

Project proposal:

'Eurocompetence for operational personnel in the chemical industry

Recommendations for:

Identification, Assessment and Validation of competences'

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European chemical industry context

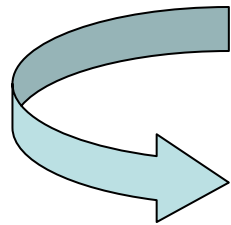
A wide scope of cascading changes :



From chemistry... To Sustainable chemistry

Innovation and competitiveness are key points

⇒ **Impacts on social dialogue :**



- **Increase the demand for better network exchange (In particular between eastern and western representatives) to gain on scale economy**
- **Strengthen the need for a better understanding of needed job profiles and associated competences for operational personnel**

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for the European chemical industry

Target groups

Industry:

⇒ Employers (in particular SMEs')

⇒ Employers (Multinational Cos')

⇒ Employees



Benefits

⇒ Define job profiles

⇒ Check and anticipate for skill gaps

⇒ Build up training plans

⇒ Serve as a reference / benchmark

⇒ Self assess job role and competences



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Target groups

Education:

⇒ National agencies responsible for VET

⇒ Education and Training providers



Benefits

⇒ Benchmark or develop qualifications

⇒ Benchmark or update VET programs



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Objective

RECOMMENDATIONS, approved by ECEG and EMCEF:

- 1. Job profiles and indication of levels**
- 2. Competence profiles and EQF levels**
- 3. Competence assessment instruments**
- 4: Competence validation procedures**

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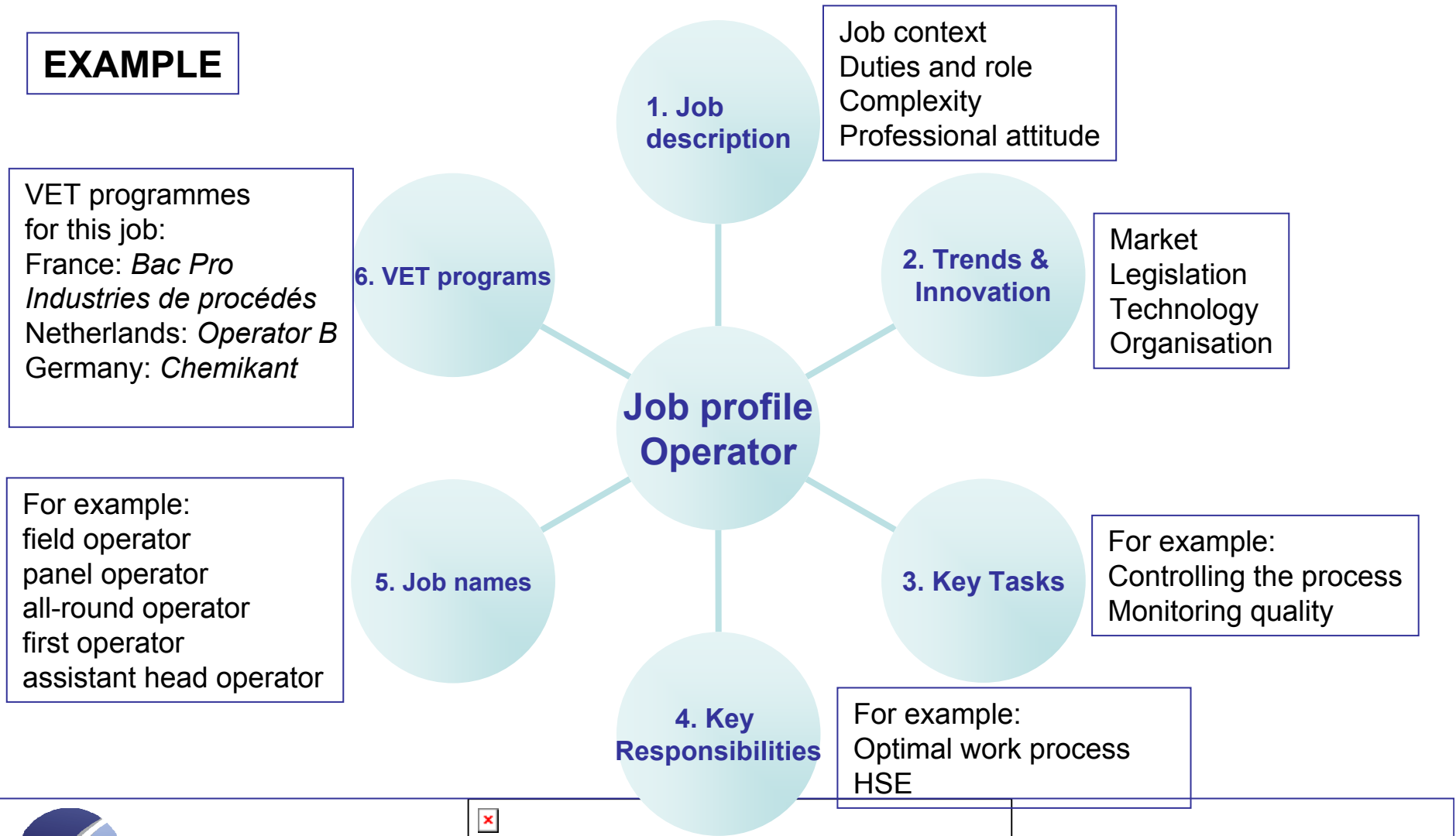
1. Job profiles and indication of levels:

- Job profiles are the basis for competence profiles and for VET programmes
- With a job profile we can define the scope of a job
- The Recommendation will reflect job profiles recognisable for the chemical industry
- Indication of level: which VET qualifications for these jobs are required by industry in the member states

Job profile of an operator: an example

for the European chemical industry

EXAMPLE



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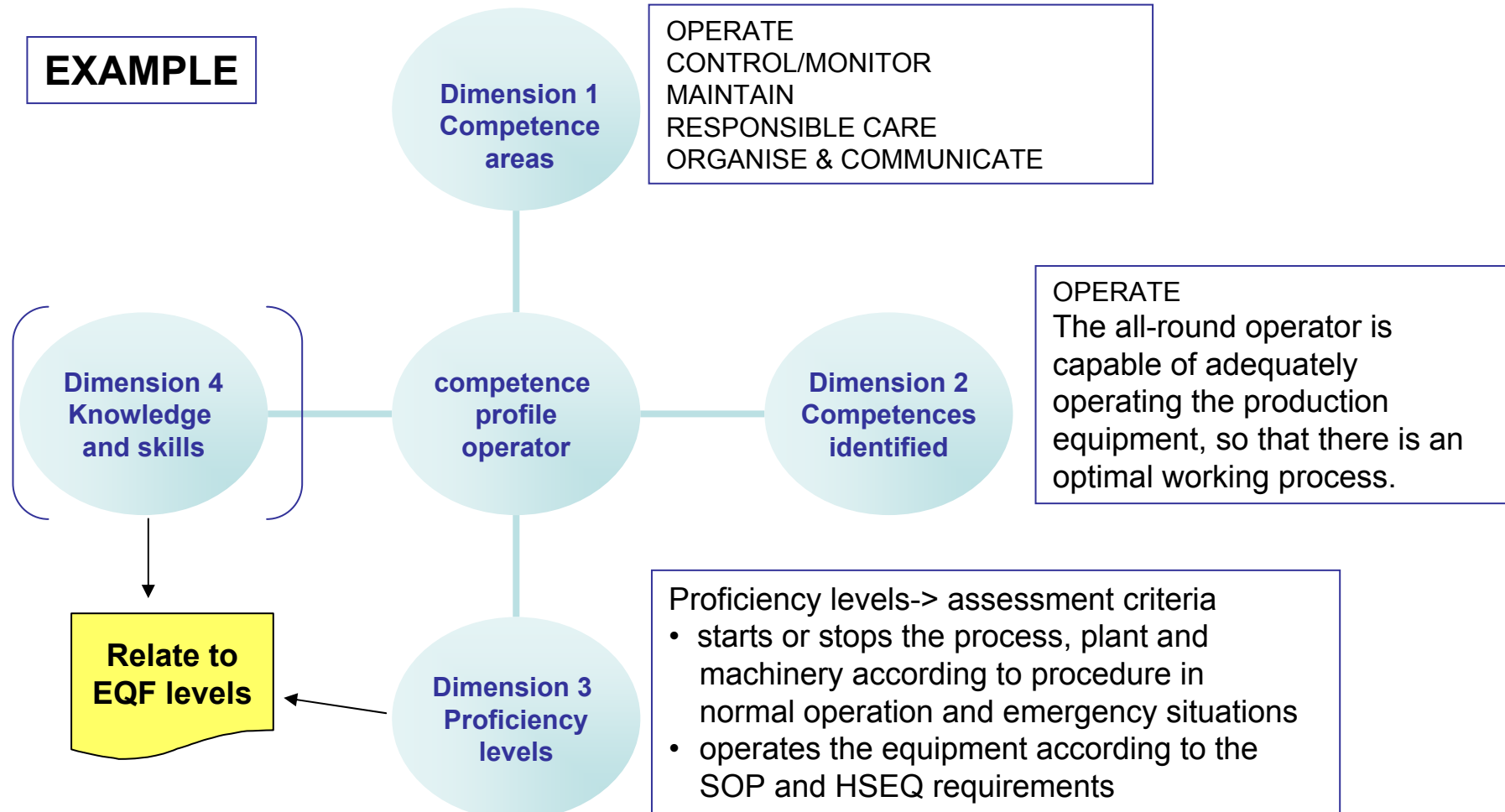
2. Competence profile and EQF levels

- With a competence profile we can identify required competences for a job
- The Recommendation will reflect competence profiles recognisable for the chemical industry
- To get an indication of level we can relate a competence profile to the levels of the European Qualification Framework

Competence profile of an operator: an example

for the European chemical industry

EXAMPLE



Competence profiles of an operator and a shift supervisor *for the European chemical industry*

How can we relate a competence profile to the European Qualification Framework?

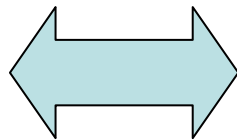
EQF:

Learning outcomes

Knowledge

Skills

Competences



Competence profile:

Proficiency levels / assessment
criteria (Dimension 3)

&

Knowledge and skills (Dimension 4)

EQF Level Descriptors

EQF level	KNOWLEDGE	SKILLS	COMPETENCE
2	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study adapt own behaviour to circumstances in solving problems
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

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3. Competence assessment instruments

- With competence assessment instruments we can assess whether a candidate has proficiency at the required level
- A selection of proven methods of assessment of competence will be described, based on best practice in member states
- The Recommendation will recommend proven methods of assessment of competence for the chemical industry

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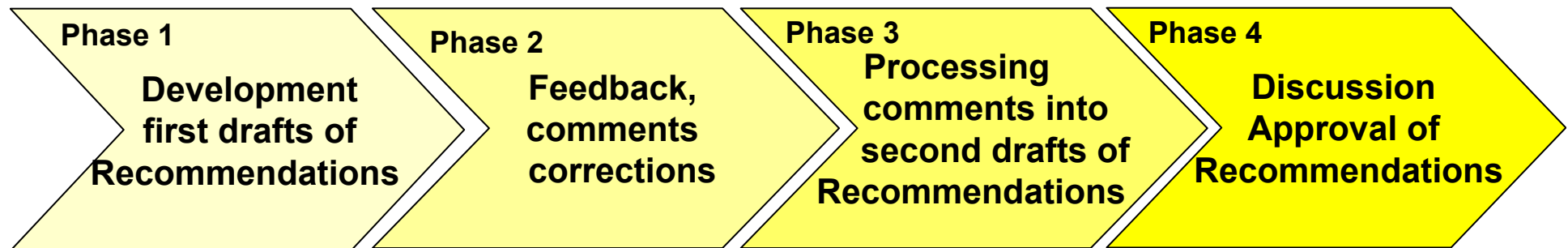
4. Competence validation procedures

- With competence validation procedures we can validate competences of workers with work experience but lacking formal certification.
- A selection of proven procedures for competence validation will be described, based on best practice in member states
- The Recommendation will recommend proven competence validation procedures for the chemical industry

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Working method



- VAPRO & Interfora
- Use what has been developed at national and European level

- Reference group of representatives of companies
- By questionnaires, e-mail and meeting(s)

- VAPRO & Interfora
- WG ETLL as sounding board

- ECEG & EMCEF workshops
- Final document: 'European chemical Industry **recommendations** for identification, assessment and validation of competences'

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Working method

Phase 1

**Development
first drafts of
Recommendations**

Desk top studies by VAPRO and Interfora experts

Use what has been developed at European and national level:

- Investing in the future of Jobs and Skills, EU sector report
- Leonardo projects ECTS/EQF Chemistry: Competence matrixes for operating jobs in chemical industry. www.ects-chemie.de / www.eqf-chemie.de
- European e-competence framework www.ecompetences.eu
- National examples of job profiles, competence profiles, assessment instruments and validation procedures

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Working method

Phase 2

**Feedback,
comments
corrections**

1. Reference group
 - 6 to 8 High Level Experts of big multinational chemical companies with presence in many European countries
 - will analyse the drafts, give feedback, add comments and propose corrections
 - communication through e-mail, and preferably meet once or twice to discuss face-to-face
2. To give a wider group of companies (also SME) the chance to comment:
 - First drafts will be made available to company representatives through members of WG ETLL.
 - Companies can respond by completing a short questionnaire

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Working method

Phase 3

**Processing
comments into
second drafts of
Recommendations**

VAPRO & Interfora adapt the first draft Recommendations based on the outcome of the comments of the reference group and the responses in the questionnaires .

WG ETLT will act as sounding board, especially during this phase

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Working method

Phase 4

**Discussion
Approval of
Recommendations**

The second drafts of the Recommendations are discussed in workshops for all 23/26 ECEG and EMCEF members.

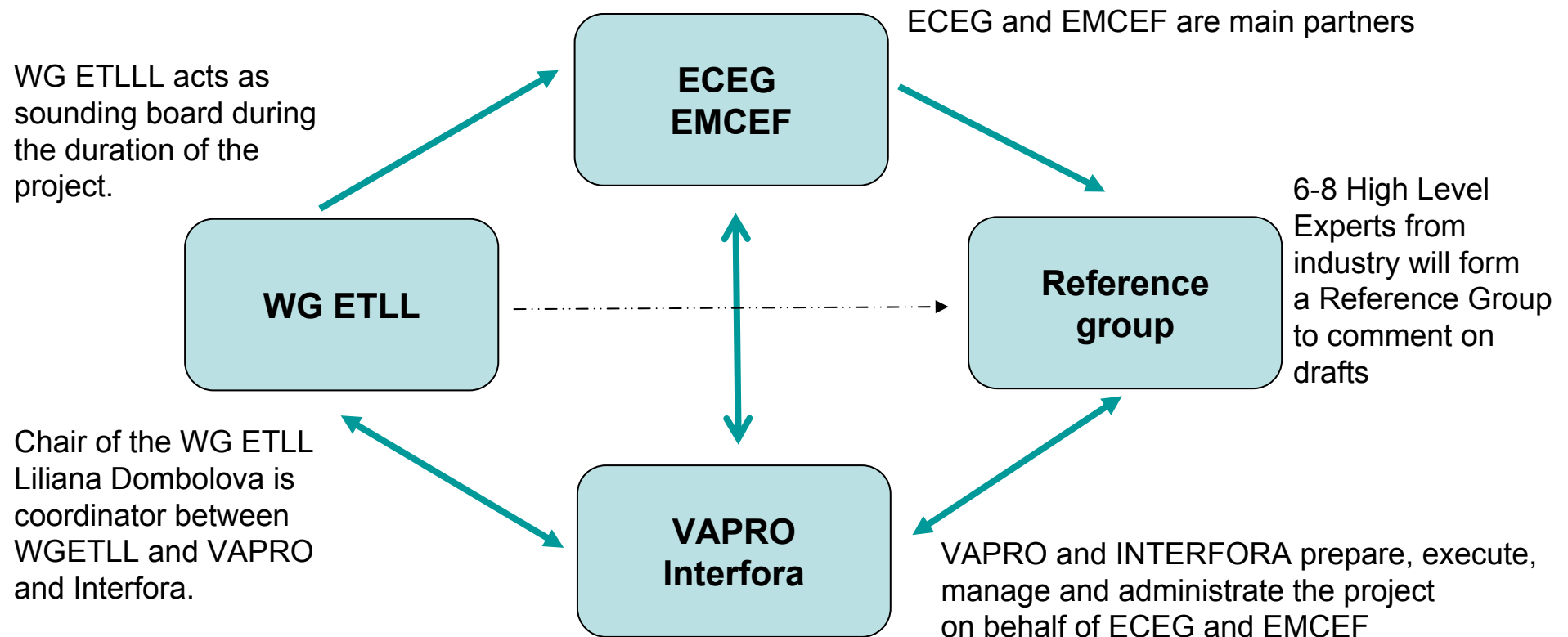
The result of the ECEG/EMCEF workshops will be the Approval of the Recommendations.

