

THE EUROPEAN UNION

**LEONARDO DA VINCI PILOT PROJECT**

**EUEXDL OR EUEXCERT II**

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## SUMMARY

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 competences 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 (2002S/B/F/PP-161014) and the EUExcert 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 competences in explosives. At the present time there is no European regulating board to either assess or impose competences in the explosive sector. Therefore there is a strong driving force by workers in the European explosive sector to continually improve the safety of handling explosives by ensuring that all workers are competent and that these competencies are regulated by .i.e. a 'Foundation'.

The work from the previous EUExcert project (2002S/B/F/PP-161014) has resulted in the production of competencies for workers in the explosive sector which could be used for a European Occupational Standard and a framework for European Vocational Qualifications. These competencies were originally developed for the UK explosives sector and only samples were validated for the European market. It is intended to explore all the UK competencies with a view to setting up a European awarding body called a 'Foundation' which will oversee the European competence framework and qualifications associated with this framework with a view to issuing certificates.

### **The Partnership behind the application EuExDL**

***KCEM, Sweden,***

***University of Pardubice, Czech Republic***

***Sprengschule Dresden, Germany***

***Technical Inspectorate, Estonia***

***Union Española de Explosivos, Spain***

***Kemia, Finland***

***EFEE, European Federation of Explosive Engineers (European partner, represented by France)***

***Nitrex, Italia***

***NAMMO RAUFOSS A/S, Norway***

***University de Coimbra, Portugal***

***APeL FOU AB, Sweden***

***Learning Centre Masugnen, Sweden***

***IN, Industrial workers in Nordic countrys (Also representing the European Organisation EMCEF)***

***YFIND, Industrial- and Chemical Industries, Sweden***

***Cranfield University, United Kingdom***

In order to achieve the goals the EUExcert partnership proposes to do the following:

1. Increase the number of European partners and participating countries – by disseminating and spreading knowledge about the competence framework to the explosive sector in Europe and the rest of the world. Members of the EUExcert partnership will present papers and posters on the outcomes of the EUExcert project at national and international conferences, seminars etc. The EUExcert website and newsletters will also be a source of information of current activities. All the organisations who attended the EUExcert conference (which was held in June 2005) will be contacted and invited to meet the EUExcert team with a view to joining as an associated member initially and a full member at a later date.
2. To form a new and improved network by contacting and collaborating with other European institutions and agencies. This network will provide a large critical mass to which EUExcert can seek advice with a view to the harmonisation of legislation and practice in the explosives sector. The European Federation of Explosive Engineers (EFEE) who at the moment is an associated partner, will become a full partner in this new programme of work.
3. Increase the skills, employability and mobility of our beneficiaries and target groups by establishing a programme of student exchanges. A preliminary study has already taken place between Sweden and UK via the Leonardo da Vinci Mobility programme. A group of Swedish trainers and educators visited the UK in November 2005 to discuss future cooperation between the two countries and a similar visit has been funded by the Leonardo da Vinci Mobility programme (UK/05-1/EX/163205) to send 10 people from the UK to Sweden in December 2005. It is intended to start a programme of student exchanges between Sweden and the UK with a view to widening this to other European countries in the EUExcert partnership.
4. To produce a basic glossary of terms for the European explosive sector. Recent discussions within the EUExcert team have highlighted problems resulting from incorrect translations of terminology within the explosives sector. The new glossary will be transferable between countries.
5. To develop transnational educational material for workers in the explosive sector incorporating flexible learning. The material will be initially formatted in English and then translated into other languages.
6. To setup a regulatory body called a 'Foundation'. The EUExcert team has been in contact with the British Computer Society (BCS) who were involved in setting up the regulatory body for the European Computer Driving License (ECDL). It is intended that the EUExcert team will seek advice from the BCS with a view to establishing a European Explosive Driving License (EuExDL). The certificates for the EuExDL will be issued by the Foundation. The Foundation will be financed through a fee paying membership and the issuing of certificates.
7. To validate the UK competencies for workers in the explosive sector and to set-up a European qualifications framework based on these competencies.

