



INTRODUCTION TO “PAN EUROPEAN COMPETENCE CERTIFICATE FOR SHOT FIRERS / BLAST DESIGNERS” CONTENT

Short introduction

- ▶ The qualification required for the shot firer's profession is very different around Europe.
- ▶ Most countries have training courses, in some countries there is no educational means at all.
- ▶ But shot firers often have the same requirements all around European Union.
- ▶ And they still can not work abroad.

Short introduction

- ▶ All shot-firers who wish to work in another country, have to start the process of gaining permission to blast from the beginning in each different country.
- ▶ As this problem is real and affects many international companies and different industries in wider sense – EFEE decided to create a *technical competence certificate* for shot firers to make it possible for them to prove their skills and competencies.



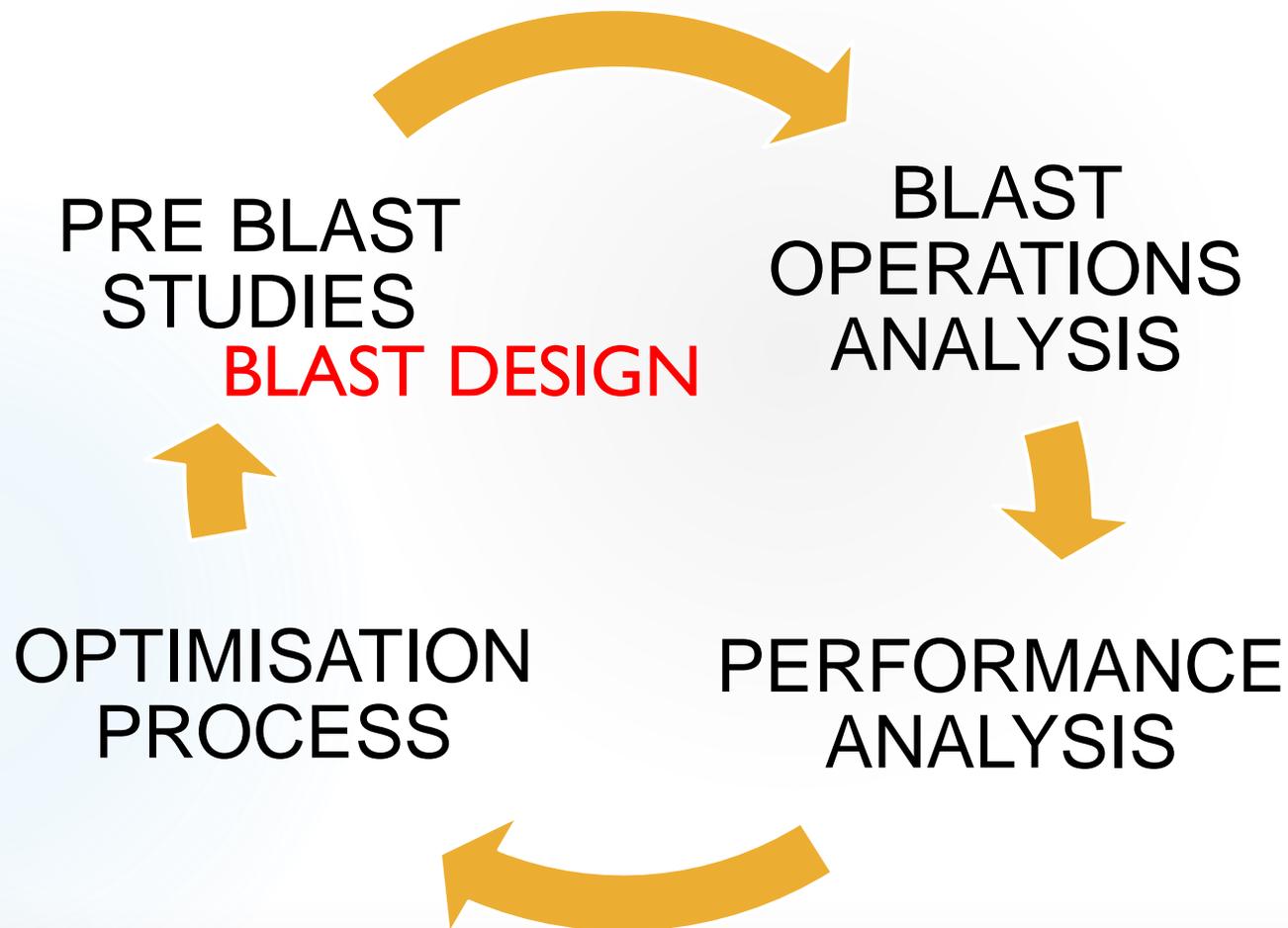


Defining the useful content

- ▶ Specifying the tasks that shotfirers / blast designers have to achieve:
 - sustainable blasting operations in mines, quarries, civil works,
 - in open pit and in tunnelling,
 - in each European country...
- ▶ Defining the shared process of these works using explosives
- ▶ Listing the basic knowledge for each step of the process
- ▶ Verifying the compatibility of the training with each national regulation

EQF Level	Knowledge	Skills	Competence
	In the context of EQF, knowledge is described as theoretical and/or factual.	In the context of EQF, skills are described as Cognitive (involving the use of logical, intuitive and creative thinking), and practical (involving manual dexterity and the use of methods, materials, tools and instruments)	In the context of EQF, competence is described in terms of responsibility and autonomy.
Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
Level 5	Comprehensive, specialized, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others

