

Reports from EUExc@rt Partners

EFEE Results and Points of Interests for Future Project

EFEE joins a large spectrum of people in blasting operations, in quarries, mines and demolition focused in Europe.

The main objectives are to improve training and blasting techniques in these areas, helping the mobility of people in these activities. Beneath EUExc@rt project specific meetings were organised by EFEE to discuss, within a large group of expert representing 19 countries in Europe, the lacks in the explosives training, the levels and the qualifications requirement for shotfire, being recommended five levels.

RESULT OF THE PROJECT

Inside EFEE was built a network of information about EUExc@rt project for all 19 countries of EFEE: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Liechtenstein, Netherlands, Norway, Portugal, Russia; Slovak Republic, Spain, Sweden, Switzerland, United Kingdom and also companies and individual members. Dissemination of the project was carry out by EFEE Newsletters and EUExc@rt Newsletters, as also EFEE webpage.

The education and training to certifying explosives sector were understood by all national delegates as fundamental to improve safety. EFEE has assumed as important to harmonise basic levels and to provide manuals for future training courses that can be after adopted by countries

for training.

WHAT WE HAVE LEARNED FROM THE COOPERATION

We have understood how relevant is the education and vocational training in other activities not covered by EFEE goal. At the same time we observed how transnational cooperation allows to comparing experiences and to improve quality and reduce costs, joining different knowledge's and competences for the same objective.

WHAT WE HAVE LEARNED ABOUT THE SECTOR

The explosive sector in major parts of European countries has been losing workers. Companies try to enlarge its activities out their frontiers establishing contracts with foreigner companies. This requires a higher mobility of their workers. Training and equipment are similar and language is no more a barrier for cooperation. Cooperation allows to reducing costs and select experts in the different countries. The explosives sector in civil construction is nowadays controlled by large groups spreading in all continents, which require the movement of workers inside the company. Out of the legislation that is different in the countries the basic operations are the same. So the knowledge requirements and training must be similar.

WHAT WE HAVE LEARNED ABOUT THE AMBITIONS

From this cooperation project was identify the principal needs and compared the different learning methodologies in countries. According each professional group of people or area of activity will be possible to conduct this project in several ways covering the different needs, trying to establish bridges between close areas. Establishing levels of competences in the different countries for each professional group and after to provide correspondences must be done. This can be one of the objectives to pursuit with the extension of this project. Level correspondences and flexibility on the training is the future for a full integration of European citizens inside European market. [Continue on page 2](#)



Ambitions in EFEE

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We want to improve cooperation with European organisations in order to compare experiences, enlarge size of the projects, reducing costs and improving the knowledge at sector of shot-fire in rock blasting and demolition.

We also would like encouraging the cooperation at all levels of activities reducing costs, improving quality, decreasing accidents and improving competences. Establish cooperation programmes for:

- Tests and evaluation of explosives quality and behaviour;
- Vocational training in several areas: explosives and pyrotechnics manufacturing, transport and security control, industrial licensing, health and safety; disposal; inactivation of explosives devices; ammunitions;
- Master courses in explosive science, rock blasting, demolition; forensic analysis; propellants and pyrotechnics;
- Demilitarization, recycling and environmental aspects;
- Write manuals and other didactic products;
- E-learning projects;
- A European Agency to establish the basic knowledge's required for each activity and the certification of training programmes, cooperating with the European Parliament and Members-States.

FOR THE SECTOR

For education and training in the explosives sector we would like to improve:

- Vocational training in: explosives and pyrotechnic manufacturing, transport and security control, industrial licensing, health and safety; disposal; inactivation of explosives devices; ammunitions;
- Master courses in explosive science, rock blasting, demolition; forensic analysis; propellants and pyrotechnics;
- Manuals and other didactic products;
- E-learning projects;
- A European Agency to establish the basic knowledge's required for each activity and the certification of training programmes, cooperating with the European Parliament and Members-States.

José Goís



Videoconferencing - a Means to Overcome Knowledge Barriers

Learning Center Masugnen has been working with information – and communication technology (ICT) for many years and continuously do so in order to develop workplace based learning.

Within the framework of EUExcert, partners who have little experience of using ICT but are interested in seeing the potential of sharing knowledge with the help of modern technology have been able to do so.

Milos Ferjencik at the University of Pardubice has given students and teachers at the University the possibility to take part in an English lesson organised by Masugnen.

The session started with a demonstration of how to use the videoconference in a learning situation, in particular language teaching. Mats Ericsson, the English teacher at Masugnen, then demonstrated how he realizes an English lesson based on communication and conversation. Totally about twenty people took part in the session. A small group of students of the 5th grade were taking part in the conversation. For everyone, except for Milos Ferjencik, this was their first experience of a videoconference meeting and they did not seem to have any difficulties at all; they rather appreciated this way of communication!

Ms. Linda Pospisilova from the Institute of Foreign Languages of the university is responsible for the language preparation of students of the faculty of chemical technology and thus important for the students. She will now continue the contact made with Masugnen to discuss further joint activities.

According to Milos Ferjencik this demonstration may work as one useful impulse!

Gisela Spak



German Work in the Project

Our organisation, the Dresdner Sprengschule GmbH – a private company for education and training in the fields of blasting technology, pyrotechnics and explosive ordnance disposal joined the EUExcert project as a new partner since October 2006. One of the main aims of the EUExcert project is prevent hazards and accidents in the European explosives sector. We believe that one way to reduce and also to prevent hazards and accidents is a good and a comprehensive education of the employees. In the present time the work gets increasingly more and more international. That's means, that the employees works not only in your own company or your home country, more and more it is reality, that they works in other company's or in other country. So it is necessary that the employees having a comprehensive knowledge to be able to fulfil the tasks. The other side is that in the present time the work tasks are change very quickly and the employees have to react of this situation. Furthermore we can register that in the next years a lot of employees will be retired and so it is possible that the company's lost know-how bearers. The population in Europe gets increasingly older, young people are often absent and there is no overlapping between the retired and the new young people.

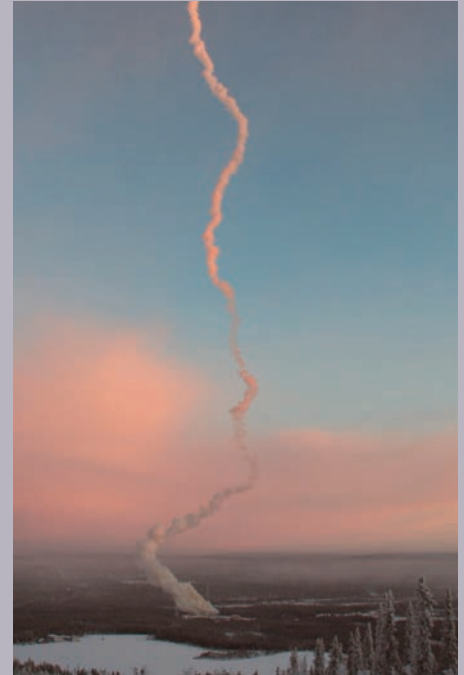
During the work in the EUExcert project we learn that the description of the situation not only typical for Germany is. We can find the same or a similar situation in the other European countries.

It gets clear, that the contents and the methods of education and training must react to these facts. In the context of the project we got to know the education systems in field of handling explosives of the other European states. In the reports and lectures we heard about accidents in the explosive sector which have happened in other countries. In the context of the evaluation of the accidents we get a lot of information about the causes and backgrounds for these accidents. This information can we used to find the right contents of our education and training in the explosive sector. In the

discussion with the other partners of the project we learn more about the different methods to transfer the knowledge for instance methods for the long distance training and methods for training via internet and video conferencing. This methods are also now in Germany but at present time the main methods to transfer the knowledge is direct training in a school or trainings where was organized for the companies and in the companies (in house seminars). One aim of the project is also to create a glossary for the explosive sector. We think that this idea and this aim are important for the communication and the understanding between the different countries and companies in Europe.

At the present time our opinion is, that the glossary contains a lot of information for handling explosives in the military sector and during the production of explosive materials. For the fields of civil blasting and handling pyrotechnics it is required to adding more information and concepts especially form the field of blasting operation and using pyrotechnics. So we think that is not realistic that the work for the glossary will be ready completely during the time of the EUExcert project and the outcomes are a glossary for the general field of handling explosives. We think the glossary should be developed further in a next project.

The training in the fields of explosives technology, pyrotechnics and EOD in Germany is based on the German law on explosive material. This training includes separate technical qualification courses for each field (explosives technology, pyrotechnics and EOD) in which the necessary knowledge and the required skills are taught. These coursed are divided into basic knowledge courses and accompanying advanced knowledge courses. The levels are not in all cases compare to the NVQ levels, because we think that is not necessary to get all levels (1-5) of the NVQ in all parts of explosives industry. In our opinion the kind of the level who the company need is depend of the scope of the duties.

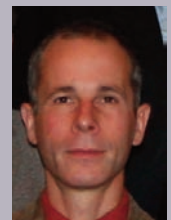


In this part of the project it will be not possible to develop a special training framework for blasting education (training programme for blasting operators). For the flexibility of the worker in the blasting industry and also in the pyrotechnic industry (operators not producer) to work in other European countries, it is necessary to create a training programme, witch will accepted in European Community. We think this is one possibility to look for a new project.

One emphasis of the next project should be focus in the range of the civil blasting industries (blasting operators) and handling of pyrotechnics (conducting fireworks (outdoor) and for using pyrotechnical objects on stages and similar scenarios (indoor)).

Generally we believe that the project goals must be solved at a European level. At the present time we think it is possible to find common way to create the technical part of a training that was accepted in European Union, but for the part of the legislation and the part of the law, we think it is in this time very difficult to find a common way.

Jörg Rennert



Cranfield will Remain an Active Project Member

Belonging to the EUExcert project has increased our network capability within the EU and the rest of the world. It has given us the opportunity to present the results of the EUExcert programme to organizations and conferences within and outside the EU and has increased our network capability. It has helped us to develop e-learning packages for workers in the explosives sector and has provided a platform for the dissemination of these activities.

BRITISH WORK

A functional map and competency framework has been developed in the UK for workers in the explosives sector. 12 key roles were identified and 440 National Occupational Standards (NOS) were written and validated in the UK (5 key roles were validated by the European partners). From these 440 NOS; 24 National Vocational Qualifications (NVQs) were developed. A qualification framework has been developed in the UK incorporating the 24 NVQs and 440 competencies. These qualifications are divided into 3 levels. Level 2 is the operator level, level 3 is the supervisor level and level 4 is the manager level. The 24 NVQ qualifications have been underpinned by a flexible educational and training programme, with vocational training as the main part of the learning objectives together with workplace training and e-learning based on CD-Rom and the internet. The recognition of these competencies throughout Europe together with an EU qualification will be a great benefit to the UK. This will lead to an increase in the mobility of staff. The development of a glossary and terminology will also be of great benefit to the UK explosives sector.

A MATTER OF SAFETY

Whilst the stovepiping of organisations in the European and UK explosives business has had an impact on the breadth of experience, the general contraction of the explosives business in Europe and the UK has had a major impact on the numbers of skilled specialists. Added to this many of the specialists were recruited in during a growth period in defence science and technology in the 1970s and are

approaching retirement. A lack of recruitment in the late 1970s and 1980s has left a demographic trough, wherein there are insufficient skilled explosives specialists to replace those who will be leaving government service in the next few years. Concomitantly, safety of the workers in explosives may be at risk. EUExcert is addressing this problem with the development of a transnational educational and training programme based on vocational and web-based training. This extensive training programme will be based on competencies validated by partner countries in EUExcert. The end result is to reverse the decline in expertise, knowledge and skills in the European explosives business.

EXPERIENCE OF COOPERATION

It has provided an insight into the training and educational programmes within the partner countries and a realization that our training needs are very similar. It has also highlighted the problems of working with countries with different cultures and language. EUExcert has clear goals but the method of achieving them can vary between the partner countries.

EXPLOSIVES SECTOR

The activities of the explosives sector are very similar between partner countries. The training requirements and needs are similar. It is an industry where new blood is desperately needed to replace retiring experts, in order to sustain a competitive and safe environment. There is a need for training in the workplace with a qualification which will be recognized throughout the EU countries. The appetite for e-based educational and training programmes to support the work-base training is increasing.

OVERALL AMBITION

The EUExcert project has always been ambitious; achieving the impossible. It has encouraged the eleven partner countries to work together towards a common goal. It has not been an easy ride for the new partners since they have had a steep learning curve, but now EUExcert family can congratulate themselves on achieving harmony and acceptance of the programme of work.

FUTURE ORGANISATION

Cranfield University will remain an active member of EUExcert and participate in future meetings and will continue to disseminate EUExcert activities at conferences and organizations. Cranfield University will also act as the point of contact between the UK and EUExcert but it cannot become a member of the Foundation since its main role is in education and training.

LOOKING INTO THE FUTURE

For the future I envisage that the EUExcert-F will be responsible for the following activities:

- European competencies which can be used for personal development and recruitment

- European centre of excellence (EUExcert-F) where networking can take place and information on training, career progression, etc can be accessed.

- exchange of students and staff managed by EUExcert

- manage and up-date the European glossary on terminology

- manage the database on experts

- Provide expert advice

- Award the EUExcert certificate and be responsible for accreditation the awarding bodies.

EDUCATION AND TRAINING

Cranfield University will be an educational and training provider and will support vocational training. It is intended for Cranfield to develop e-learning activities for operators, supervisors and managers in all of the key role areas and be accredited to award a technical certificate which will be used towards an NVQ.

Jackie Akhavan



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