P1	<p><b>KOMPETENSCENTRUM FÖR ENERGETISKA MATERIAL (SE)</b></p> <p>KCEM, the Competence Centre for Energetic Materials. KCEM is a Network organisation and a Meeting Place for companies, universities, authorities and private persons within Energetic Materials.</p> <p>KCEM objectives are to; Support Education of personnel in the explosives industry on all educational levels.</p> <p>KCEM co-operate with Örebro University, Karlstad University, Mälardalens University, Linköping University and The Royal Institute of Technology to establish new course within Energetic materials on university level. Basic and Major courses will be available for students and other persons who wish to enlarge their knowledge in Energetic Materials. An Educational Board is assisting KCEM in a survey of educational needs within Energetic Materials.</p> <p>KCEM, already, together with Masugnen Education Centre carry out education by modern techniques on distance. Those providing small companies to arrange training for their personnel with professional teachers at a low cost.</p> <p>KCEM is the promoter for EUExcert. KCEM will act as promoter act as project leader for EuExDL.</p> <p><a href="http://www.kcem.se">www.kcem.se</a></p>
P2	<p><b>UNIVERSITY OF PARDUBICE (CZ)</b></p> <p>Institute of Energetic Materials of the University provides education in MSc, PhD and license types of study. The study line „Theory and Technology of Explosives“ represents a multidisciplinary line comprising two branches: “Technology of Energetic Materials” and “Safety Engineering”. It involves the fields of chemical technology of individual energetic materials, technology of explosives, explosion physics, and safety engineering. A basic and applied research &amp; development are also realized in these fields. Institute also participates in activities against an improper use of Internet for dissemination of knowledge about EMs (antiterrorist activities). Institute offers cooperation on the develop a comprehensive and accessible programme of education and teaching in the above mentioned fields, forcefully on chemistry and technology of EMs, their specialized testing (electric spark sensitivity, etc.) and study of their reactivities, physics of explosion (simulation of fast dynamic processes, etc.) and safety engineering with a view to simulation explosion of gaseous mixtures and of closed and ventilated explosions, modelling of scenarios of emergency escapes of chemicals inclusive of the consequences and modelling of emergency escapes of natural gas and crude oil, inclusive of their consequences.</p> <p><a href="http://www.upce.cz">www.upce.cz</a></p>
P3	<p><b>SPRENGSCHULE DRESDEN</b></p> <p>The Dresdener Sprengschule has been an international acknowledged educational institution for more than three decades. Nowadays training and qualification within the Explosives Sector as well as technical consulting constitute focus of the business. The Dresdener Sprengschule currently offers more than 40 different state certified seminars and courses. Training and Education, including certification, is offered in six main disciplines such as ; Blasting Technology, Pyrotechnics, Civil Engineering, Explosive Ordnance Disposal, Transport of Dangerous Goods and Handling with dangerous Goods.</p> <p>Sprengschule Dresden with their long experience and highly qualified staff will be an ideal partner in Germany.</p> <p><a href="http://www.sprengschule-dresden.com">www.sprengschule-dresden.com</a></p>

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## **ESTONIA**

### **Technical Inspectorate (EE)**

The Technical Inspectorate is a government agency in the administrative area of the Ministry of Economic Affairs and Communications, which, in its areas of expertise, deals with development and dissemination work as well as the guarantee of safety and reliability through supervision.

The mandate of the Inspection includes:

1. Safety supervision and development in the following fields:

- Mining operations & extraction and primary processing of mineral resources and earth substances, construction of underground buildings and mine survey operations, fire protection of underground buildings, use of equipment in the geological surveys of minerals and borehole drilling, primary processing of grain);
- Explosive substances and blasting for civilian purposes, method and organisation of fireworks displays;
- Pressure equipment;
- Lifts and cableway installations;
- Machinery (including cranes);
- Gas equipment and area;
- Electrical plants, works and installations electromagnetic compatibility;
- Construction products, structures and works;
- Handling of dangerous chemicals.

2. Advisory supervision and development in the following fields:

- Legal metrology;
- Energy efficiency of equipment;
- Products made of precious metals.

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### **Union Espanola de Explosivos, S.A.**

UEE is a European leading company in explosives industry, involved in propellants, explosives, boosters and pyrotechnics. The company UEE is a very large company with many branches all working with explosives and a lot of international contacts. UEE is working much with education programmes for the employed and is very interested to join the new partnership EuExDL.  
[www.uee.es.com](http://www.uee.es.com)

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### **KEMIA (FI)**

The Finnish Chemical Workers Union (Kemianliitto) has 35.000 members, 14.000 are women and 21.000 are men. Finnish chemical industry is highly diversified. There are a few very big companies in the industry with over one thousand workers and there are hundreds of small ones with only a handful.

The union bargains and concludes national collective agreement in nine different sectors. Head office is in Helsinki and the union employs 43 persons, including seven who work for the unemployment fund.

KEMIA as a member of NIF take an active part in the dissemination of Excert and EuExDL.

[www.kemianliitto.fi](http://www.kemianliitto.fi)

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### **EFEE/OPPBT European Federation of Explosive Engineers**

The European Federation of Explosives Engineers (EFEE) was founded at Aachen, Germany, on 22 October 1988. Its main objectives are:

- Advancing European Explosives Engineering
- Expertise, Technology and Management
- Education and certification
- Health and Safety

#### **Within the European Union the EFEE stands for:**

An organisation of professional users of explosives for industrial applications and the experts on a national and European level in its field; and the democratic right to representation and involvement in the policy-making, legislation and regulating processes in its field, on a national and a European level.

EFEE embraces all European countries, including those outside the European Union. Unlike some similar organisations, such as the International Society of Explosives Engineers in the USA which is composed of individual members, membership of EFEE is open to national, but non-governmental, institutes, associations or societies that are officially registered and whose members are professional explosives users and whose aim is the advancement of explosives engineering. These member associations represent their countries.

Today, the national societies of the following countries are members of our Federation: **Austria, Belgium, Bulgaria, Czech Republic, Croatia, Denmark, Finland, France, Germany, Liechtenstein, Netherlands, Norway, Portugal, Russia, Slovak Republic, Spain, Sweden, Switzerland and the United Kingdom.**

See [www.efee-web.org](http://www.efee-web.org)

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### **NITREX (IT)**

NITREX is a consulting company working in Italy and abroad since 1982 in the explosives and mining branch, in the field of planning, managing, litigation, legal and economical aspects of the ventures. Customers are both private and institutional. The service given includes planning, start-up of the job, monitoring, education, hazards assessment (According to "Seveso" directives), environmental impact analysis, research and development. Nitrex has very strong links with the university of Turin. Nitrex also works directly for the Ministry of Industry. Nitrex is a member of the project group EUExcert, and works mainly with the civilian Explosives Industry including Guidelines according to EU DIRECTIVE 96/82/ec "SEVESO II" Nitrex also will take an active part in the dissemination of Excert and the new partnership EuExDL especially in Italy and other parts of the southern Europe.

Please find further information at our homepage [www.nitrex.it](http://www.nitrex.it)

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### **NAMMO RAUFOSS A/S (NO)**

Nammo AS, Nordic ammunition company is a multinational Nordic company which operates production companies in Norway, Finland, Sweden, Germany and USA.

The total number of employees is about 1200 persons. Qualified, professional manufacture and handling of explosives articles are one of the core competences of the Group. The products have both military and civilian use and the product range are including Hunting Ammunition, Military ammunition, Rockets Propulsion, Pyrotechnical products and Environment-friendly demilitarization.

The Nammo group already has a TV-conference system well distributed at the sites in the different countries and this is used for a test with transnational education within the EUExcert project and the new EuExDL. . Nammo also will take active part in the dissemination process as member in FEEM and the multinational activities.

[www.nammo.com](http://www.nammo.com)

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### **UNIVERSITY DE COIMBRA**

Associação portuguesa de estudos e engenharia de explosivos (AP3E)

The leading educator for explosives in Portugal

**Contact person:** Professor José Carlos Gois Email [ap3e@dem.uc.pt](mailto:ap3e@dem.uc.pt)  
[www2.dem.uc.pt/ap3e](http://www2.dem.uc.pt/ap3e)

P11 **APEL FOU AB (SE)**

**APeL FOU AB (SE)** is a local government research and developmental institute in the field of learning in work life. The institute employs 17 people, researchers, project developers and process leaders. The main idea is to support learning processes in and between workplaces. Learning is seen as a combination of formal education and informal training. The learning of the individual must be supported by the organisation. From these perspectives learning based on experience and reflection will be in focus. APEL also participates in many European and international research projects concerning work based lifelong education and training.

APeL have knowledge, skill and expertise in developing, initiating and managing developmental projects and processes relating to workplace learning. APeL can participate in the Leonardo project to evaluate the learning experience in the piloting programmes where the occupational standards make the foundation of accrediting knowledge and experience towards a European certificate. The evaluation process will be organised as a joint learning experience together with the organisers of the pilot studies and the people participating in the piloting programmes (students, employees, employers, and education agencies) in Sweden. APeL can collaborate with researchers or research agencies in other European countries where the piloting programme is tested in the aim to develop a deeper understanding of the potential of developing the piloting programme into a functional product. The outcomes of evaluation can be used for developing the piloting programme into next level in achieving the target of a European License. APeL also will take active part in the dissemination process. APeL is working on the local, regional, national and international level.

(see [www.apel.nu](http://www.apel.nu))

P12 **LÄRCENTRUM MASUGNEN (SE)**

The enterprise of Masugnen consists of two separate units. The first unit is a part of the municipality named Lärcentrum Masugnen. The second unit Masugnen Utveckling AB (Masugnen Development Ltd) is run as a municipal joint-stock company where the municipality of Lindsberg owns the stock. Lärcentrum Masugnen and Masugnen Utveckling AB are responsible for Lindsberg commissioned education.

The enterprise of Masugnen started as early 1985, with commissioned education for trade and industry. Today, Masugnen has a number of different fields of activities and has specialized in running development projects, flexible education and IT education. The last year, flexible education located directly within trade and industry has become an important element in the enterprise. Masugnen can offer distance courses; provide for conferences, seminars and access to modern IT equipment. Masugnen today produces a 40 week long distance education for vocational education of certified explosive technicians.

[www.masugnen.com](http://www.masugnen.com) The Adult Learning Centre Masugnen in Lindsberg, Sweden, has developed a highly recommended vocational education for Technicians handling explosives and flammable materials in the industry. The education is a result of cooperation with the explosives industries and KCEM, the Competence Centre for Energetic Materials. KCEM is a network and a meeting centre for companies, universities, authorities and all persons within the Energetic Materials sector.

The students at KY (Kvalificerad Yrkesutbildning, in English: Qualified Vocational Education and Training) are introduced to the different subjects at the Adult Learning Centre. Each one of them is connected to a company where the practical part is taking place, and most parts of the theoretical studies are made with distance learning methods.

This implementation has been very successful, both from the companies and the students' point of view. The student studies a subject theoretically, and can implement the knowledge at the work training the very same day.

The education is 40 weeks long, and all of the students have their own careers guidance officer, assisting them with plans and strategies for the future. Masugnen will contribute to the project with experiences made and through testing educating-modules offered transnational and will provide a test centre for piloting a European certificate for the Explosives.

See [www.masugnen.com](http://www.masugnen.com)

P13 **INDUSTRIANSTÄLLDA I NORDEN (IN) (SE FI NO, DK and IS)**

The Federation of workers in Norden (IN) is organizing around 400 000 blue- and white-collar workers in the chemical, medicine, garment, paper, textile, mining and energy sectors in **Sweden, Finland, Norway, Denmark and Iceland**. Truly a Nordic organisation. The head office is in Stockholm. The 19 Trade Union in IN are also representing the 20 million strong European Federation EMCEF European Mine, Chemical and Energy workers Federation. IN will through its European network have a very important role in W-P 2 Dissemination. NIF also is a member of the Steering committee.

See [www.IN.se](http://www.IN.se)

14	<p><b>INDUSTRI- OCH KEMIGRUPPEN (YFIND) (SE)</b></p> <p>YFIND is a Swedish organisation for vocational training. It is formed as a joint committee between The Swedish Industrial and Chemical Employers Association (AIGR) and the Trade Union for the chemical, pharmaceutical, rubber, glass, textile and other branches (INDUSTRIFACKET).</p> <p>Fields of activities are:</p> <p>Stimulating of local, national and international networks, creating understanding between the partners participating in the vocational training process. Comparing and evaluating different national and international experience (models) of the vocational training focusing of the efficiency and the orientation of practical experience. Better preparation for tutors regarding practical training supervision. Make proposal how practical work supervisors should be equipped and informed.</p> <p>Qualifying the practical know-how of instructors and teachers through teamwork. Improvement of the methodology of practical training supervision. YFIND will take active part in the dissemination process both in the Nordic countries and Europe through the confederation of Swedish Enterprises and European organisations.</p> <p><a href="http://www.Industri och kemigruppen.se">www.Industri och kemigruppen.se</a></p>
15	<p><b>CRANFIELD UNIVERSITY (UK)</b></p> <p>Cranfield university is a unique British University which specialises in advanced teaching and applied research in engineering, technology, management and public policy. It is the largest centre for applying research, development and design for industry, commerce, defence and public service in Western Europe. It has the highest number of post graduated students of any UK university and is the highest earning university in the UK from industrially funded research. The department of Environmental and ordnance system (DEOS) operates from Cranfields Defence Academy. The department specialise in technology teaching and research in technologies that have a relevance to defence. Explosives science and technology is one of the technologies in which the department leads the world in research and teaching. A wide range of courses is provided covering all aspects of explosives science. Student both military and civilian from many nations take advantage of the Department's unique facilities. They can study for postgraduate degrees, diplomas or participate in continuing professional development programmes from one day to several months. Increasingly, the department is providing vocational training and education at the workplace and is also improving access to training and education through a major e-learning initiative.</p> <p><a href="http://www.rcms.cranfield.ac.uk">www.rcms.cranfield.ac.uk</a></p>

## Timetable

Approval from the commission is expected in June 2006

Project duration from November 2006 to 2008

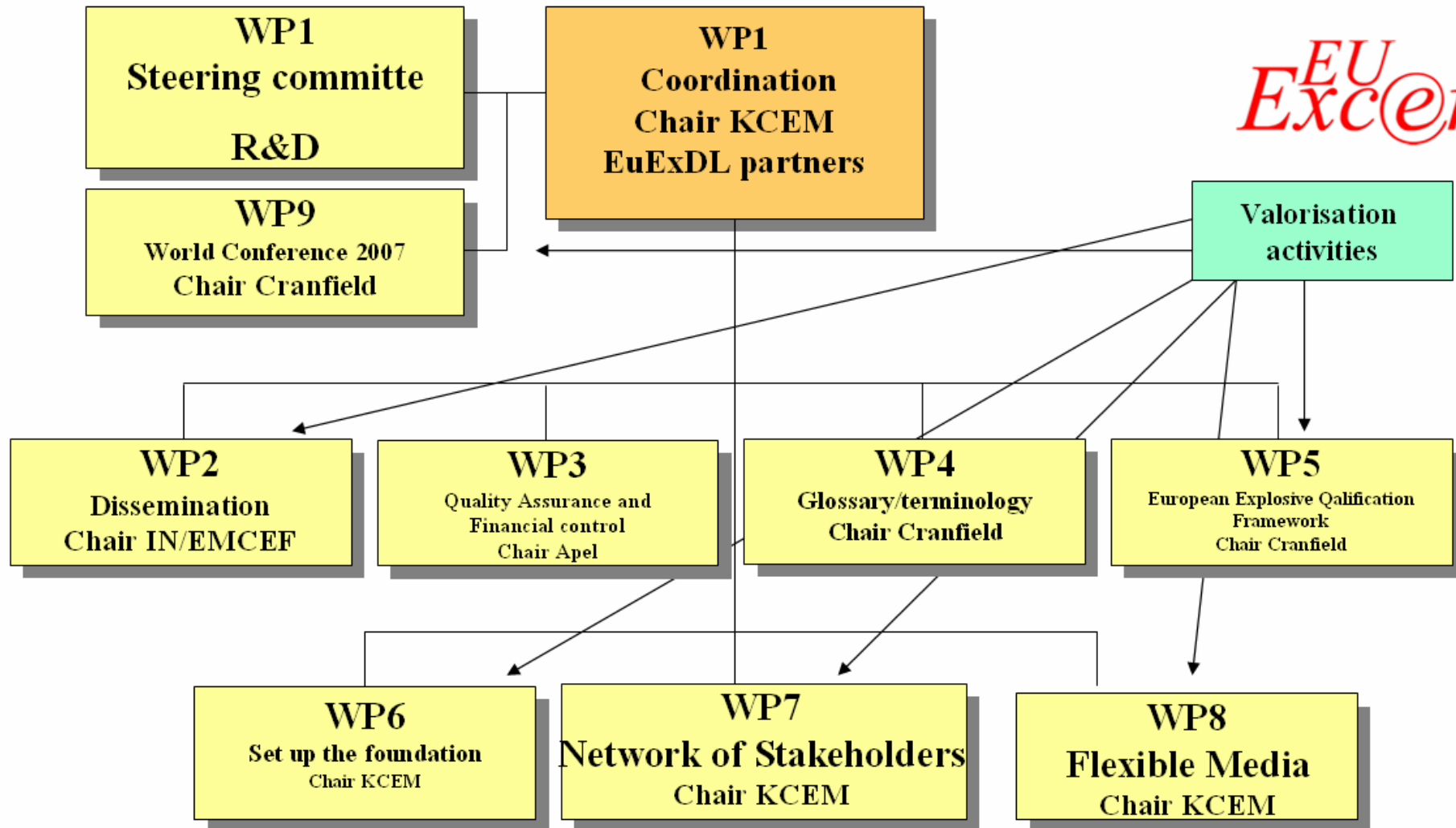
Further information will be available on the [www.euexcert.org](http://www.euexcert.org) or from [hans.wallin@kcem.se](mailto:hans.wallin@kcem.se)



# L d V **EuExDL** Project Management Configuration

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# EuExDL European Explosives Driving Licence for the Explosives Sector



## Area of Training

## Area of Training

