

Kick-off-Meeting IT:BSE

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Reason for the project

The central objective of the ET-2020 Strategy is the increase of the energy efficiency and the reduction of CO₂ emissions. In order to reach the central objectives of ET-2020 when operating buildings a building must be seen as a complex technical system; it needs a systemic approach where all aspects from building to operating must be considered. A resulting field of activity is the **Building Service Engineering (BSE)** that is of growing importance in Europe although there have been just a few training and further education facilities in BSE explicitly based on the systemic approach so far.

With the project, already existing VET as well as new training and further education in the BSE- field are supposed to be oriented towards the systemic basis of BSE. Therefore **new qualification demands have to be fulfilled by the employees**. The project is **targeted at the empirical recording of these specific demands** and to describe them **competence-oriented**. By this means the **future job training and further education structures** are supposed to be coordinated in a better way with the **demands of the job market**. Furthermore, the **transfer of acquired competences** should be promoted **among the different European countries** and the cooperation between the world of work and the VET-system will be intensified.

Since BSE combines and reinforces qualifications of different existing jobs that require training on the basis of its systemic approach, **there is a need to make acquired competences transparent and easy to describe for new vocational training profiles within the BSE**. Thus the model of the **Vocational Qualification Transfer System (VQTS)** is transferred to the field of BSE. Job-related competences are **described in learning units**, suggestions for a possible distribution of credits and **credit points (ECVET)** are developed and already existing training profiles in Europe are made transparent. Each trainee in the occupational field of BSE should be enabled to do parts of his job training in a different European country and it should be possible to acknowledge all acquired skills and competences as part of his training frameworks.

In order to coordinate job training and further education and the qualification systems in the field of BSE and to make a lasting improvement on the demands of the job market, the results of the projects should be **implemented in the frameworks for VET and the curricula of the VET and further education programmes in each participating country**.

Core Partners

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Aims of the project

It is the aim of the project **to describe the future competence demands of BSE** and to **promote the transferability** of the acquired competences **between and within the individual countries**. These are the aims of the project:

1. **The transfer of the VQTS-Matrix** into the new field of activity of BSE. The matrix serves as a tool to intensify the cooperation between the world of work and the different VET-systems in this new field of occupation.
2. **Outcome-oriented description for the competences** of the vocational field of Building Service Engineering.
3. Easing the **identification and acknowledgement of competences** that were already acquired within the initial vocational training in the vocational fields mentioned above.
4. Further **development of training programmes and further education programmes** in the field of BSE in all participating countries.
5. **Comparability of already existing training opportunities**. In this way the transparency of the European training opportunities in different dimensions, e.g. **between the initial vocational training and further education as well as between European countries** can be improved and a higher flexibility/mobility on the European job market can be achieved.
6. Working out suggestions for a **possible assignment of national standards (NQF, EQF)** and for an **assignment of Credit Points**.
7. Drawing up suggestions for the **implementation** of parts of the VQTS-Matrix **in already existing national training programmes**.

The project will **help to find out current and future requirements in the new field of BSE** and to show competence requirements for future employees in a transparent and clear way. The project should **enable each trainee** of BSE **to spend parts of his job training or his further education in a different European country**. Afterwards **his acquired knowledges, skills and competences will be acknowledged as part of his job training**. Thus multinational transparency will be created that shows which competences future employees in BSE will either have or have to gain in order to practise their future profession. By drawing up competence profiles **employers for their part can formulate the requirements for future employees** in a more detailed way to **find qualified staff**. The project is supposed to promote the transition to a "green economy" by helping to react to future needs of the job market in this field (ET2020).

Work packages

Measures to transfer the project can be summarized in nine work packages where the **results were discussed at six transnational meetings** together with the partners:

Step 1: *Investigation/identification of job-related competences in the vocational field of BSE* on the basis of already existing job descriptions and with the help of empirical investigations (questionnaires). This is one of the topics **on the first project meeting (kick-off meeting) at the Adolf-Kolping-Berufskolleg.**

Step 2: *Transparent description* of the vocational field of BSE with the help of the investigation results (**transfer of VQTS-Matrix**). This step will be worked out from all partners after the first meeting and the results will be agreed on a **second meeting at I.E.S. Campanillas/Malaga.**

Step 3: *Creation of the national competence profiles and description of standardized assessment procedure to acknowledge and validate* those units of the competence matrix which will be tested in mobilities.

Description of the national competence profiles with the help of the matrix and development of suggestions to categorize them in the EQF/the ECVET System. This step will be prepared and the results will be agreed on at the **third project meeting in K.S.A.O. in Finland.**

Step 4: *Preparation and implementation of the mobilities* to proof the understandability of the VQTS-Matrix. This step will be agreed on **the fourth project meeting in Sofia or Gabrovo/Bulgaria.**

Step 5: Carrying out of mobilities to check the competence matrix (selected units).

Step 6: *Evaluation of the mobilities and assessments* and preparation of specific suggestions/**possibilities to integrate the competence matrix into already existing national/regional training opportunities** and systems. The results of this step will be realized and agreed on at the **fifth project meeting at the Robert Schuman Institute in Belgium.** At first the **mobilities** that were already carried out **will be evaluated** and the suitability of methods to identify competences will be discussed.

Step 7: *Use of the project results* at the partner institutions and **dissemination and exploitation of the results.** At the **last project meeting in Langreo, Spain,** the dissemination strategies will be fixed and agreements on using the results after the ending of the project will be discussed and fixed.

Throughout the whole project the results will be evaluated. All partners are obliged to follow certain quality management measures.

Information about ECVET-System

Before implementing a mobility action, the partner institutions are faced with the challenge of **agreeing on a common language and common terminology** regarding the **contents and objectives of a project**. The **basis for this agreement can be** both, the **EQF system** and the use of **ECVET instruments** for describing **learning outcomes** as well as for **assessing, documenting and validating** units of learning outcomes.

ECVET technical components are:

- a) Units of learning outcomes
- b) Credit points (size of qualifications and relative weight of units)
- c) Assessment of learning outcomes
- d) Validation of learning outcomes
- e) Recognition of learning outcomes
- f) Memorandum of Understanding (partnership)
- g) Learning agreement
- h) Learners' transcript of record (individual achievement)

a) Units of learning outcomes

Learning outcomes are statements of what a learner knows, understands and is able to do on completion of a learning process. Learning outcomes are defined in terms of *knowledge, skills and competence*.

- **Knowledge** means the body of facts, principles, theories and practices that is related to a field of work or study. It is described as theoretical and/or factual knowledge;
- **Skills** means the ability to apply knowledge and use know-how to complete tasks and solve problems. They are described as cognitive (logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);
- **Competence** means the proven ability to use knowledge, skills and personal, social and methodological abilities in work or study situations and in professional and personal development. It is described in terms of responsibility and autonomy.

A unit of learning outcomes (also called "unit" or "module") **is a** component of a qualification consisting of a **coherent set of knowledge, skills and competence** that **can be assessed and validated**.

b) Credit points

ECVET points are **a numerical representation** of the overall **weight of learning outcomes** in a qualification and of the **relative weight of units in relation to the qualification**. Together with units, descriptions of learning outcomes, information about the level of qualifications, ECVET **points can support the understanding of a qualification**. The number of ECVET points allocated to a qualification, together with other specifications, can indicate for example, that the scope of the qualification is narrow or broad.

The number of ECVET points allocated to a unit provides the learner with information concerning the relative weight of what s/he has accumulated already. It also provides the learner with information concerning what remains to be achieved.

c, d, e) Assessments, validation and recognition

The agreements of the partners in a mobility action are decisive for the **assessment, validation and recognition** of learning outcomes against the background of the valid national regulations and practices in the participating states. **For this purpose, the partners must agree on criteria for quality assurance in good time.**

Assessment of learning outcomes means methods and processes used to establish the extent to which a learner has in fact attained particular knowledge, skills and competence;

Validation of learning outcomes means the process of confirming that certain assessed learning outcomes achieved by a learner correspond to specific outcomes which may be required for a unit or a qualification;

Recognition of learning outcomes means the process of attesting officially achieved learning outcomes through the awarding of units or qualifications.

The partners are responsible for selecting the procedure for determining and assessing competences. In order to validate and recognize learning outcomes which have been achieved in a different learning context, it is necessary to determine that the learner has actually acquired the competences which have been taught and which are intended. **The selection of the method(s) of assessment should be appropriate to the competences** to be determined. In the course of the **assessment procedure**, it is not only possible to assess learning outcomes that are **defined in a formal unit** of learning outcomes in accordance with the national qualifications system, **but also cross-occupational competences** which have been acquired during the stay abroad.

f) Memorandum of Understanding

A MoU contains statements through which the parties concerned:

- **accept each other's status** as competent institutions,
- **accept each other's quality assurance, assessment, validation and recognition criteria** and procedures as satisfactory for the purposes of credit transfer, This agreement is based on transparency of information concerning the above processes.
- **agree the conditions for the operation of the partnership**, such as objectives, duration and arrangements for review of the MoU,
- **agree on the comparability of qualifications** concerned for the purposes of credit transfer, using the reference levels established by EQF,
- **identify other actors and competent institutions** that may be involved in the process concerned and their functions.

MoUs define the roles of other competent institutions with regard to functions such as signature of learning agreements, assessment, issuing of learners' personal transcript, etc.

g) Learning agreement

A Learning agreement is an **individualised document which sets out the conditions for a specific mobility period**. It specifies, for a particular learner, which learning outcomes and units should be achieved together with the associated ECVET points.

The Learning agreement also lays down that, if the learner achieves the expected learning outcomes and these are positively **assessed by the "hosting" institution**.

The "home" institution will validate and recognise them as part of the requirements for a qualification. Therefore the Learning agreement constitutes a commitment to the learner that his/her achievement, if in line with the expectations, will be recognised.

The Learning agreement is always signed by these parties:

- **The home institution** (the institution which will validate and recognise learning outcomes achieved by the learner)
- **The hosting institution** (that delivers training for the learning outcomes concerned and assesses the achieved learning outcomes)
- **The learner**.

The Learning agreement contains **information concerning**:

- The **identity of the learner**
- **Duration of the mobility period**
- Learning outcomes to be achieved by the learner and the associated **ECVET points**
- Additional information, for example in relation to assessment, learning activities may be provided.

i.) Learners' transcript of record (individual achievement)

- The Personal transcript is **a record of learning achievements**. It contains **information on learners' assessed learning outcomes**, units and ECVET points awarded. It also specifies the identity of the learner and the competent institution(s) that assessed, validated and recognised learners' credit.
- The personal transcript is a **document that belongs to the learner**.
- While the Learning agreement describes what the learner is expected to achieve, the personal transcript documents what s/he has achieved.

Annex 1:

Timeline

Annex 2:

Competence Matrix Mecatronics

Annex 3:

Competence Matrix Trift