“Sustainable blasting operations” process





“Pre blast” process

Blast design

a. Managerial **blasting objectives**

1. Safe operations
2. Legal compliance (security included)
3. Operations economy
4. Special conditions
5. Site operational constraints

b. Technical **blasting objectives**

1. Fragmentation control blasting
2. Profile control blasting
3. Environmental control blasting
4. Muckpile control blasting
5. Damage control blasting



PECCS training information

Blast design

a. Managerial **blasting objectives**

1. **Safe operations**
2. Legal compliance (security included)
3. Operations economy
4. **Special conditions**
5. **Site operational constraints**

b. Technical **blasting objectives**

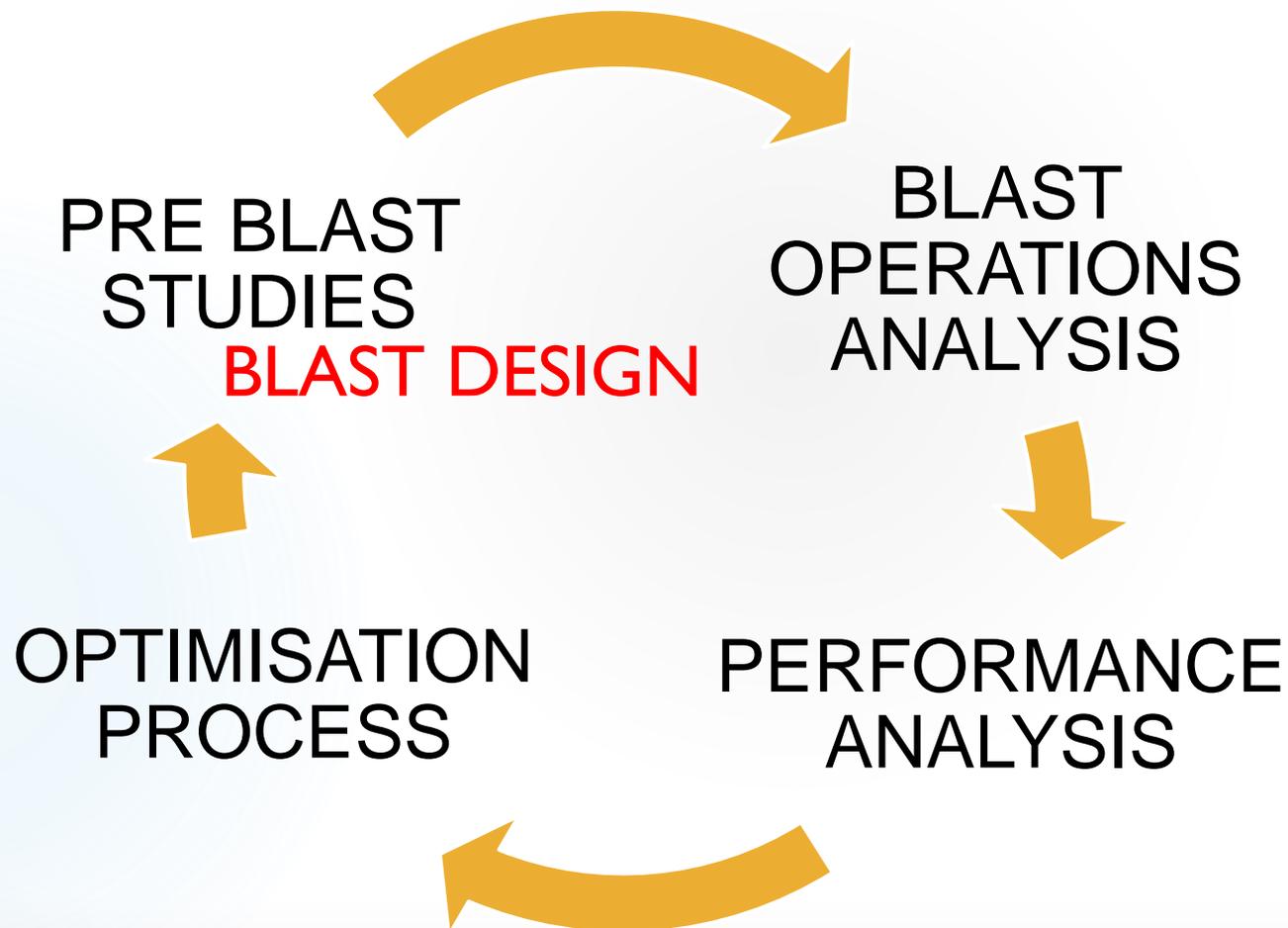
1. **Fragmentation control blasting**
2. **Profile control blasting**
3. **Environmental control blasting**
4. **Muckpile control blasting**
5. **Damage control blasting**



PECCS training process

- ▶ ROCK MASS INFLUENCE ON BLAST
- ▶ EXPLOSIVES
- ▶ INITIATING SYSTEMS
- ▶ DRILLING AND MACHINERY
- ▶ BLASTING THEORY
- ▶ BLASTING CLOSE TO EXISTING STRUCTURES
- ▶ TUNNELLING
- ▶ SAFETY

“Sustainable blasting operations” process



Conclusion

- ▶ Our aim is **not to change any regulations in any of the European countries**, but to create a possibility of proving real and good competences in this profession.
- ▶ The certificate would only be available for those, who **already have a shot-firer license** in their homeland.
- ▶ It would be a possibility for them to **level up** in order to work abroad (or in homeland!) in Europe.

**After PECCS you can come
and have a blast in the north with me!**



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▶ and do not hesitate to contact us

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▶ Thank you!