Maastricht etc.) through by the following activities/approaches and actions:

EU-Excert is cooperation between different European stakeholders which enforces the European dimension in vocational training both regarding education and labour market. Validation tools offered within the project gives a transnational dimension to the lifelong learning process and recognition of competences and qualifications.

III. SUGGESTION FOR PRESENTATION TO THE PUBLIC

In the case of being selected as “best of success story” and invited to Berlin, the best way to present the project would be

- during the “learning festival” to a large public
- at the exhibition of projects for targeted stakeholder

X in the context of one of the four thematic conferences on Monday afternoon for an expert public

Please feel free to add comments: