



Competence **E**valuation **M**ethod for **E**uropean **S**pecialists

**A European Competence
Recognition Process**

**We create a professional identity
through competencies!**

<http://www.cemes.eu>



Preface

Development in the business world is being formed by an ever increasing dynamic. This has an important role on the work place and the requirements for the employees. At the start of the 20th century it was sufficient for workers to learn a career at the beginning of their working lives however that is decreasing more and more today. That is not only due to the ever increasing technological developments in the business world. More and more people are occupying workplaces that are different to their apprenticeship and for which they haven't gained any competencies for in the framework of their work training or study. The necessary skills have been gained from formal, non-formal and informal learning accompanying the work. People receive certificates and confirmation of participation for education activities from formal learning. There are no competence certificates for gained skills from non-formal and informal learning. This has consequences for the people, companies and the environment. Employees in particular in SME's have been employed with one main competence but actually have a wide ranging field of work which partly require competencies from totally different areas. These competencies have been gained through formal or non formal learning at the workplace. It can be seen in companies that a large uncertainty concerning the evaluation of competencies exists by employees. This can be seen very clearly by internal investigations into further education. Many SME's are not able to formulate the current needs of further education of their employees.

Another problem in SME's is that the individual education requirements and not the real needs for further education influence the Human Resources development strategy and the business education plans. Further education requirements are a need and the motivation of an individual for further education and this shows the subjective side of the need for further education. Then the actual individual or an organisation's education requirements can be compared. As the educational requirements are the requirements on qualifications in a company or from potential customers of a vocational institute and are therefore more the objective side of the educational requirements. This makes it possible to identify the necessity of the actual requirements but also objectively. That's why there is a need for competence recognition methods which in the area of professional competencies should be consequently orientated to the actual competencies but also the results of the education processes. That's why participation notes or questioning concerning educational wishes are very unclear in defining the exact educational needs of individuals or organisations.

The procedure mentioned here evaluates business competencies based on an objective level and is therefore an important tool in determining the actual needs for further education or confirming the actual existing competencies.

18th November 2008

Multiple level CEMES competence recognition process

	Page
1. Starting situation	4
2. Organisation of the CEMES competence recognition process	5
2.1 Complete structure	5
2.2 Step 1 – Multiple Choice Test	5
2.3 Step 2 – Complex Questions	6
2.4 Step 3 – Personalised Assessment, Profiling process	7
3. CEMES competence recognition process course of actions	8
4. Description of Competence Recognition Platform	9
4.1 Complete structure	9
4.2 Administration tool	11
4.3 Examination tool	12
4.4 Assessment tool	14
5. Possible usage	15
5.1. Competence certification and –recognition	15
5.2. Competence profiling – Strengths / weakness analysis	18
5.3. Analysis of educational requirements	18
5.4. Human Resource Development Support	20
5.5. Development of junior executives and executives	20
5.6. Selection process when employing people	22
6. Future	23

1. Starting situation

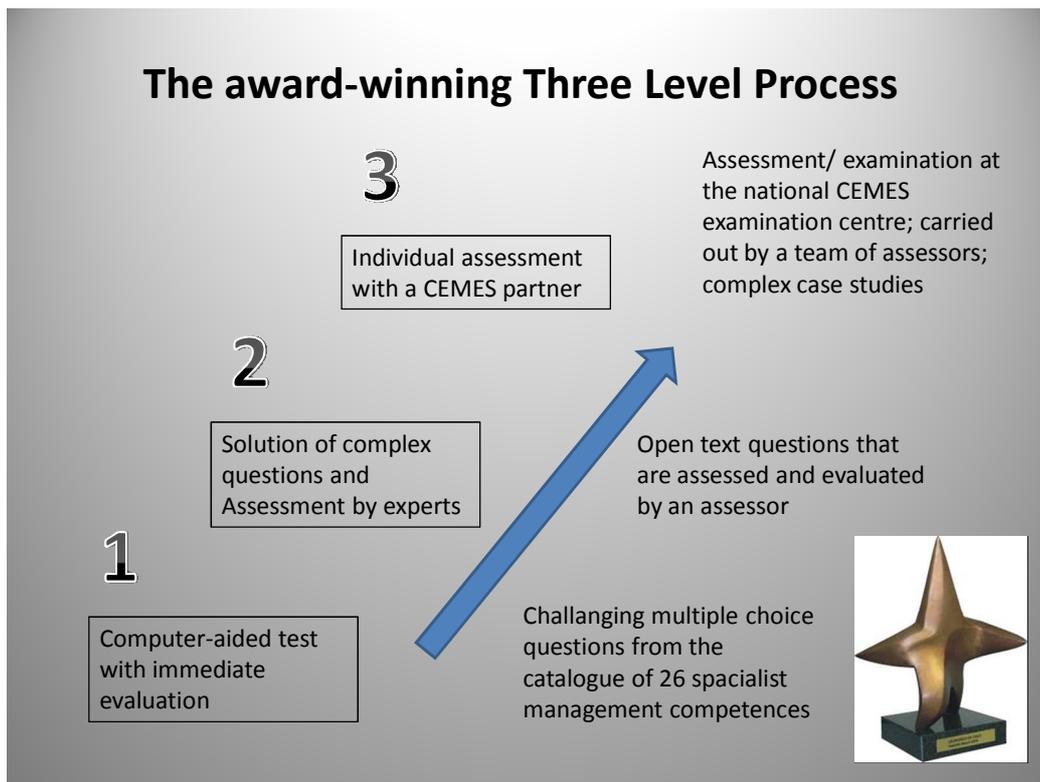
The complexity of business and the increasing amount of dynamics in all processes in the managing and controlling of businesses needs high levels of requirements from the company executives. Management and professional competencies are typical competence examples which have been gained through non-formal and informal learning and have to be replaced through targeted participation in formal education courses. Certificates or documents are only available for formal learning whereas the majority of management competencies and professional competencies are effective in vocational further education. For a business the existing employee's competencies are difficult to estimate because there is a blurring of targeted Human Resource development and staffing in the area of skilled personnel and executives which exists. A difficult situation exists for the company's successor when the technical or industrial knowledge of the executives can be estimated correctly but it is not possible to provide evidence for these leadership competencies.

The EU-Project „CEMES“ developed a system of European certificates for management skills and a corresponding examination process. CEMES means: **C**ompetence **E**valuation **M**ethod for **E**uropean **S**pecialists. This project was awarded with the Helsinki-Award 2006 in the category Transparency and Recognition of Knowledge by the European Commission. The developed examination process has been additionally developed as an independent product „CEMES Competence Recognition Process“.

Other professional competencies can be evaluated in the framework of „CEMES Competence recognition procedure“ not just the already defined 26 management components. These competencies that need to be evaluated and the accompanying questions can be selected from the CEMES-Pool or can be added according to the specific needs that are required and then added to the CEMES-Pool.

At the moment the Online-Tool for competence recognition has been totally revised and concentrates on a scaleable competence rating system in the pilot project ESO-CRS (DE/07/LLP-LdV/TOI/147050V Creation of an internet-based and scaleable solution for the evaluation and assessment of knowledge and competencies - for the recognition of competencies that have been acquired through non-formal and informal learning). The stated Screenshots in this document correspond to the actual level of development. As the project will be completed in 2009 it is possible that changes in the layout and functionality could appear. The described methods will be the basis of the development work and will not change during the duration of the project. After the completion of this project there will not only be a scaleable software solution. Additional practical useful cases for the activities of business assistants and professional drivers have been already integrated into the CEMES competence recognition process.

2. Organisation of the CEMES Competence Recognition Process



2.1. Complete structure

The competence recognition process based on the CEMES-Method consists of a three step method mix for a comprehensive evaluation of the candidates' competencies. The aim is to create a candidate's actual profile. Both the first steps which consist of an online Multiple-Choice-Test and online answering of open questions serve as the starting point of the third step the personal assessment by two assessors. Online based important information has been collected due to the mix of methods which allows the assessor to use when evaluating the candidates' competence level in a simultaneous shortened examination process. According to requirements the steps can be in combination or individually. This results in a modern efficient outcome orientated evaluation process of competencies which is very flexible and available for use all over Europe.

2.2. Step 1 – Multiple-Choice-Test (MC Test)

The online based MC-Test is used as the test of the technical knowledge as well as the knowledge and use of important technical terms. The test is carried out online by an authorised examination centre. After the registration of the candidate the examinations will be installed and the examination centre will receive the examination access codes from the CEMES-Head Office. The candidate will carry out the online test in an allocated room. The examination centre is responsible for the proper execution of the test. The test candidate logs on to the examination platform through the internet. He will be instructed how to answer the questions and the possible selection of the answers. The evaluation follows the test immediately. The test candidate receives an evaluation shown in percentage of the competence description and the percentage of correct answers. The following graphic shows an example of a question:



question

To work on images and pictures, you can use special graphical software. Which software would you choose?



- Macromedia Flash
- Paint Shop Pro
- Adobe Acrobat Reader
- Microsoft Access
- Corel Draw

14 / 56

The assessor who controls the third step of the competence recognition process receives information of the asked questions and the candidates' answers by logging on to the assessor access in the system. This enables a targeted preparation of the assessment and the current tendencies of the candidates' strengths and weaknesses.

2.3. Step 2 – Complex Questions (Open questions)

The second step consists of the candidate answering complex questions. This step provides knowledge of how things connect together and the overall competence knowledge of the candidate. According to this open questions will be asked which connect more technical topics or individual competences. The test candidate has to explain in his/her own words and cannot use prepared answer examples. This step can be carried out immediately at the end of step 1. The test is carried out online in an examination centre. The questions are asked online and the necessary answers are collected and saved online. For candidates who do not have sufficient computer and keyboard skills it is planned for them to scan the written answers as a PDF document and enter them onto the online software.

The evaluation is carried out by a technical expert or a potential assessor. The candidate has answer Tips or answer forms with evaluation explanations available to him/her. This makes it possible to have transparent and comparable evaluation results which can be reproduced.

The assessor who controls the third step of the competence recognition process receives information of the asked questions and the candidates' answers by logging on to the assessor access in the system. This enables an even more targeted preparation of the assessment and the current tendencies of the candidates' strengths and weaknesses have been made even clearer.

2.4. Step 3 – Personalised assessment, profiling process

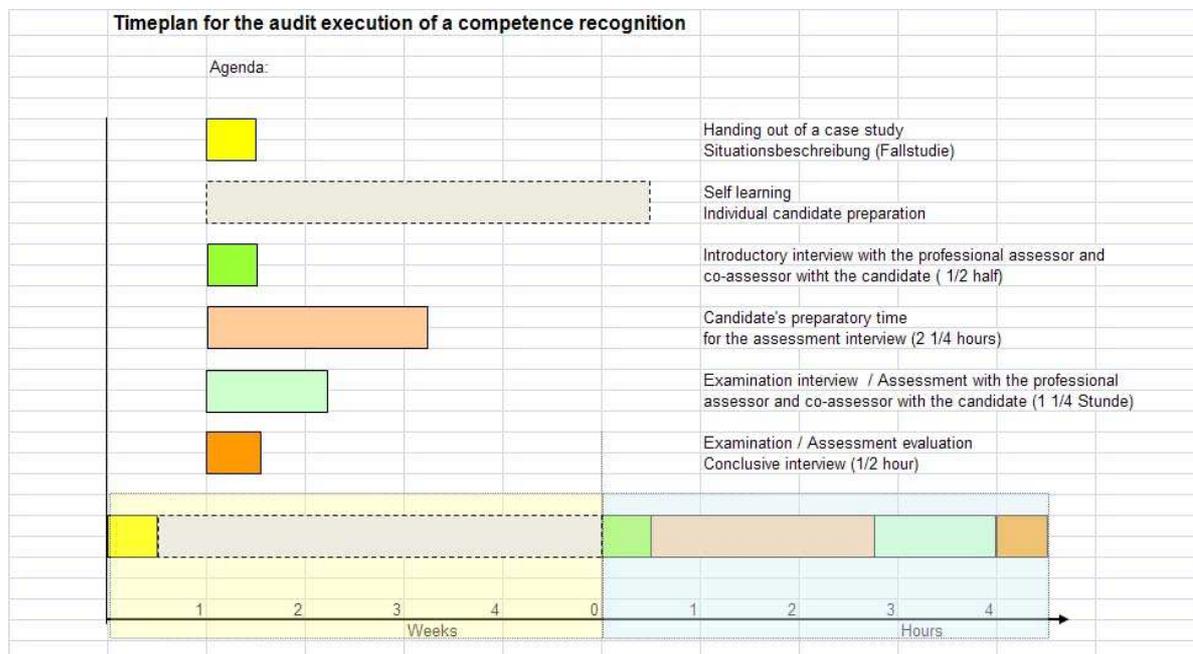
In the framework of competence recognition the assessment has various aims independent of if it is to be used at the start of a profiling as a pure strength weakness

analysis or if it has been used after a qualification phase and/or coaching phase. If the CEMES-Method is used for needs of education analysis then a development process has been closed. The results also serve as an individual direction of your personal development plan.

The final version of the assessment is dependent on the aims and the use of the competence evaluation system. If the system is used for supporting Human Resource recruiting (Point 5.6), the assessment will be an interview (Point 5.6). If the CEMES competence recognition system is used for certifying and recognizing competencies then it will be a Human Resource assessment corresponding to the European standard. As it is concerned with the highest qualitative requirements then the detailed described case of the principal organisation in step 3 should be used.

The European Management Certificate was developed in the European pilot project CEMES. This dealt with a certificate which confirmed the owner's high-quality existing management competencies. The certificate and the use of the CEMES competence recognition process for this situation will be described in detail in point 5.1.

This CEMES assessment which leads to the EMC is not public. It has the aim to document and test the complete and complexity of the candidates' proved competencies. The candidate, assessor and a second assessor (Lead assessor or professional assessor) take part in the assessment. The assessment takes place under the control of certification place of the named external accredited professional assessors. Each professional area will last a maximum of 4.5 hours (0.5 hours introduction; 2.25 hours preparation; 1.25 hours examination; 0.5 hours evaluation). The assessor informs the candidate at the end of the assessment of the result.



The content of the assessment is defined in the minimum competencies in the competence description. Steps 1 and 2 are necessary requirements for the assessment. The candidate is only allowed to take the assessment if he/she can prove at least 50% of the minimum requirements (level) for each competence (not for the strength weakness analysis). The results of the CB-Tests of step 1 and the evaluation of the open questions in step 2 will be taken into consideration by the assessor. The examination has been passed if the candidate has been able to prove his/her competencies according to the

required levels of competencies for the corresponding certificate. The basis of the assessment is an example case study of a business or situation description which has to be handed over to the candidate 4 weeks before the assessment. By using this case study the professional, methods and self competencies will be evaluated. The structure in 4.1 shows the possible various professional areas where assessments can be carried out.

The level that the candidate has achieved in the competence for the specified professional area is defined as the result of the assessment. An examination is concerned as passed and an EMC certificate or professional certificate can be issued when in the special defined management areas when the defined minimum levels according to the CEMES framework have been achieved.

3. CEMES- Competence Recognition Process Organisation

The main course of events for a candidate is as follows:

The candidate finds out from a CEMES-Partner or from the homepage of the European CEMES Head Office about the possibilities to have his/her competencies evaluated and/or certified.

If interested then it is possible to carry out an anonymous online self appraisal test to see which certification is suitable.

If necessary the candidate can take advantage of further education options which will help to close competence gaps.

An advisory interview with the candidate follows in a national CEMES examination centre and the handing over of the relevant examination documents. The candidate registers with the required documents by a national CEMES examination centre. As proof of his/her professional practical experiences the candidate has to provide a **competence portfolio**.

Afterwards the competence recognition takes place on the basis of point 2 described structure of the competence recognition process.



Computer based test with immediate evaluation

Qualified Multiple-Choice-Questions from 26 professional competencies of a manager or professionals e.g. for the candidate from the relevant competencies or competence area



Solution of complex questions with expert evaluation

Open text questions which are evaluated by an assessor. The selection depends upon the relevant competencies or competence areas.

3

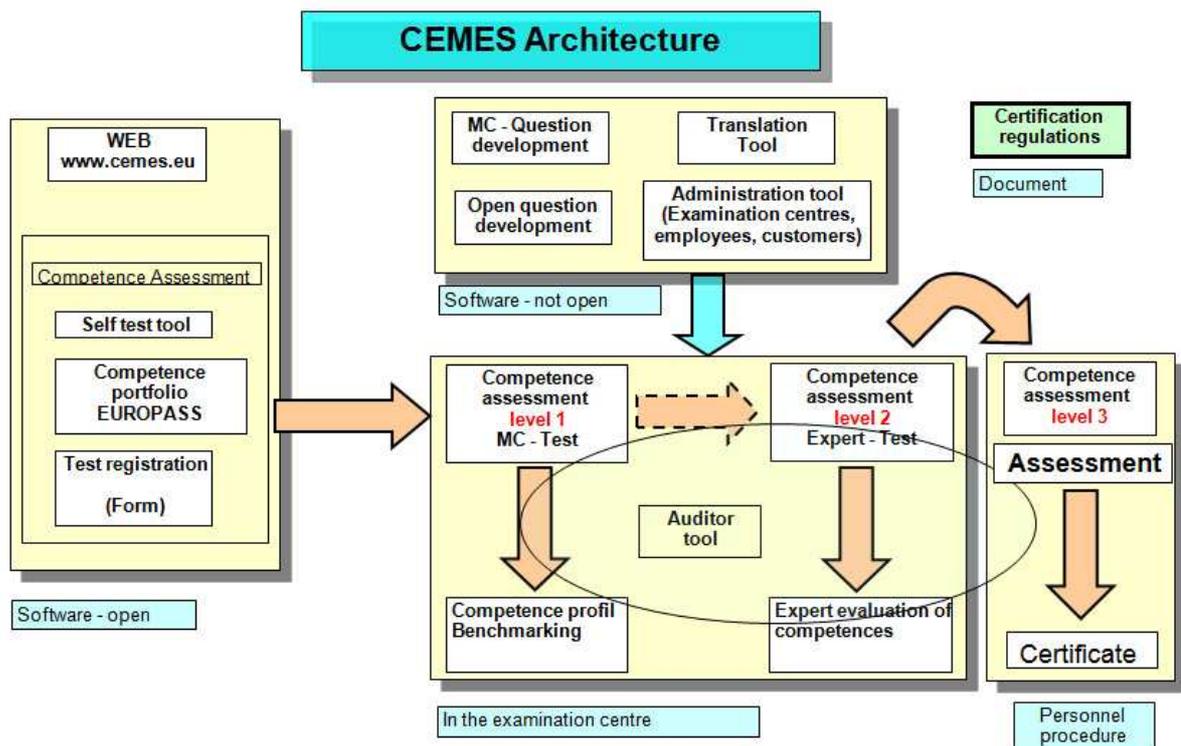
Personalised assessment from a CEMES partner or qualified educational advice

Assessment / examination in national CEMES examination centre by an assessment team with complex case studies or a qualified educational advice. The results of step 1 and 2 could be taken into account.

4. Description of the platform of competence recognition

4.1 Complete structure

The recognition of a learning performance and competencies requires a unique personal documentation. This means that the person who would like a competence documentation or recognition of learning performances has to have carried out a clear planned process. Included in this process are the examining institutions: examination centres, independent assessors and the candidates. The CEMES method which was awarded with the Helsinki Award 2006 for the recognition of competencies works with a specially developed internet-based platform. This platform fulfils all functions in the preparation, administration, execution and evaluation of the recognition process which have been represented in the following structure:



The CEMES.EU platform consists of three parts:

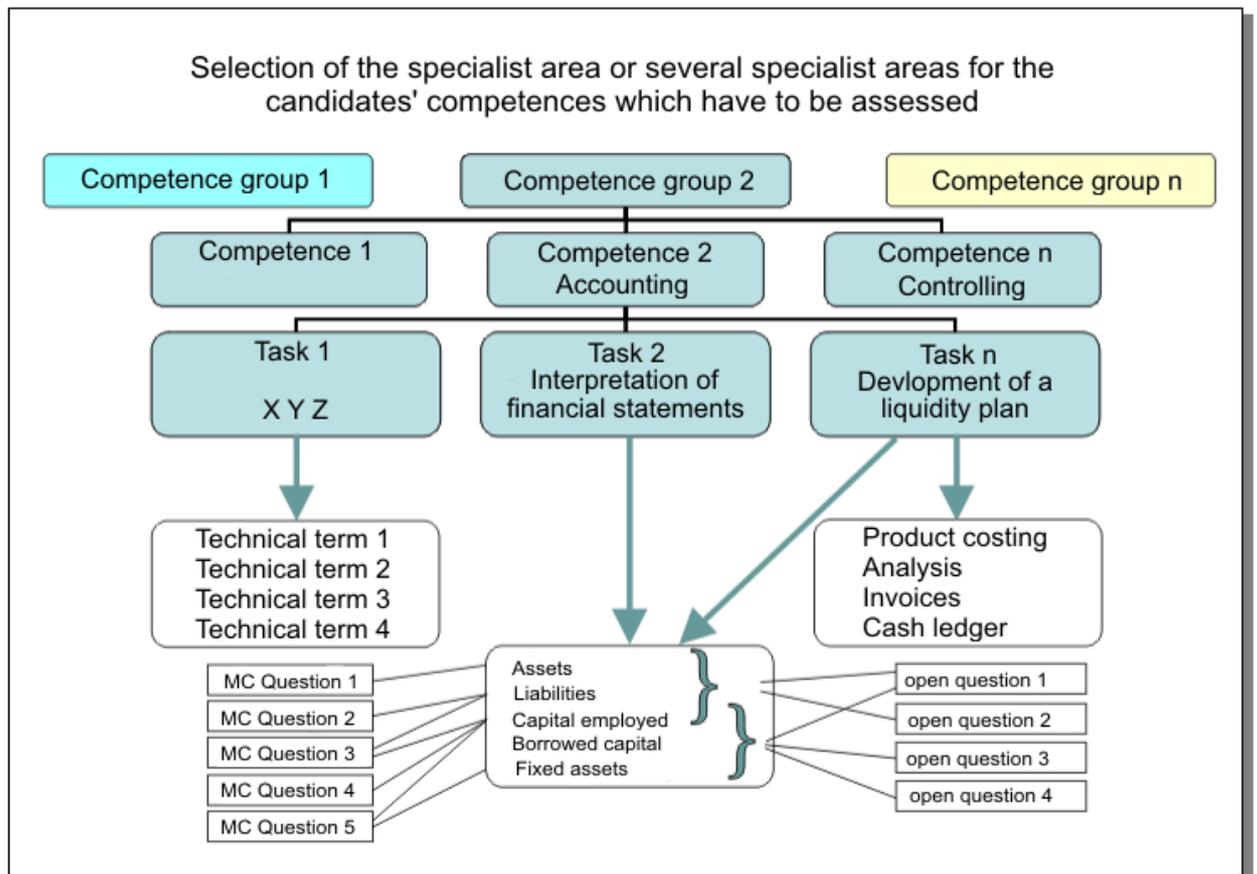
- (1) the public accessible internet pages with:
 - General overview
 - Competence description
 - Description of the examinations and certificates
 - Self appraisal test (MC-questions)
 - Examination centres and registration

- (2) internal area (password) with:
 - Development area
 - Development of MC-questions
 - Development of open questions
 - Translation of all types of questions
 - Administration of examination centres, employees, assessors, ...

 - Administration of the competence recognition and examination
 - Registration, creation of tests, making appointments
 - Execution of tests in step 1 (MC-test)
 - Execution of tests in step 2 (open questions)
 - Assessment tool

- (3) external area with:
 - Personalised examination
 - Assessment tool with evaluation of examinations
 - Documentation (Examinations regulations, examination results)

Essential elements for the competence recognition are the necessary multiple choice and open questions which have to be integrated into the system. During the duration of the project questions have been developed. These questions should be made available to all users. Therefore a structured system of collection and identification marking is necessary. A database structure has been developed based on competencies and technical terms which can be used for targeted searching of questions for the competence recognition process which needs to be set up. The represented structure in the following graph is the basis of filing and identifying the collected questions:



4.2. Administration tool

The CEMES-platform has an important function in the granting of comparable European examination and recognition processes. This includes the content preparation of standardised examination tasks, questions and evaluation schemes but also the compliance with a European standardised accepted examination regulation as requirement for transparent examination and recognition processes are supported by this online platform.

The multiple choice questions are collected in the area called question administration and are discussed and agreed upon between the question developers in each country and the CEMES-employee in the European Head Office. The question is given free for translation by the Head Office into the native languages at the end of the discussion process. Questions that have been given free will be translated into native languages by the question developers in each country in the translation area. It is possible here to block specific questions which are not acceptable in that country. The development and collection of open questions happens in an analogue way.

In the user administration area:

- personal data of the candidates is collected,
- examinations are selected and appointments are made,
- examination questions from the database are randomly selected and put together,
- candidates numbers and examination codes are registered and
- examination results are recorded.



user name: Jahn, Hans | language: Deutsch | exam center: London | last login: 24.09.2009 14:22:25 | [logout](#)

www.cemes.eu

IBS - Institut für berufliche Bildung und EDV-Schulung GmbH / Cottbuser Str. 4 / 01979 Lauchhammer
www.bildung-ibs.de
CEMES

4.3 Examination tool

All examination and competence recognitions are carried out by a CEMES-examination centre. CEMES-examination centres can be temporarily set up, for example, in companies, for example, in the Human Resources Department. The candidate's number and the examination code for the start of the examination are entered onto the platform by an authorised employee in the examination centre at an arranged time. The candidate is informed about the examination process and the examination can be carried out.

The candidate answers MC-questions in any order and is informed about the level of answers on an overview page (● green point = answered; ● red point = not yet answered).

Question overview



evaluation

1	journal	● MC
2	Debit and credit	● MC
3	Forms of balance sheet	● MC
4	Liabilities	● MC
5	Break even point	● MC
6	Income statement 2	● MC
7	Office clerk responsibilities	● MC
8	Keeping confidential documents 2	● MC
9	Qualities of a good secretary 1	● MC
10	Office organisation	● MC

The candidate is informed immediately about the result of the examination (1. step). It shows if this test or part of the complete test has been passed or what result the candidate would achieve in competence recognition. The basis is the CEMES-framework's defined percentage values in relation to the defined levels.



CEMES
customer administration





exam: **Test office clerk 1**
name: **test user, clerk**

Probation:
go: 22.04.2009 / 11:30:26
end: 22.04.2009 / 11:34:14

competence	questions	Correct	Incorrect	%
Bookkeeping	6	1	5	16.7
Correspondence	5	0	5	0
Customer service/advise	4	0	4	0
Office communication / IT ability	5	1	4	20
Office organisation	5	0	5	0
Office work and administration	2	0	2	0
Planning and controlling deadlines, (Time Management)	4	0	4	0
sum:	31	2	29	6.5 (5.2)

www.cemes.eu

IBS - Institut für berufliche Bildung und EDV-Schulung GmbH / Cottbuser Str. 4 / 01979 Lauchhammer
www.bildung-ibs.de
CEMES

If the test has been successfully passed then the candidate goes directly to the answering of open questions (2. step of the competence recognition).



CEMES
Test





question

How do calculate the average inventory for a business year if there was an inventory of 5,500 items at the beginning of the year and of 4,500 items at the end of the year?

next

back

overview

B I U
[bullets]
[numbered]
[indent]
[outdent]
[undo]
[redo]
x₂ x²

1 / 56

Each competence shows a previous defined number of open questions which have to be answered. The candidate enters the answer into the given text field.

The order the questions have to be answered is not fixed.

After answering all questions or after the allowed time the examination is finished (step 2 of competence recognition).

The result of the answered questions is transferred to the assessor for evaluation.

4.4 Assessment tool

An assessment tool has been developed for the evaluation of examinations and the collection of previous test results. The assessment tool shows the assessor the result of the MC-examination (1. step of the competence recognition). After that the assessor receives a summary of correct and wrong answered questions. By clicking on a question a more detailed summary is possible. This represents the candidate's answers and which have been marked and which are correct. After the second examination process the assessor is given the answers from the candidate of the open questions. The assessor is not just given the candidate's questions and answers but also possible answers and an evaluation system as a help. The assessor enters his evaluation of the question into the memo field. This also includes the achieved number of points. The results of steps 1 and 2 of the competence recognition process can represent a competence profile and an actual profile or can be compared with a benchmark.

In case that the third step or a qualified educational conversation should be carried out for the candidate then the assessor can enter a note in each question (memo field) so that he can better prepare for the assessment.

The assessor is able to access this information during the assessment or in the preparation of the educational conversation.

question 1

titel: Customer care

question:

Your company wants to take part in a trade fair. You are involved in the preparations. Please name 6 things that you have to do beforehand.

1. Contacting the management of the fair for the stand. (1 pt)

2. Agreeing on (negotiating) prices and conditions for the stand. (1 pt)

3. Making reservations (e.g. hotel) for the staff that will work at the stand. (1 pt)

4. Contacting the printing shop and making arrangements for the flyers or other things that have to be printed and shall be handed out at the stand. (1P)

5. Advertising the stand in publications (e.g. trade journals, customer information etc.). (1 pt)

6. Preparing and commissioning information signs for the stand. (1 pt)

Total: 6 points

Memo:

save

Punkte: / 6

Close

5. Possible applications

The CEMES certification solution and the developed tools for competence recognition offers many and a wide range of possible applications. An example is the recognition of gained competencies independent from how they were gained or the examining of the technical aptitudes by recruiting. Later other possible usage, cases advantages and other specialities will be represented.

5.1. Certification and recognition of competences

The recognition and certification of competencies is currently very important in the area of lifelong learning. Knowledge and competencies are increasingly gained not only in formal educational situations but also through informal and non-formal learning. These competencies gained from non-formal and informal learning do not usually have any certificates and whereby these competencies are restricted in availability for the vocational career and vocational mobility. The recognition of these gained competencies in a vocational context is an important contribution of increasing the individual's vocational mobility and using the human potential in the company

The „European Management Certificate“ should be an example of recognition of competencies independent from the way they were gained and described.

In the pilot project ESO-CSA (**E**uropean **S**etting of the **O**rganization for **C**ertification **S**pecialist **A**reas) a European system for certifying SME's competencies has been created. In doing so a system has been developed which allows the identification, evaluation and recognition of technical competencies in small and medium-sized companies which have been particularly gained through non-formal or informal learning. This new European

standardised certificate represents a contribution for a European comparable evaluation of vocational competencies.

The new system uses a European standardised process to confirm competencies according to a standardised framework of terms. For the developed management and technical certificates in the CEMES pilot project, evaluations based on ECVET (European Credit for Vocational Educational Training) were carried out to grant comparability with vocational educational certificates.

All CEMES certificates require compulsory vocational practice which means they can not only be gained through formal learning. These practical working times are calculated by a code into an equivalent learning time. This results in a total learning time. This corresponds to, for example for the **EMC Master certificate a 4 year study period**. This means that this certificate has a very high level.

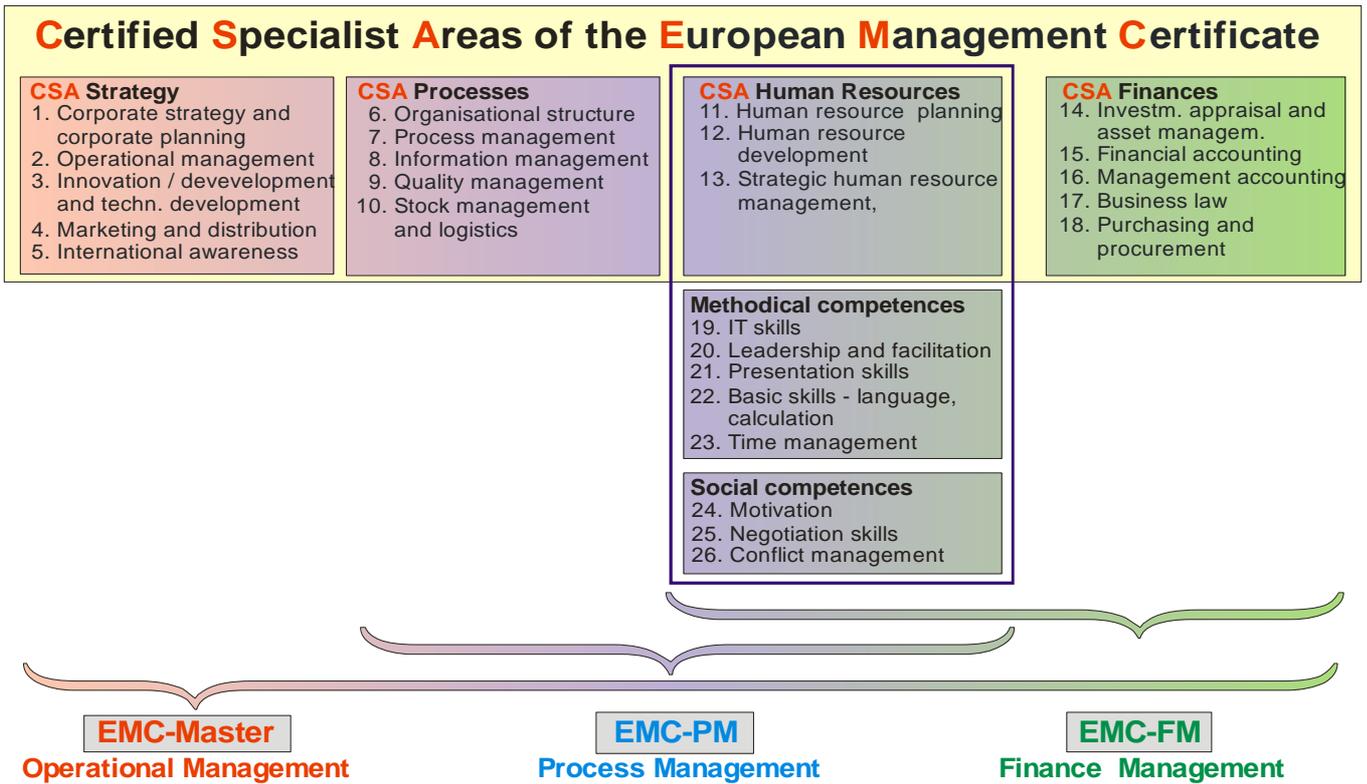
With the competence certification of **qualified employees, executives and managers in SME's** competencies in special activities and areas are confirmed.

The competence recognition and certification happens in the following steps:

1. Enquiry from a manager from a SME of the possibility of competence recognition at a regional certification partner. The candidate uses the possibility of the self appraisal in the internet.
2. The EMC candidate can potentially gain the necessary competencies through free educational offers.
3. The first part of the examination consists of a computer based test at a CEMES examination centre. The candidate has to submit a portfolio which contains the educational certificates and the proven necessary practical work experience.
4. The concluding assessment takes place at a national CEMES examination centre by two independent accredited assessors. Preparation and examination time amount to approximately 3 hours. The CB-test and the portfolio of vocational development will also be considered.
5. The results will be given to the national CEMES Head Office by the CEMES professional assessor who evaluates and confirms the results.
6. The recommendation of listing the certificate is forwarded to the European CEMES Head Office who issues the certificate.
7. If desired the certificate owner can be listed on the CEMES homepage.

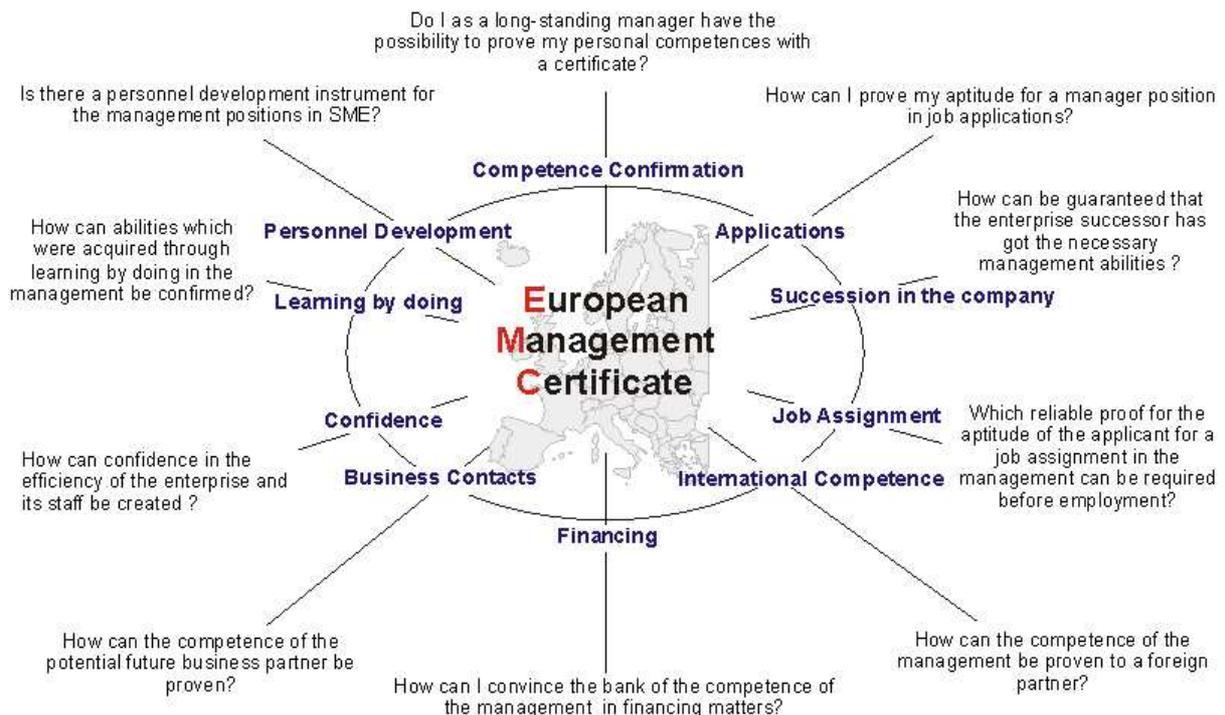
The competence requirements of all certificates are based on a system of 26 defined technical, methodical and social competencies. Defined competence profiles describe the required procentual level which needs to be proven for each certificate. These levels are different for each certificate. The following graphics makes the classification of competencies to technical areas and to the necessary examinations for the certifications:

The Structure of the CEMES Examinations and Certificates



The advantage which comes from a certification of gained vocational competencies is very complex. It is situated with the certified person but also with the company and the society. The following graph shows the advantages for various users based on the certification of the European Management Certificate:

We can create your professional identity by using your competences!



5.2. Competence profiling – Strength/Weakness analysis

The international awarded CEMES process is used for the strength and weakness analysis. It is based on a three step internet based competence evaluation system for management competencies in small and medium-sized enterprises.

The basis for the evaluation are the CEMES competence descriptions and the defined levels which define to what level the precise competencies have to be mastered. At the same time the real activity fields and activity requirements ascertain which competencies should be evaluated. The actual competence requirements and the levels are developed allowing for the actual vocational requirements profile which has been measured according to the strengths and weaknesses. For the purpose of benchmarking it is also possible to compare with an average value a comparable group. It is also possible to compare past tests of candidates.

The main advantage of strength-weakness analysis is the consequent Outcome-Oriented of competence evaluation. This means that all ways that knowledge was gathered are used in the evaluation. This means the formal learning methods, non-formal learning and informal learning merge in the evaluation. The establishment of necessary Human Resource development measures are based on actual competence levels.

Office Clerk		Level				
Competence	Percentage	marginal	low	good	high	very high
	%	0-15	16-40	41-60	61-85	86-100
Accounting	80			●	■	
Office administration work	90				●	■
Written correspondence	90				●	■
Office organisation	80				■ ●	
Customer advisory service	70				■	●
Scheduling	85				■	●
Office communication / IT skills	75			●	■	

■ Required level for an Office Clerk
● Actual level

Therefore the use in potential analysis in companies makes sense especially by the identification of individual vocational development strategies or also as an anonymous self appraisal in the preparation of an interview or vocational decision. At the same time the use or also the aim decides which of the three steps has to be used. In the most cases the first step with the use of Multiple Choice questions is sufficient. This means a neutral and very efficient instrument for strength and weakness analysis exists.

5.3. Educational requirement analysis

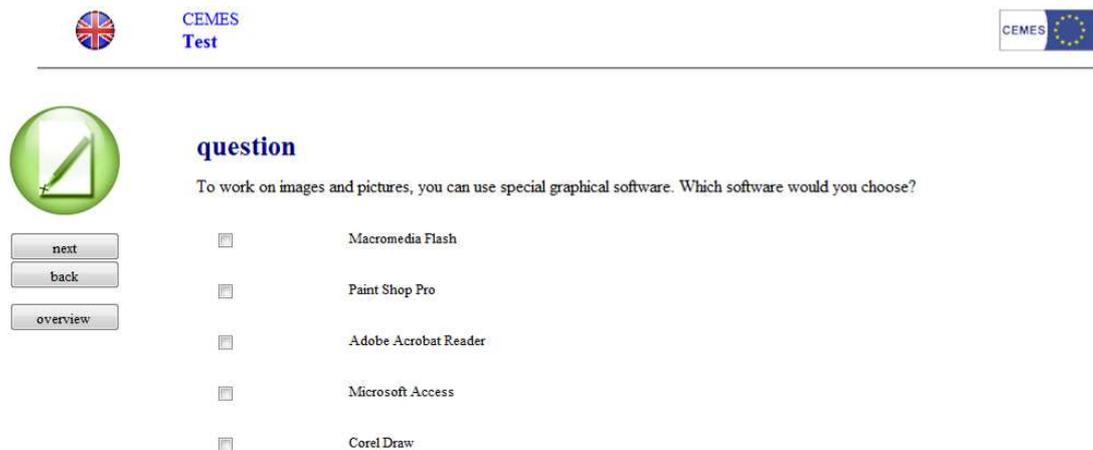
The educational requirement analysis is an important part in businesses. This is a clear problem especially in SME's to recognise and test the exact needs for education. It doesn't often happen that the decision includes the necessary educational measures of educational requirements of managers or the appropriate employee. This feeling of educational requirements doesn't always have to be suitable or correspond to the actual educational requirements which a business requires to be able to react successfully on the open market.

The reason lies in the previous often used systematic in educational requirement analysis. Mostly interviews, questionnaires or manager, executives and employees interviews supported by points according to the requirement. This means that without doubt it is possible to win important information through the educational requirement in a company. This should be compared to the actual existing competencies measured with the actual necessary professional requirements.

The described process and in particular the developed instruments in competence evaluation systems mentioned in step1 offer themselves for this purpose. By answering activity based professional questions the competence level will be evaluated and an actual level will be measured. This actual level is comparable with the described competence profile mentioned in point 5.2. For determining the actual profile the educational advisor and the company management should collaborate.

An example of educational requirement analysis in the area of drivers in a freight forwarding company should be made clear by using the developed tools. Due to the laws of introducing a basic qualification and further education of a driver in freight or transporting people an enormous pressure for education has developed in 2009. As transport companies are under cost pressure due to actual developments then an especially efficient use of resources concerning qualification is necessary. The further education, for example of all drivers according to a standardised content programme doesn't correspond to this aim. Not every driver has the same competencies and knowledge gaps. If it is necessary for further education then one has to be undertaken which will be actual and necessary and will help the company.

You should start with the surveying of the actual knowledge gaps with step 1 of the CEMES competence recognition process. By asking concrete questions as represented in the following graph the actual knowledge level will be identified.



The screenshot shows the CEMES Test interface. At the top left is the UK flag and the text 'CEMES Test'. At the top right is the CEMES logo with the European Union flag. Below the header is a green circular icon with a pencil and paper. To the left of the question are three buttons: 'next', 'back', and 'overview'. The question text is: 'To work on images and pictures, you can use special graphical software. Which software would you choose?'. Below the question is a list of five software options, each with a checkbox:

- Macromedia Flash
- Paint Shop Pro
- Adobe Acrobat Reader
- Microsoft Access
- Corel Draw

14 / 56

This means that the filled educational gaps or the educational requirements are not crucial for structuring the necessary courses. An additional advantage is that the identification of individual various necessary educational requirements. This means that the qualification can be individually designed for each driver and not one prescribed for every person.

5.4 Supporting Human Resource development

The developed competence evaluation system is suitable for a high level of support of internal personnel development in a company. The requirements which the controlling of business tasks and activities require, the existing professional employees' competencies but also the social and individual competencies all influence the Human Resource development courses. All these factors of influence have been taken into account in the CEMES process in the various steps.

Phase 1 serves as the identification of professional knowledge in particular knowledge of facts and industrial knowledge.

Phase 2 identifies the combining knowledge and multidisciplinary knowledge regarding the solving of business tasks.

Phase 3 with the personal assessment concludes the evaluation after phase 1 and 2 and provides information about the social competencies and individual competencies.

This depth of information which is not subjective due to the used process measured with the actual requirements of the necessary Human Resource development courses. In particularly the objective way of competence evaluation can lead to areas of conflict with social partners and to mutual formation of opinions related to the necessary courses in companies.

In this context the special strengths of the CEMES system come into effect which exists in the measuring of competencies from the independent ways of learning. This means that all formal, non-formal and informal learning methods are incorporated in the evaluation. So in particularly the Learning by Doing gained competencies through work processes are incorporated into the evaluation and receive a vocational identity. This makes it possible for a transparent judgement of the targeted situation and the deduction of individual and exact courses.

5.5 Development of junior executives and executives

The development of suitable junior executives and executives is growing in importance. The way to executive level is not easy and requires individual and exact development courses. The European Management Certificate in connection with the CEMES competence recognition process can be used together for the process of executive development. The European Management Certificate EMC describes the competencies which a successful manager should possess. This certificate delivers the aim of the OUTCOME of the executive development processes. Therefore it serves as a measuring rod for the strength and weakness analysis at the start of the process as well as the proof after the development process of the existing competencies. A typical project with the use of the EMC and the CEMES tools could be used as following. The possible main organisation of the development of a project for executives with the help of the EMC and CEMES instruments is shown in the following table.

Phase	Definition	Result
Strength-weakness-analysis	Step 1 Multiple-Choice-Test for all requested CSA (Certified Specialist Areas)	Competence profile, Tip for the strength and weakness assessment
	Step 2 Answering the open questions for all requested CSAs	
	Evaluation of the open question answers by an expert or an appointed assessor	
	Step 3 Assessment according to the guidelines of the requested CSA with immediate evaluation	Strength-weakness profile of the candidate
Evaluation	Evaluation of the analysis results and deduction of suitable qualifications, coaching and development courses	Recommendation of qualifications and development plan
Development	Development of potential executives based on recommended plans	Organising competencies
Certification	Step 1 Multiple-Choice-Test for all requested CSA (Certified Specialist Areas)	Competence profile, Tip for the strength and weakness assessment
	Step 2 Answering the open questions for all requested CSAs	
	Evaluation of the open question answers by an expert or an appointed assessor	
	Step 3 Assessment corresponds to the guidelines of the requested CSA with immediate evaluation	Confirmation of certification conformities
Evaluation	Handing over of the European Management Certificate in a festive ceremony by the project management, the Managing Director of the IHK-Education Centre and the CEMES- Head Office	EMC-Master certificate

The strength-weakness analysis based on the CEMES method consists of a three step mix of methods for a comprehensive evaluation of management competencies. The aim is the identification of budget profiles for candidates. The first two steps which consist of an online based Multiple-Choice test and online supported answers of open questions serve the preparation of information for the third step which is the personal assessment with two assessors. The mix of methods already support important information online about the levied competence level which makes it possible for the assessor to evaluate the competence level of the candidate very intensively by carrying out a short examination process. This results in a modern efficient outcome orientated evaluation process of competencies.

The criterion for the evaluation is the European Management Certificate. These specially developed European certificates for managers in SMEs confirm that the candidates have the necessary competencies for the successful leadership of a SME.

Basis for the evaluation are the competencies descriptions and the defined level which has been determined and which have to be controlled. At the same time the actual activity fields and activity requirements define which competencies have to be evaluated and confirmed. An evaluation of the CEMES certificates and the CEMES competence descriptions through interviews with 400 SME managers provided the relevancy to practice and the group aim orientation for the basis of the executed strength and weakness analysis. The result is a competence portfolio for up to 26 management competencies which contrasts the actual profile and provides concrete statements for the development requirements. The following

professional methodical competencies available then it can lead to damageable problems in the production or business process. The decisions are made mostly intuitive or based on proved competence documentation. Examples of these are certificates, documents or job references which seldom prove the existing competencies of the candidate at that existing time.

Especially in these cases but also by competence checks for a large amount of applicants it is highly recommendable to use the CEMES competence recognition. The developed three step process is suitable for establishing the actual professional and methodical competencies of the candidate in a time-saving manner. The future developed Multiple Choice questions for business areas as a first step gives a quick ranking of candidates. Taking the evaluation corridor as a basis then the answering of open questions can be attached to the second step for the most promising candidate. Open questions are suitable for testing combined knowledge and the managing of complex problem definitions. Only the best applicants in this step need to take the assessment or an educational conversation for their social competencies and behavioural patterns in step 3 will be evaluated. So it is a very efficient selection process for a large number of applicants. Especially for SME's the professional evaluation of professional competencies can be prepared by this process by an external service provider. The future organisation of the CEMES system will include this service and the preparation of suitable MC and open questions and the evaluation of the results.

6 Future prospects

The CEMES competence recognition process has been developed in two Leonardo da Vinci pilot projects. The development work was characterised by working closely with companies especially SME's in several European countries. Therefore methods and tools have been developed for competence recognition which has been consequently orientated to business requirements. This development should proceed in the future. The aim consists of preparation of a comprehensive competence recognition platform which is capable of indicating the competencies of the important areas. This means that a service can be offered that can lead to an efficient qualification in business and society. This also means that resources can be used more efficiently. Particularly the consequent OUTCOME orientation which the proof of the actual competencies focuses on also offers recognition of non-formal and informal learning performance. This fully represents the actual trend at the moment concerning lifelong learning.

IBS - Institut für berufliche Bildung und EDV-Schulung GmbH
Cottbuser Str. 4
D-01979 Lauchhammer
++49 3574 121212
ibs@bildung-ibs.de ; info@cemes.eu
www.bildung-ibs.de ; www.cemes.eu