FSW-Tech

Friction Stir Welding European Qualifications

Intellectual Output 6 – Operational ECVET KIT

Comparative analysis between the National Qualification Frameworks (NQF) and the European Qualification Framework (EQF) and the allocation of ECVET points

Report

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1. Introduction

FSW-TECH: Harmonized Friction Stir Welding Technology Training across Europe, is an ERASMUS+ project, implemented between December 2017 and November 2019. The project consortium is composed by five partners from five countries, all partners with technical expertise to achieve the project objectives and a wide experience of participation and management of national and/or European projects:

PARTNER	COUNTRY	ORGANISATION	
D1	SK	VUZ	Vyskumny Ustav Zvaracsky – Priemyselny Institut
D2	SL	IZV	Institut Za Varilstvo
D3	PT	ISQ	Instituto de Soldadura e Qualidade
D4	RO	ASR	Asociata de Sudura din Romania
D5	BL	EWF	European Federation for Welding, Joining and Cutting

The overall aim of the FSW-TECH is the creation of 3 new professional profiles (European Friction Stir Welding Operator, Specialist and Engineer), which include the development of Guidelines, training manuals and methodologies, in order to boost high quality and efficient work-based learning in VET. The project address to strengthening key competences in VET curricula, namely in Friction and Stir Welding technologies, which is a market need identify by companies in the manufacturing and engineering sectors.

In the scope of the FSW-TECH project, this report – which is part of the Operational ECVET kit - will support stakeholder's/VET providers in becoming aware of the state of the art of National Qualification Frameworks (NQF) implementation, the correspondence between NQF and European Qualification Framework (EQF) levels and the allocation of ECVET points in their national system.

2. EQF & NQF – State of the art in each partner country

The Recommendation of the European Parliament and the Council on the establishment of the EQF (23 April 2008) explicitly stated out that the Member States shall use "(…) an approach based on learning outcomes to define and describe qualifications" and to promote the validation of informal and non-formal learning. The new recommendation from the European Parliament and the Council on EQF for lifelong learning (17 May 2017), reinforces that objective encouraging "the use of EQF by social partners, public employment services, education providers, quality assurance bodies and public authorities to support the comparison of qualifications and transparency of the learning outcomes.".

The European Qualifications Framework (EQF), implemented in 2008, is a common European reference system which is linking different countries National Qualifications Systems (NQF) and frameworks together. In practice, it works as a translation mechanism making qualifications more readable. As an instrument for the promotion of lifelong learning, the EQF encompasses general and adult education vocational education and training as well as higher education. It is structured in 8 qualifications where each level is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any system of qualifications.

The 8 levels of qualification cover the entire span of qualifications from those achieved at the end of compulsory education to those awarded at the highest level of academic and professional or vocational education and training and are described in terms of level descriptors for the expected knowledge, skills and competences (responsibility and autonomy) for each level of qualification. **The learning outcomes descriptors, for all level of qualification, are defined in terms of knowledge, skills, responsibility and autonomy**, relevant to qualifications at that level in any system of qualifications are understood as showed in the following table:

Each partner conducted a comparative analysis between its country National Qualifications Framework and the European Qualifications Framework. This analysis was made based mainly on several CEDEFOP publications that reflect the latest updates on the "National qualifications framework developments in Europe" report, published in 2017. It was also part of this study stage to check the ECVET implementation and allocation of ECVET points in each partner country.

According to the "National qualifications framework developments in Europe 2017" report, *a total of 35 countries are working towards comprehensive frameworks, including all levels and*

types of qualifications from formal education and training and increasingly opening up to qualifications awarded in non-formal contexts. **Portugal**, **Belgium** and **Slovenia** are among the 21 NQFs that CEDEFOP considers to have reach a more mature operational status.[1]

In the previously mentioned report, it is also stated that *all countries have introduced learning-outcomes-based level descriptors, reflecting EQF level descriptors. Countries have, however, further developed national level descriptors (in particular the third column) to reflect national contexts, values, traditions and objectives*[2]. Within the context of the FSW-TECH project, the definition of the learning outcomes will be developed according to the EQF descriptors (**Table 1**), having in mind that the national specificities shall also be taken into consideration.

[1] Cedefop (2018). National qualifications framework developments in Europe 2017. Luxembourg: Publications Office, p. 12. http://data.europa.eu/doi/10.2801/029873 (last access 03-11-2018).
[2] Cedefop (2018). National qualifications framework developments in Europe 2017. Luxembourg: Publications Office, p. 14. http://data.europa.eu/doi/10.2801/029873 (last access 03-11-2018).

Table 1: EQF level descriptors

Knowledge	Skills	Responsibility and autonomy
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 the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility

Source: https://ec.europa.eu/ploteus/content/descriptors-page

On a more detailed level, we present next the information gathered by each partner regarding the state of the art in their countries.

2.1. Slovakia

Works on the Slovak qualifications framework (SKKR) has been under way for some time, based on a 2009 government decision on EQF implementation. The 2009 Act on Lifelong Learning, amended in 2012 (Law 315/2012), stipulated the legal background for the development of a national qualification system and framework; the tasks related to these developments became part of the national reform programme. In 2013, strategies for revision of the initial NQF proposal, deemed to be too much shaped around formal education, were put forward, along with wider involvement of social partners. The system is intended to provide a comprehensive view of all qualifications, pave the way for recognition of non-formal and in-formal learning, ease communication between the education sector and the labour market, improve quality of provision at all levels, and promote student and workforce mobility. It consists of two pillars, the SKKR and the national qualifications register (NQR): their development was closely related. The description of qualifications in terms of qualification standards forms the content of the NQR; their levelling is the content of SKKR.

The first phase of SKKR development was finalised in 2015, with the revision of the SKKR grid and approval of the methodology for linking qualifications to SKKR levels. The framework includes all qualifications: it consists of four sub frameworks for general education, VET, higher education, and occupational qualifications (awarded outside the formal system, as a result of courses and work experience). It is an eight-level, learning-outcomes-based framework, with level descriptors defined in terms of knowledge (general and professional), skills (cognitive and practical) and competence (responsibility, autonomy and social competences). The architecture of the SKKR consists of the framework grid and a catalogue of qualification cards describing full and partial qualifications. Qualifications were assigned to SKKR levels following analysis of the learning outcomes set in the qualification standards, and their comparison with the national descriptors. Implementation and further development of the framework are work in progress.

The overarching SKKR was referenced to the EQF in October 2017 and the referencing report was approved by the Slovak government in November 2017. The report on the fulfilment of self-certification criteria against QF-EHEA will be presented at a later stage[3] The next table presents the level descriptors elements in Slovakia.

[3] Cedefop. National qualifications framework developments in Europe 2017 http://www.cedefop.europa.eu/files/4163_en.pdf

*Table 2: The three main FQF level descriptor elements **Slovakia** are[4]:*

Level descriptors elements			
Levels	**Knowledge**	**Skills**	**Competence**
Level 1	Must have basic general factual and theoretical knowledge at the level of remembering and understanding required for the work in familiar conditions.	Must be able to apply basic knowledge in an activity taking place in familiar situations under unchanged conditions. Must be able to carry out simple activities under supervision of a superior, with limited responsibility in a controlled process.	Must be able to communicate in the mother tongue, fluently and aptly, both in writing and orally, and transfer the information within the working group. Must be able to take part in simple responsible activities, be aware of one's own share of responsibility.
Level 2	Must have basic factual and theoretical knowledge at the level of remembering and understanding required for the work in familiar conditions, including small modifications, with guidance of a superior. Must be able to apply knowledge of simple facts and ideas	Must be able to identify the activities and sequence of particular steps in a work activity. Must be able to carry out, in a high quality, simple routine operations under familiar conditions. Must be able to use simple methods, tools, materials in familiar conditions.	Must be able to think logically in simple concrete tasks required of him or her in simple situations. Must be able to identify a problem in routine situations, formulate basic information on the problem and its solution for others, and be aware of his/her own position within a team.
Level 3	Must be able to apply basic factual knowledge, principles and processes, general concepts in an occupational area or field of study.	Must be able to orientate oneself in routine technical and non-technical documentation, norms and standards used within a field of study.	Must be able to complete tasks and adapt one's own behaviour within the guidelines of common work contexts.

Level descriptors elements			
Levels	**Knowledge**	**Skills**	**Competence**
	Must be able to apply basic theoretical knowledge in performing simple tasks within an occupational area or field of study.	Must be able to apply simple, concrete, creative and logical thinking required to select and use appropriate information, work procedures, methods, tools, raw materials, materials, machinery, etc. in accordance with routine conditions and performance standards of partial or complex tasks.	Must be able to take and assume responsibility for the accomplishment of independent tasks within an occupation or field of study. Must be able to manage a smaller group of people, with some degree of autonomy in common contexts.
Level 4	Must be able to analyse factual knowledge, principles and processes, general concepts in broadly defined contexts within an occupational area or field of study. Must be able to analyse theoretical knowledge in performing more complex tasks in broadly defined contexts within an occupational area or field of study.	Must be able to orientate oneself in specific technical and non-technical documentation, norms and standards used within a field of study. Must be able to apply basic abstract logical thinking required to select and use appropriate information, work procedures, methods, tools, raw materials, materials, machinery, etc. in accordance with varying conditions and specific performance standards of complex tasks.	Must be able to complete and take some responsibility for complex tasks and adapt one's own behaviour within the guidelines of work or study contexts that are predictable, or subject to change. Must be able of self-management and supervision of a group of people, with some degree of autonomy, in contexts that are usually predictable, but may be subject to change.
Level 5	Must be able to analyse and synthesise extensive and specialised, factual knowledge, principles and processes, general concepts in broadly defined contexts within an occupational area or field of study and	Must be able to orientate oneself in a broad range of technical and non-technical documentation, norms and standards used within a field of study. Must be able to apply abstract logical thinking required to generate and develop creative	Must be able to complete and manage complex tasks, including supervision in contexts of work or study activities where there is unpredictable change. Must be able to take and assume full responsibility for the management, limited responsibility for the evaluation and development of activities, evaluate and

Level descriptors elements			
Levels	**Knowledge**	**Skills**	**Competence**
	must have an awareness of boundaries of that knowledge. Must be able to analyse and synthesize theoretical knowledge in performing complex tasks in broadly defined contexts within an occupational area or field of study and must have an awareness of boundaries of that knowledge.	solutions of specific information, abstract work procedures and problems under unpredictable conditions. Must be able to perform complex specific activities and, progressively, use methods, tools, equipment and materials in partially unpredictable conditions and propose simple methods and procedures.	develop one's own performance and that of others in unpredictable work or study contexts.
Level 6	Must have crosscutting knowledge of a field of study, with an emphasis on applications, at a level corresponding to the current state of knowledge. Must have broad knowledge and understanding of a specialised area, including the knowledge of practical connections and relations to related fields.	Must be able to actively acquire information and use it to solve practical problems in a field of study. Must be able to solve practical problems in a field using current research and development procedures, exercising critical judgement of their expediency and adequacy.	Must be able to solve professional tasks and coordinate partial activities and take responsibility for the performance of the team. Must be able to identify and evaluate ethical, social, and other implications of investigated problems. Must be able to acquire new knowledge independently and actively extend one's own knowledge.
Level 7	Must have deep and crosscutting knowledge of a specialised area including knowledge of connections and relations to related fields.	Must be able to actively acquire new knowledge and information, integrate and use it in applications for the development of a field.	Must be able to solve problems, coordinate the courses of actions in teams, and take decisions, autonomously and responsibly, in a changing environment.

Level descriptors elements			
Levels	**Knowledge**	**Skills**	**Competence**
	Must have knowledge and understating of theories, methods and procedures used in a field, with potential applications in science and research.	Must be able to creatively solve theoretical and practical problems in a field, using the theory, and research and development procedures. Must be able to contribute to the development of a field of study by acquiring new knowledge in solving relevant tasks.	Must be ready to take responsibility for one's own activity and decisions, with account taken of broader social implications. Must be able to formulate information on the progress and outcomes of the solution of tasks, discuss professional views with experts.
Level 8	Must have a systematic, self-contained and comprehensive body of knowledge of a specialised area, including the knowledge and understanding of relations to other parts of a field and to related fields. Must have deep understanding of theories, sophisticated methods and procedures of science and research meeting the highest international criteria.	Must be able to actively acquire new knowledge and information, critically analyse and re-evaluate it and use it, both, in theory and in practical applications for the development of a field of study. Must be able to apply and creatively refine and develop theories and research, development and innovation procedures in a field of study and develop new ones. Must be able to identify the world scientific and innovation developments in a field of study and in related fields and use it in steering and developing a field, while integrating knowledge from different fields.	Must be able to plan for and initiate solutions of complex problems/projects, including formulating of objectives, tools, and methods in the area of the development of a field. Must be able to assess and modify own professional activity in a broader context, in relation to long-term impact on the field and from the aspect of social, ethical, environmental and other criteria. Must be able to formulate information on outcomes and conclusions of the scientific, research and development work at an international level, and manage comprehensive research tasks and teams.

Table 3: Levels for professional and educational qualifications in the Slovak national qualifications framework (SKKR) related to EQF.

LEVEL DESCRIPTORS ELEMENTS		
SKKR levels	**Qualification types**	**EQF levels**
8	Diploma (Vysokoškolský diplom) + Certificate of State exam (Vysvedčenie o štátnej skúške) + Diploma supplement (Dodatok k diplomu)	**8**
7	Diploma (Vysokoškolský diplom) + Certificate of State exam (Vysvedčenie o štátnej skúške) + Diploma supplement (Dodatok k diplomu) Certificate of qualification (Osvedčenie o kvalifikácii)	**7**
6	Diploma (Vysokoškolský diplom) + Certificate of State exam (Vysvedčenie o štátnej skúške) + Diploma supplement (Dodatok k diplomu) Certificate of qualification (Osvedčenie o kvalifikácii)	**6**
5	Maturita certificate (Vysvedčenie o maturitnej skúške) + Certificate of apprenticeship (Výučný list) Maturitacertificate (Vysvedčenie o maturitnej skúške) Certificate of final post-secondary exam (Vysvečenie o absolventskej skúške) + Absolutorium diploma (Absolventský diplom) Certificate of qualification (Osvedčenie o kvalifikácii)	**5**
4	Maturita certificate (Vysvedčenie o maturitnej skúške) + Certificate of apprenticeship (Výučný list) Maturita certificate (Vysvedčenie o maturitnej skúške) Certificate of qualification (Osvedčenie o kvalifikácii)	**4**
3	Certificate of final exam (Vysvedčenie o záverečnej skúške) + Certificate of apprenticeship (Výučný list) Certificate of qualification (Osvedčenie o kvalifikácii)	**3**
2	Lower secondary education certificate with supplement (Vysvedčenie s doložkou) Certificate of final exam (Vysvedčenie o záverečnej skúške) + Certificate of apprenticeship (Výučný list) Certificate of qualification (Osvedčenie o kvalifikácii)	**2**
1	Primary education certificate with supplement (Vysvedčenie s doložkou)	**1**

2.2. Slovenia

In 2006 the Republic of Slovenia adopted a decree on the introduction and use of classification systems of education and training (KLASIUS). KLASIUS was set up in order to replace obsolete qualifications and to coordinate official records containing the data on levels, types and areas of education for the purposes of the recording, analysis and identification of statistical and analytical data, and not to serve the needs of the Slovenian Qualifications Framework.

A national debate on the European Qualifications Framework (EQF) was conducted in 2005. Its chief aim was to obtain the information on the European Qualifications Framework and to inquire about the state of play of the Slovenian Qualifications Framework. A host of other conferences addressing the Slovenian and European Qualifications Framework have been organised since 2006. On these bases a consensus emerged between relevant ministries (the Ministry of Education and Sport, the Ministry of Higher Education, Science and Technology as well as the Ministry of Labour, Family and Social Affairs) and social partners about the need to set up the Slovenian Qualifications Framework. Thus, the Slovenian Qualifications Framework would mean an instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved.

The Slovenian Qualifications Framework is a unified system of qualifications in the Republic of Slovenia for the classification of qualifications into levels with regard to learning outcomes.

The purpose of the SQF is to achieve transparency and recognisability of qualifications in Slovenia and the EU. Its essential objectives are: to support lifelong learning; to integrate and harmonise Slovenia's qualifications subsystems; and to improve the transparency, accessibility and quality of qualifications with regard to the labour market and civil society.

The components of the Slovenian Qualifications Framework are:

- Level descriptors: covering 10 levels and three categories (knowledge, skills, competences);
- Qualifications framework: tabular presentation of categories and types of qualifications at 10 qualification levels;
- Methodology of the description and referencing of qualifications;
- SQF Register.

The fundamental role of Slovenia's qualifications framework and other national qualifications frameworks is to clarify the horizontal and vertical relations between different types of qualifications, certificates and diplomas/degrees. They consist of level descriptors, where each level descriptor is explained in terms of learning outcomes. Learning outcomes are thus the central plank, term, concept and measure of national qualifications frameworks, on which the effectiveness and transparency of national frameworks and the implementation of the European Qualifications Framework in EU countries depend. Learning outcomes are designed to facilitate, via national qualifications frameworks: the comparability and transparency of qualifications systems, lifelong learning, the recognition of non-formal and informal learning, quality assurance and better connections between education and the labour market.

In order to show the clear and demonstrable connection between the old Slovenian Qualifications Framework (SQF) and the European Qualifications Framework (EQF), Slovenian authorities had carried out a three-stage methodological analysis as follows:

- Structural comparison of the two frameworks, - Conceptual comparison of the two frameworks, - Comparison of SQF descriptors and EQF descriptors. On the basis of the results of this analysis, we have arrived at the following conclusion with regard to referencing SQF levels to the EQF table.

From 2010 on was developed proposal of the new Slovenian Qualifications Framework (SQF) and referenced SQF levels to the EQF (2013, 2014). From 2015 the all the 8 levels In SQF and EQF are the same with exception of descriptors which are in Slovenia more detailed.

Table 4: Comparison between the Slovenian Qualification Framework (SQF) and the European Qualification Framework (EQF)

SQF	EQF
1	1
2	2
3	3
4	4
5	
6	5
7	6
8	7
9	8
10	

In addition to the conceptual comparison of the two frameworks, we can present below a more detailed comparison of the contents of SQF descriptors and EQF descriptors, where we compare the similarities and differences of the Slovenian and European qualifications frameworks at individual levels of knowledge, skills and competences. Correspondences between EQF descriptors and SQF descriptors are shown in red (knowledge), purple (skills) and green (competence(s)). Differences between knowledge, skills and competences in the two sets of descriptors are shown in blue. A comparison of the two frameworks for level 1 are given below.

Comparison of EQF level 1 with SQF level 1 EQF Levels SQF Levels EQF descriptors SQF descriptors Knowledge Skills Competence Knowledge Skills Competences 1 level 1 level Basic general knowledge Basic skills required to carry out simple tasks Work or study under direct supervision in a structured context Elementary general knowledge enabling further systematic learning Basic literacy and the ability to learn information and concepts. Practical skills required to carry out simple, repetitive tasks or a short sequence of simple tasks Ability to operate in a specifically defined and highly structured setting.

Knowledge: The generic description is almost identical, although the SQF descriptor emphasises further systematic learning.

Skills: In the EQF these relate exclusively to carrying out simple tasks, while in the SQF this starting definition is polarised into 'basic literacy and the ability to learn information and concepts' and 'practical skills required to carry out simple, repetitive tasks'.

Competences: The essential differences between the two frameworks are that the EQF specifies study in a structured context alongside work, whereas the SQF combines the two concepts in the term 'operating'; and where the EQF refers to 'direct supervision', the SQF talks about a 'highly structured setting'.

Table 5: Comparison of EQF level 1 with SQF level 1

EQF Levels	SQF Levels	EQF DESCRIPTORS			SQF DESCRIPTORS		
		Knowledge	Skills	Competence	Knowledge	Skills	Competence
Level 1	Level 1	Basic general knowledge	Basic skills required to carry out simple task	Work or study under direct supervision in a structured context	Elementar general knowledge establish further systematic learning	Basic literacy and the ability to learn information and concepts. Practical skills required to carry out simple repetitive task or short sequence of simple tasks.	Ability to operate in a specifically defined and highly structured setting.

We conclude that SQF level 1 corresponds to EQF level 1. The same can be presented for each level.

Slovenia has kept old system for some third cycle professional educations (EQF level 2), from 2010 combined with State conducted professional certification system for some newer or rare professions. For all education levels above 4 EU credit system is used.

2.3. Portugal

The comprehensive Portuguese qualifications framework (Quadro Nacional de Qualificações) (QNQ) is a single reference for classifying all qualifications awarded in the Portuguese education and training system. Established by Decree-Law No 396/2007 (3), the framework was published in 2009 (4) and came into force in October 2010. It includes eight levels, with level descriptors defined in terms of learning outcomes.

Table 6: Comparison between the Portuguese qualification framework and the European Qualification Framework (EQF)

LEVEL DESCRIPTORS ELEMENTS		
QNQ	**Qualification types**	**EQF levels**
8	Doctoral degree (*Doutoramento*)	**8**
7	Master degree (*Mestrado*)	**7**
6	Bachelor degree (*Licenciatura*)	**6**
5	- Diploma in technological specialisation (*Diploma de Especialização Tecnológica*)	**5**
4	- Secondary education and professional certification (Ensino secundário obtido por percursos de dupla certificação) - Secondary education and professional internship; minimum six months (*Ensino secundário vocacionado para prosseguimento de estudos de nível superior acrescido de estágio profissional — mínimo de seis meses*)	**4**
3	- Secondary education (*Ensino secundário vocacionado para prosseguimento de estudos de nível superior*)	**3**
2	- Third cycle of basic education (*3º ciclo do ensino básico obtido no ensino regular*) - Third cycle of basic education and professional certification (*3º ciclo do ensino básico obtido por percursos de dupla certificação*)	**2**
1	Second cycle of basic education (*2º ciclo do ensino básico*)	**1**

The learning outcomes approach play an important role in reforming the Portuguese education and training system and was an underlying principle in the development of the national qualifications catalogue. Following we present in table 6 the level descriptors of the Portuguese national qualification framework. It important to highlight that, in spite of the importance of the learning outcomes at this level, the learning outcomes approach has not been adopted but the different education and training subsystems. There is still need for a national debate to support the understanding and appropriation of the concept.

Table 6: Level descriptors in the Portuguese national qualification framework

Level descriptors elements[5]		
Knowledge	**Skills**	**Attitude[6]**
*"The **collection of facts, principles, theories** and practices related to the field of studies or professional activity" (Ordinance no. 782/2009, of 23 July)."*	*"The ability to apply knowledge and use the acquired resources to complete tasks and solve problems. It may be **cognitive (use of logical, intuitive and creative thinking) or practical (implying manual skill and the use of methods, materials, tools and instruments)**" (Ordinance no. 782/2009, of 23 July)."*	*"The **ability to develop tasks and solve problems of a higher or lower degree of complexity** and different degrees of autonomy and responsibility" (Ordinance no. 782/2009, of 23 July)."*

[5] ANQEP, *Methodological guidebook – concept of qualifications based on learning outcomes*. ANQEP, 2015, p.56.

[6] *As the term 'competence' was already used as an overarching concept within the national qualifications system (defined as 'recognised capacity to mobilise knowledge, skills and attitudes in contexts of work, professional development, education and personal development'), the choice was made to use 'attitude' for the third category of descriptors in the NQF*. CEDEFOP, *Analysis and overview of national qualifications framework developments in European countries*. Annual report 2016, 2017.

2.4. Romania

Generally, the European Union countries tried to accomplish a correlation between their own National Qualification Systems – starting with the discovering of particularities and similarities of their National educational and professional training systems compared to the EQF. Romania decided on drawing up a National Qualifications Framework (NQF), correlated with EQF (European Qualifications Framework) based on the following ideas:

- Compliance with the terminology of the EQF;
- Romania's participation in all relevant European events.
- Drawing a coherent and harmonized methodological framework (for elaboration, validation and certification of qualifications).
- Clearly defining responsibilities and ensuring full cooperation from all social partners.

Chronological steps towards the Romanian National Qualification Framework (NQF)

8 June 2004 – Signing the Memorandum between the Ministry of Education and the Ministry of Labor, approved by the Prime Minister of the Romanian Government.

7 December 2004 – Transformation of the National Adult Training Board (NATB), autonomous and tripartite organization, into National Authority for Qualifications (by law).

23 February 2005 – Signing the Tripartite Agreement for NQF between the Romanian Government and the National representative confederations of trade unions and employers associations.

December *2005* – The end of the consultation process for the European Qualification Framework (EQF).

December 2006 – July 2009 –Establishment of the Romanian National Qualifications' Authority.

September 2010 – today: Creating the National Qualifications' Authority by reunion of NATB and Agency for Qualifications in Higher Education.

In Romania, the National Authority for Qualifications (NAQ) created and develops a National Framework of Qualifications. New qualifications are being developed or revised in accordance with EQF descriptors. Within the Romanian VET, sectoral committees were established by the NAQ. These committees have the responsibility to design the sectors strategy for labour force development and validation of professional qualifications for EQF levels. This applies also to the **Technical Vocational Education and Training (TVET).**

There are three major profiles relate to the envisaged trades and specializations, as follows:

- Techniques; comprising the fields of *mechanics, electromechanical and electrical, electronics and, automation, constructions and civil works, telecommunications, light industry, transports, industrial chemistry, wood processing.*

- *Services, comprising the fields of tourism and catering, food and beverage, commerce and related services, post, economics and public administration, health and social assistance, and other services deserving industry and population.*

- *Resources, comprising the fields of food industry, forestry, agriculture, agro-tourism, animal breeding and veterinary, environment protection.*

TVET in Romania was developed at secondary education level in two alternatives, as follows:

- The *technological high school, includes:*
  - *the lower cycle, (level 3 EQF)*
  - *the upper cycle, (level 3 - 4 EQF)*
- The Post-high schools (a *specialised route* of 1-3 years leading to certificated competences for advanced vocational qualifications (level 5 EQF).

The first step for a new qualification is an occupational analysis in order to identify the occupational area. The second step is the development of an occupational standard (OS), a document describing the competence units related to one occupation. This OS is also used for the validation of prior learning and for qualification within formal continuous VET and apprenticeship. The third step is defining the **training standard** (**TS**): a document which describes the learning outcomes related to a qualification linked with one or more occupations. It is specifically developed for initial VET, but it is also used within formal continuous VET.

As for the domain of qualifications, we outline the following general ideas:

- Qualifications are described in terms of learning results.
- The qualification is described by means of competences, and the competence is made up of a coherent set of learning results. Key competences are based on eight domains of key competences.
- The qualification is requested in order to ensure the employment degree in the long run, as well as career progress.

Romania maintained a five-level system, and it is in the process of restructuring it to encompass all eight levels of educational achievement.

The previous five Romanian levels of qualifications:

Level 1 – application in professional activities from different domains, activity characterised by routine and predictable work tasks; Education: compulsory education and professional training.

Level 2 – application of knowledge in a certain professional activity, non-routine work tasks, that suppose responsibility and teamwork; Education: compulsory education and professional qualification.

Level 3 – application of knowledge in an extensive area of the professional activity, diverse and complex work tasks that exclude routine. Work tasks suppose decision taking, responsibility and, sometimes, teamwork with co-ordination attributions; Education: technological or vocational high school; post high school education.

Level 4 – application of knowledge in an extensive area of the professional activity, diverse and complex work tasks, characterised by a significant degree of personal responsibilities, of co-ordination of the activity and allocation of the resources needed in order to efficiently carry out the respective professional activities; Education: post-secondary technical training in HE.

Level 5 – use of knowledge in especially diverse contexts of the professional activity, complex and unpredictable. Independent decision taking, high personal responsibility, tasks related to co-ordination of the staff activity, allocation of the resources, analysis, diagnosis, foreseeing, planning, execution and control activities. Education: university and post university level.

Table 7: Education and training system in Romania

GRADE	EDUCATON LEVEL	NQF LEVEL
	Long duration HE	5
	Short duration HE	4
	Post High School Education	3+
13	Technical High School	3
12-12	General/Vocational/Technical High School	2
9-10	General High School	1
5-8	Gymnasium	
1-4	Primary	
	Preschool	

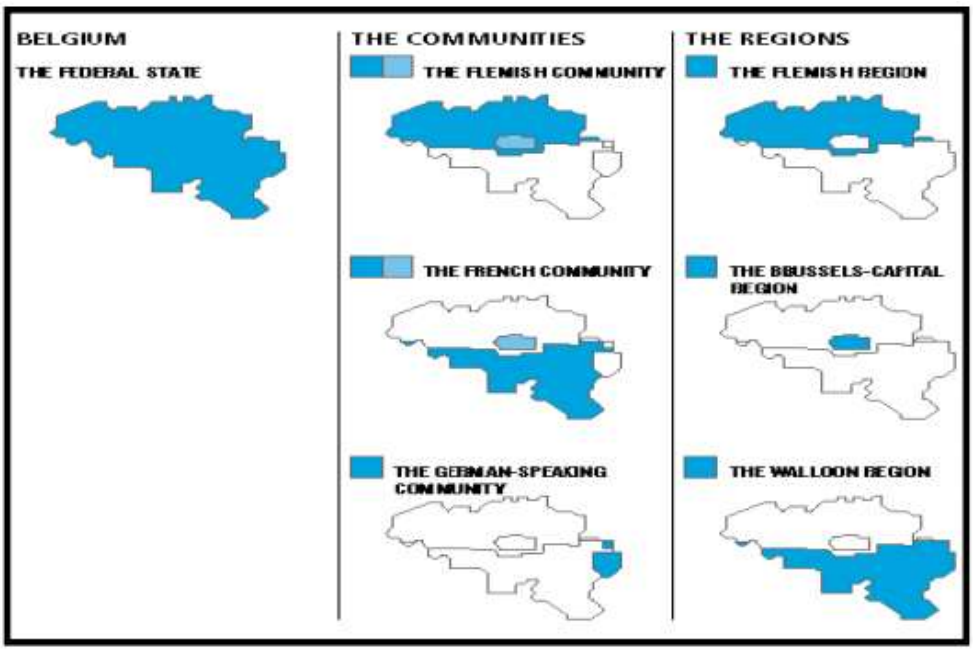
The **level descriptors** are described in terms of learning outcomes and defined in three categories:

- **Knowledge** (theoretical and/or factual).
- **Skills** split into cognitive skills (use of logical, intuitive and creative thinking) and practical skills (manual dexterity and use of methods, materials, tools and instruments).
- **Competence** (scope of responsibility and autonomy).

2.5. Belgium

Belgium is a federal union with 3 regions and communities, each with their own parliament and government. These are: the Flemish community, the French community and the German-speaking community, and each possess the responsibilities regarding education and training, given by the constitutional revision dd. 15 July 1988.

Figure 1: Belgium Communities[7]



Currently, Belgium has a fully operational national qualification framework, including three different frameworks, one for each of the Communities.[8] NQF is seen in Belgium as a reform tool to restructure, strengthen and/or regulate its national qualification systems. Therefore, exists the intention to include NQF levels in the diplomas and certificates. However, the Belgium NQF is partially linked to the EQF, having the Flemish region linked to EQF since 2011, the French region since 2013 and, as the German Speaking community is in an early stage of development with regards to the mentioned reference, it still doesn't *have a link* to the EQF [1].

The report regarding the *Referencing of the Flemish Qualifications Framework to the European Qualifications Framework* [2] contains a detailed explanation on the process of training and education that aligns the **Flemish Qualification Framework** and the European Qualification Framework.

This qualification system is divided in eight levels, in a crescent manner and each described with level descriptors, which generally describes the competences' characteristics for the qualifications at that level, divided in knowledge, skills, context, autonomy and responsibility. On Table 8, the level descriptor elements are described.

[7] Courtesy of: <http://www.ehea.info/media.ehea.info/file/Qualifications_frameworks/78/8/NQF_Flemish_National_Qualifications_Framework_596788.pdf>

[8] Analysis and overview of national qualifications frameworks developments in European countries, annual report, 2014. http://www.cedefop.europa.eu/en/publications-and-resources/publications/6127

2.5.1. Flemish Community

Table 8 presents the level descriptors elements for the Belgium, Flemish Community.

Table 8: The three main FQF level descriptor elements in Belgium, Flemish Community are:

LEVEL DESCRIPTORS ELEMENTS		
Levels	**Knowledge/Skills**	**Context/Autonomy/Responsibility**
Level 1	– Recognising materials, concise, unambiguous information and simple, concrete basic concepts and rules of a part of a specific area. – Applying one or more of the following skills**:** **Cognitive skills** (retrieving information from one's memory, remembering and applying it); **Motorical skills** (using automatisms and imitating practical actions) – Performing repetitive and recognisable actions in routine tasks.	Acting in a stable, familiar, simple and well-structured context, in which time pressure is of little importance. Acting with non-delicate objects. Functioning under direct supervision. Showing personal effectiveness
Level 2	– Understanding information, concrete concepts and standard procedures within a specific area. – Applying one or more of the following skills: **Cognitive skill:** analysing information by distinguishing and relating elements; **Motorical skills**: transforming sensory perceptions into motor actions; and performing acquired practical-technical actions. – Applying a selected number of standard procedures when performing tasks; applying prescribed strategies to solve a limited number of concrete, recognisable problems.	Acting in a limited number of comparable, simple, familiar contexts. Acting with delicate, passive objects. Functioning under supervision with limited autonomy. Taking limited executive responsibility for one's work.
Level 3	– Understanding a number of abstract concepts, laws, formulas and methods within a specific area; distinguishing between major and minor issues in information. – Applying one or more of the following skills: **Cognitive skills**: Analysing information using deduction and induction and Synthesising information; **Motorical skills**: Making constructions based on a plan; Performing actions which require tactical and strategic insight; Applying artistic-creative skills; Choosing, combining and applying standard procedures and methods to perform tasks and solve a variety of well-defined, concrete problems.	Acting in comparable contexts in which a number of factors change. Acting with delicate, active objects. Functioning with certain autonomy within a well-defined set of tasks. Taking limited organisational responsibility for one's work.
Level 4	– Interpreting concrete and abstract data (information and concepts) within a specific area. – Applying reflective cognitive and productive motorical skills. – Evaluating and integrating data and developing strategies to perform diverse tasks and solve diverse, concrete, non-familiar (but subject specific) problems.	Acting in a combination of changing contexts. Functioning autonomously with some initiative. Taking complete responsibility for one's work. Evaluating and correcting one's functioning with a view to obtaining collective results.

LEVEL DESCRIPTORS ELEMENTS		
Levels	**Knowledge/Skills**	**Context/Autonomy/Responsibility**
Level 5	– Expanding the information in a specific area with concrete and abstract data or completing it with missing data; using conceptual frameworks; being aware of the scope of subject-specific knowledge. Applying integrated cognitive and motorical skills. – Transferring knowledge and applying procedures flexibly and inventively for the performance of tasks and for the strategic solution of concrete and abstract problems.	Acting in a range of new, complex contexts. Functioning autonomously with initiative. Taking responsibility for the achievement of personal outcomes and the stimulation of collective results.
Level 6	– Critically evaluating and combining knowledge and insights from a specific area. Applying complex specialised skills, linked to research results. Gathering and interpreting relevant data and making innovative use of selected methods and resources to solve non-familiar complex problems.	Acting in complex and specialised contexts. Functioning with complete autonomy and considerable initiative. Taking shared responsibility for the definition of collective results.
Level 7	– Integrating and reformulating knowledge and insights from a specific area or at the interface between different areas. – Applying complex new skills, linked to autonomous, standardised research. – Critically evaluating and applying complex, advanced and/or innovative problem-solving techniques and methods.	Acting in unpredictable, complex and specialised contexts. Functioning with complete autonomy and a right of decision. Taking final responsibility for the definition of collective outcomes.
Level 8	– Expanding and/or redefining existing knowledge from a substantial part of a specific area or at the interface between different areas. Interpreting and creating new knowledge through original research or advanced scientific study. – Designing and executing projects which expand and redefine existing procedural knowledge, aimed at the development of new skills, techniques, applications, practices and/or materials.	Acting in very complex contexts with far-reaching, innovative implications. Taking responsibility for the development of professional practice or scientific research with a highly critical attitude and steering capacity.

A professional qualification lists the competences needed for the professional for a specific role and can be achieved in an educational environment or not and are included in all levels of the qualifications framework. An educational qualification lists the individual competences needed to participate in society, to continue with further education and/or exercise professional activities. This type of qualification requires the attendance in educational institutions recognized by Flemish authorities [1]. On Table 9 it is possible to observe the levels for professional and educational qualifications in the Flemish qualifications framework.

2.5.2. French Speaking Community

Table 9: The three main CFC level descriptor elements in Belgium, French Community are:

LEVEL DESCRIPTORS ELEMENTS		
Levels	**Knowledge/Skills**	**Context/Autonomy/Responsibility**
Level 1	Knowledge, skills, behavioural skills not referenced to a specific area of work or study enabling to achieve simple and repetitive tasks in the context of simple reproduction process.	Acting under direct supervision in a structured and defined context within a non-specific environment of work and/or a non-specific field of study.
Level 2	Basic knowledge, skills, behavioural skills of a specific field of work or study enabling to achieve a set of tasks without having to choose the methods/tools/materials in the context of the application of simple and standard processes.	Acting under supervision in situations known and defined related to a specific field of work or study, with a degree of responsibility limited to the execution of tasks.
Level 3	General knowledge, skills, behavioural skills of a specific field of work or study enabling to achieve a set of tasks involving choice of methods/tools/materials in the context of application of complex processes.	Acting with a degree of autonomy and responsibility limited to the choices made and implemented in characteristic situations of a field of work or study in which a limited number of factors vary.
Level 4	General knowledge, skills, behavioural skills of a specific field of work or study enabling to search and select adequate information to mobilise and integrate knowledge/methods/practices in the context of solving concrete problems whose indices are obvious and whose possible solutions are in finite and limited number.	Acting with a limited scope for initiative in characteristic situations of a field of work or study in which a large number of predictable factors may change, and with full responsibility for his work.
Level 5	Specialised knowledge, skills, behavioural skills of a specific field of work or study enabling to analyse, complete, articulate information based on the knowledge/methods/practices of its specialty to reorganise and build adapted solutions in the context of solving abstract problems, whose indices are not obvious and whose possible solutions are multiple.	Acting with an extended degree of initiative in characteristic situations of a field of work or study in which the changes are unpredictable, with full responsibility for his work.
Level 6	Depth of knowledge, skills, behavioural skills of a specific field of work or study enabling critical understanding and use of knowledge/methods/practices of its specialty as well as different dimensions and constraints of the situation to formulate and/or implement appropriate solutions (or new) in the context of solving complex problems or situations.	Acting independently and fully responsibly in characteristic situations of a field of work or study in which the changes are unpredictable.
Level 7	Highly specialised knowledge, skills, behavioural skills of a specific field of work or study enabling to demonstrate proficiency and critical thinking in relation to knowledge/methods/practices of its specialty and at the interface of other specialties to develop and/or implement innovative solutions in the context of	Acting independently and fully responsibly in novel situations of a field of work or study and/or at the interface of several fields.

LEVEL DESCRIPTORS ELEMENTS		
Levels	**Knowledge/Skills**	**Context/Autonomy/Responsibility**
	development of knowledge, projects (or processes).	
Level 8	More advanced knowledge, skills, behavioural skills of a specific field of work or study or at the interface of several fields enabling to demonstrate recognised expertise in relation to knowledge/methods/practices of its specialty and at the interface of other specialties to extend and redefine in a singular and significant way knowledge (and procedures) in the context of existing research and/or innovation.	Acting independently and fully responsibly in the most advanced situations, at the forefront of a field of work or study and/or at the interface of several fields.

2.5.3. German Speaking Community

The smallest community of Belgium, the German-speaking community, adopted its qualification framework (QDG) in 2013, reflecting and inspired by the qualification's framework from the Flemish and French communities in Belgium and from Germany. However, in 2016, the QDG hadn't been referenced to the EQF and there's no indication when it will take place [2]. A validation of nonformal and informal learning will be linked to the *Qualifikationsrahmen Deutschsprachiger Gemeinschaft (QDG)* in the 5 years following 2013.

Similarly, to the previous described level descriptors and learning outcomes, an 8-level framework has been introduced, distinguishing between personal competences and the subject/occupational specific competences, which are described in Table 10. The level descriptors will be based on the following categories.

*Table 10: The three main QDG level descriptor elements in **Belgium, German Speaking Community** are [1]:*

LEVEL DESCRIPTORS ELEMENTS			
Subject/Occupational competence		**Personal competence**	
Knowledge	Skills	Social Competence	Autonomy

The German-speaking community in Belgium hasn't implemented the ECVET, due to the fact that Germany itself hasn't done it so far. Nevertheless, some components have been tested for IVET and CVET, like a credit system, for example, through EU and national projects [1].

Table 11: NQF levels with their correspondent qualifications.

LEVEL DESCRIPTORS ELEMENTS		
NQF levels	**Qualifications from general education**	**Qualifications from vocational education and training**
8	Doctoral or postdoctoral degree/habilitation	-
7	Master's degree (long duration)	Master's degree upon successful completion of dual track higher education (long duration).

LEVEL DESCRIPTORS ELEMENTS		
NQF levels	Qualifications from general education	Qualifications from vocational education and training
6	Bachelor's degree	Master craftsperson certificate upon successful completion of a three-year master craftsperson programme; Professional bachelor's degree upon successful completion of dual track higher education
5	-	Master craftsperson certificate upon successful completion of a two-year master craftsperson programme; Successful completion of supplementary secondary vocational education
4	Successful completion of upper secondary general education	Successful completion of upper secondary technical and arts programmes; Attestation of competence upon successful completion of year 6 in vocational education; Successful completion of year 7 (complementary year) in vocational education; Journeyman certificate upon successful completion of an apprenticeship
3	Successful completion of lower secondary general education	Successful completion of lower secondary technical, vocational or arts programmes; Certified partial qualification acquired in year 2 of an apprenticeship
2	Successful completion of 'common' year 2 in secondary education	Successful completion of year 3 in vocationally oriented education
1	Successful completion of primary education	Certificate upon successful completion of year 2 in vocationally oriented education

2.6. Summary of the current state of NQF's in partners' country

The following table sums up important information regarding the current state of implementation of NQFs in each partner country.

Table 2-1: Summary of current NQF implementation in each partners 'country

Country	Scope of the framework	Number of levels	Level descriptors	Stage of development NQF linked to EQF
Slovakia	Comprehensive NQF, including all levels and types of qualification from formal education and training. It includes also sub-framework of occupational qualifications.	8	Knowledge Skills Competences	Operational 2017
Slovenia	Comprehensive NQF, including all levels and types of qualification from formal education and training, from the system of national vocational qualifications and supplementary qualifications.	10	Knowledge Skills Competences	Operational 2013
Portugal	Comprehensive NQF including all levels and types of qualification from formal education and training and from the national system for the recognition, validation and certification of competences.	8	Knowledge Skills Attitudes	Operational 2011
Romania	Comprehensive NQF including all levels and types of qualification from formal education and training.	8	Knowledge Skills Competences	(Early) operational stage
Belgium **Flemish Community**	Comprehensive NQF, including all levels and types of qualifications from formal education and training and from the professional qualifications system	8	Knowledge Skills Context Autonomy Responsibility	Operational 2011

Country	Scope of the framework	Number of levels	Level descriptors	Stage of development NQF linked to EQF
Belgium **French Speaking Community**	Designed as comprehensive framework; will include all levels and types of qualifications from formal education and training and from the professional qualifications system.	8	Knowledge Skills Context Autonomy Responsibility	Advanced development stage Formal adoption pending 2013
Belgium **German Speaking Community**	Comprehensive NQF including all levels and types of qualifications from formal education and training.	8	Subject Occupational competence *(knowledge and skills)* Personal competence *(social competence and autonomy)*	(Early) operational stage

3. Current state of the art of ECVET implementation and allocation of ECVET points

"The European credit system for VET (ECVET) is one of the important common European tools to support and increase European mobility. ECVET is also meant to support learners on their career and learning paths to a recognised vocational qualification, through transfer and accumulation of their assessed learning outcomes acquired in different national, cultural and education and training contexts. In a broader sense, ECVET should contribute to promoting lifelong learning and increasing the employability of Europeans. ECVET calls for better transparency and mutual trust between education systems and providers, as well as more efficient and readable recognition of non-formal and informal learning."[9]

Cedefop has been conducting monitoring of ECVET implementation since 2010. Besides understanding if the existing credit systems provide conditions for individuals to have their learning accumulated or transferred towards a qualification, there are several aspects that are key when we examine ECVET implementation, such as:

- whether qualifications are based on learning outcomes and organised in units;
- whether individual units are assessed and validated for further transfer and accumulation;
- whether units are assigned credit points; and
- whether VET providers use memoranda of understanding and learning agreements to understand better the learning outcomes they provide.

It is important to notice that:

- ECVET allocates points to qualifications and not to education and training programmes.
- ECVET points/credits allocation is based on using a convention according to which 60 points/credits are allocated to the learning outcomes expected to be achieved in a year of formal full-time learning.

In 2015, the **Belgium-French Community**, **Romania** and **Slovenia** where amongst the countries with a credit system in IVET that allows accumulation and/or transferring learning outcomes of individuals, whereas the **Belgium Flemish Community** was in the group of countries with no credit system. **Portugal** and **Slovakia** where positioned as being in the direction of ECVET development.

According to CEDEFOP's last monitoring report on ECVET implementation, published in 2016, in terms of the status and directions of development of ECVET, countries can be grouped as follow:

Group 1: countries that have credit systems compatible with ECVET

Group 2: countries that are working towards ECVET-compatible systems; this group is subdivided into two:

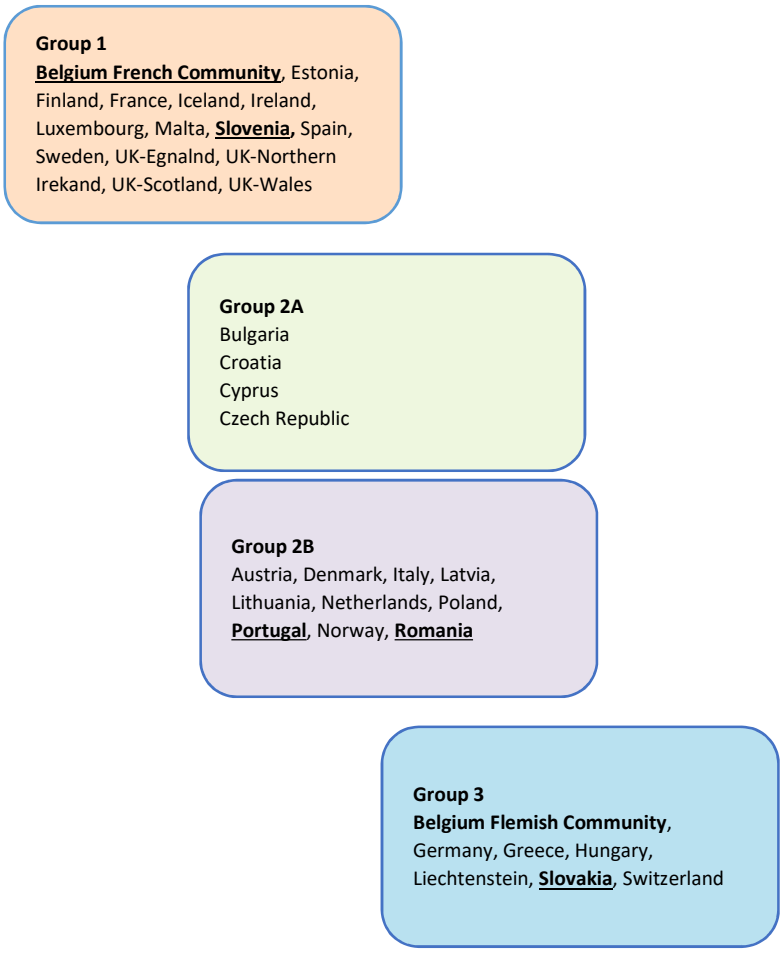
(i) **group 2a**: countries that are developing a credit system to be compatible with ECVET principles;

(ii) **group 2b**: countries that are currently testing ECVET technical components;

[9] CEDEFOP. ECVET in Europe Monitoring report 2015, 2016, p. 1.

Group 3: countries without credit systems and without system-level ECVET initiatives. These are countries where activities at the system level have not started or have been put on hold for various reasons.

Figure 2: Group of countries by current status and direction of development[10]



Inside Group 1, the **Belgium French Community** and the **Slovenian** credit system is compatible with the ECVET-based system but needs further developments to operate. In group 2A, countries that are testing ECVET technical components, **Romania** has its own credit systems in IVET that allow accumulating and transferring Learning Outcomes and Portugal does not have a credit system in VET but is testing some ECVET components. In 2015, both countries reported that they have worked on a draft proposal. In Group 3 the **Belgium Flemish Community** has reported that the ECVET technical specifications are unclear to them; therefore, they do not see developing ECVET as priority. *Slovakia concentrated on developing the national qualifications register first and links ECVET-related developments to the next phase of their work on qualifications*.

[10] CEDEFOP. ECVET in Europe Monitoring report 2015, 2016, p. 15

4. Concepts

Each country has its own understanding of knowledge, skills, responsibility and autonomy, therefore the definition of the learning outcomes, for the FSW-TECH profiles curricula, will be developed according to the EQF descriptors, having in mind that the national specificities shall also be taken into consideration. Below it is given an overview of useful concepts:

Competence Unit (CU). A training module or training unit which is transferable and accumulative to which credit points are associated and registered in a transcript of learning outcomes.

ECVET points. 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 (European Parliament and Council of the EU, 2009).

Job Function (JF). Core tasks inherent to the exercise of the professional activity.

Job Activities (JA). Sub-function/activity that is mandatory to undertake a job function, and that has a regular occurrence within the professional activity.

European Credit System for VET (ECVET). Allows the transfer, recognition and accumulation of learning outcomes (LO) to obtain a qualification. As for the principles for ECVET attribution of points/credits, it is important to notice that: ECVET allocates points to qualifications and not to education and training programmes. ECVET points/credits allocation is based on using a convention according to which 60 points/credits are allocated to the learning outcomes expected to be achieved in a year of formal full-time learning.

Knowledge means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the EQF, knowledge is described as theoretical and/or factual;

Learning agreements are made by the competent institutions (such as schools in the country of origin and in the host country) and the respective mobile learner.

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

Memorandum of Understanding (**MoU**) is a voluntary agreement between the competent institutions of the countries concerned, which lays down the conditions for a period of mobility abroad

Personal Transcript is a record of learning achievements; it is a document that belongs to the learner.

Responsibility and autonomy means the ability of the learner to apply knowledge and skills autonomously and with responsibility;

Skills means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).

5. References

2018 **National qualifications framework developments in Europe 2017**
This publication on the latest national qualifications framework (NQF) developments aims to share how 43 NQFs in 39 countries participating in the European qualifications framework (EQF) implementation are structured, and how national qualifications have been allocated to NQF levels and linked to the EQF.

2018 **National qualifications framework developments in European countries (analysis and overview 2015-26)**
Most of the 36 countries involved in implementing the European qualifications framework (EQF) have defined, and largely adopted, level descriptors of learning outcomes, i.e. what an individual possessing a qualification at a particular level is expected to know and be able to do. The report shows that while the EQF has influenced national level descriptors, countries have also adjusted the learning outcomes approach to their own needs and priorities: these descriptors have mostly been the fruit of extensive discussions between government, social partners, and education and training providers.

2018 **Overview of national qualifications framework developments in Europe 2017**
Cedefop's concise guide to national qualifications framework developments in 39 European countries (28 EU Member States as well as Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Iceland, Liechtenstein, Kosovo, Montenegro, Norway, Serbia, Switzerland and Turkey) in 2017.

2018 **Qualifications frameworks in Europe 2017 developments**
Cedefop's brief note on qualification's framework in European countries.

2017 European inventory on NQF
Slovakia – European inventory on NQF 2016
Slovenia - European inventory on NQF 2016
Portugal - European inventory on NQF 2016
Romania - European inventory on NQF 2016

2016 **ECVET in Europe - Monitoring report 2015**
Cedefop has been conducting monitoring of ECVET implementation since 2010; this report covers developments from mid-2013 till 2015. It is based on national responses provided by the ECVET users' group from 28 EU Member States and four EFTA countries. The report examines whether existing credit systems provide conditions for individuals to have their learning accumulated or transferred towards a qualification. It examines key aspects: whether qualifications are based on learning outcomes and organised in units; whether individual units are assessed and validated for further transfer and accumulation; whether units are assigned credit points; and whether VET providers use memoranda of understanding and learning agreements to understand better the learning outcomes they provide. The report also focuses on the ways ECVET is promoted among stakeholders and beneficiaries and on examples of support materials that can be useful to ECVET promoters throughout Europe.

2014 **Monitoring ECVET implementation strategies in Europe in 2013**
Fourth annual report on ECVET implementation in 38 European countries/regions.