The Recommendations, approved by ECEG and EMCEF, can be basis for further projects

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Participants and roles



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Global time line

Total project time 15 months

Quarter ->		1	2	3	4	5
Part 1&2	job profiles & competence profiles	development of first drafts	development of first drafts	feedback comments, corrections	development of second drafts and approved recommendations	
Part 3&4	assessment & validation		development of first drafts	development of first drafts	feedback, comments corrections	development of second drafts and approved recommendations

Funding: Budget line 04.03.03.01
Industrial relations and Social Dialogue

Deadline for proposals: 1 September 2009



'Eurocompetence for operational personnel in the chemical industry

*Recommendations for:
Identification, Assessment and Validation of competences'*

**To facilitate the social dialogue about the challenges
for European chemical industry**

Questions?

Martine Dumont

Mirjam de Jong

„ECTS for Chemistry Worker“ Individual Competence Profile for ‘general operator’ in automated plants

1. Operating Machinery, Performing Plant Operation Procedures	2. Process Control, Plant Monitoring and Control
1. Able to start or stop the process, plant and machinery according to procedure in normal operation	1. Able to describe the basic operations and basic functions of the software and he can assign them to the process controlled system and its main components
2. Able to start or stop the process, plant and machinery according to procedure in emergency situations	2. Able to describe and explain processes and their visualisation on the screen
3. Able to monitor process, plant and machinery requirements and conditions within the task	3. Able to prepare the system to start an operating process by manual and by means of operating software
4. Able to respond to safety, economic and environmental requirements within the task	4. Able to start a process controlled system (basic operations, parts of recipes, recipes) by manual and via software and screen
5. Able to make appropriate changes based on the state of the plant at that time	5. Able to operate and control processes by manual and via software and screen
6. Able to exchange information about the task with team members and others	6. Able to analyse alarm messages and take the right actions (stop the process correct the process or other actions)
7. Able to coach team members and others in the key tasks in this job	7. Able to assign the different steps of a running process to the process controlled system and its main components
8. Able to correctly update the documentation and logs according to procedure	8. Able to document faultless the different steps of a whole process according to the Standard Operating Procedures (SOP)
9. Able to correctly communicate with other plant areas affected by the job	9. Able to distinguish between critical and uncritical measurement data

Competence matrix

1. Title	General Operator	Supervisor	
		junior	senior
1. Operating Machinery, Performing Plant Operation Procedures	<p>Can start and stop the process, plant and machinery according to procedure. Can operate the equipment according to the SOP and safety, economic and environmental requirements. (SHEQ)</p> <p>Can work and communicate in teams, with supervisors and maintenance staff</p>	<p>Can instruct and give technical and operational directions to colleagues, according to procedures. Can train and coach colleagues on the job</p>	<p>Can monitor operating staff. Can teach staff about the principles of the process, the plant and machinery operations, and can coach them</p>
2. Process Control, Plant Monitoring and Control	<p>Can control processes step by step at the machinery and from the control room. Can document the different steps according to the procedures.</p> <p>Can react correctly in case of alarms according to SOP and SHEQ procedures.</p> <p>Can modify conditions and/or steps of the process according to the results of quality control and according to SOP or act promptly to consult the supervisor in the case of complex situations.</p>	<p>Can lead a team in controlling processes at the machinery and from the control room. Can train and advise members of his team how to react in the event of alarms according to SOP and SHEQ procedures</p> <p>Can check the work of his team.</p>	<p>Can plan and organize the work according to the production plan, including the change of products and monitoring the efficiency and the costs of the production.</p> <p>Can give technical and operational directions to his/her staff, concerning the process control and monitoring functions.</p> <p>Can teach colleagues about the principles of the control process,</p>

