



**EACEA KA1 EQF PROJECT
EQF AND COMPATIBILITY OF SECTORAL QUALIFICATIONS
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**GUIDELINES FOR THE APPLICATION OF NATIONAL
QUALIFICATIONS FRAMEWORKS AND THE EUROPEAN
QUALIFICATIONS FRAMEWORK IN THE INTER-COUNTRY
COMPARISON OF SECTORAL QUALIFICATIONS**

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Introduction

European Qualifications Framework (further EQF) is being designed and implemented with a twofold aim: creating an effective tool for the comparison of qualifications in the European Union countries (and even beyond); then enhancing, as a consequence, the transferability of qualifications between countries, mobility of employees and learners seeking development of competitive human resources, effective European labour market and the European space of vocational and higher education. In order to achieve this aim, the designers and implementers of the EQF have already faced and will face in the future the challenge posed by the important differences in the structure and contents of qualifications inside the sectors of activities in the different EU countries. Sectoral qualifications are distinctive and unique in different dimensions. This challenging situation became the reason for the launching the project of the EU Lifelong Learning Programme Key Activity 1 "EQF and compatibility of the sectoral qualifications between countries". The project was launched in the beginning of 2008 by the team of research and expert organisations from Lithuania, Austria, Czech Republic, France and Ireland. The aim of research is to define, how the EQF can be helpful for the comparison of sectoral qualifications of different EU countries belonging to different structures of qualifications inside the sectors possessing different internal structures and compositions due to sectoral specificities. This aim is achieved by comparing the structures of the qualifications in the construction and hospitality sectors in the partner countries, comparing the internal structures of these qualifications and analysing the possibilities of the EQF to be an effective measure in comparing the different sectoral qualifications. The main applied methods of research employed were systemic and comparative analysis. The main sources of research were: existing occupational profiles of the sectors, descriptors of the sectoral occupations and qualifications, VET standards, data from different researches of activities available in the partner countries.

The main target groups of the project and these guidelines are:

1. The developers of qualifications and frameworks of qualifications at the sectoral and national level. The product of the project – guidelines for the matching of sectoral qualifications in the different countries using the EQF and national qualifications frameworks is aimed to provide them with the additional methodological support for the designing of qualifications and development of the qualifications frameworks and systems.
2. The experts working on the development and improvement of the European Qualifications Framework. The analysis of the compatibility of sectoral qualifications and national qualifications frameworks with the EQF provides information for the further development and improvement of the European Qualifications Framework making it more flexible and responsive to the needs of the sectors of activities in different countries.

1. Possibilities for inter-country comparison of sectoral qualifications

There can be distinguished and discussed the following cases of the comparison of sectoral qualifications in the different countries (Fig. 1):

1. Direct comparison and compatibility of sectoral qualifications between the different countries without referencing to the NQFs and the EQF. In this case of comparison the most important factors are the characteristics of work, typical for the sector and the specificities of the sector in terms of size of enterprises, market niches, work organization and applied technologies, business organisation and human resource management etc.

2. Referencing sectoral qualifications from one country to the NQF levels of another country. The most important factors in this case of comparison are models of the supply and awarding of qualifications in the national systems of VET and higher education and related hierarchical structuring of qualifications in the countries, as well as the compatibility of the structure of compared sectoral qualifications with the NQF criteria for the structuring of qualifications into levels.

3. Referencing of sectoral qualifications to the levels of the EQF without the referencing of these qualifications to the levels of the NQF of their origin country. The most important issue in this case is the compatibility of the structure of compared sectoral qualifications with the criteria for referencing levels of qualifications to the EQF for the structuring of qualifications into levels.

4. Compatibility and comparison of sectoral qualifications between the countries with the intermediation of the NQFs of these countries and the EQF. The quality and validity of such comparison of sectoral qualifications is largely dependent upon the complex compatibilities between the structure of the compared sectoral qualifications and the criteria for the structuring of qualifications into levels in the NQFs of compared countries and the EQF.

Each of these cases will be further analysed and described.

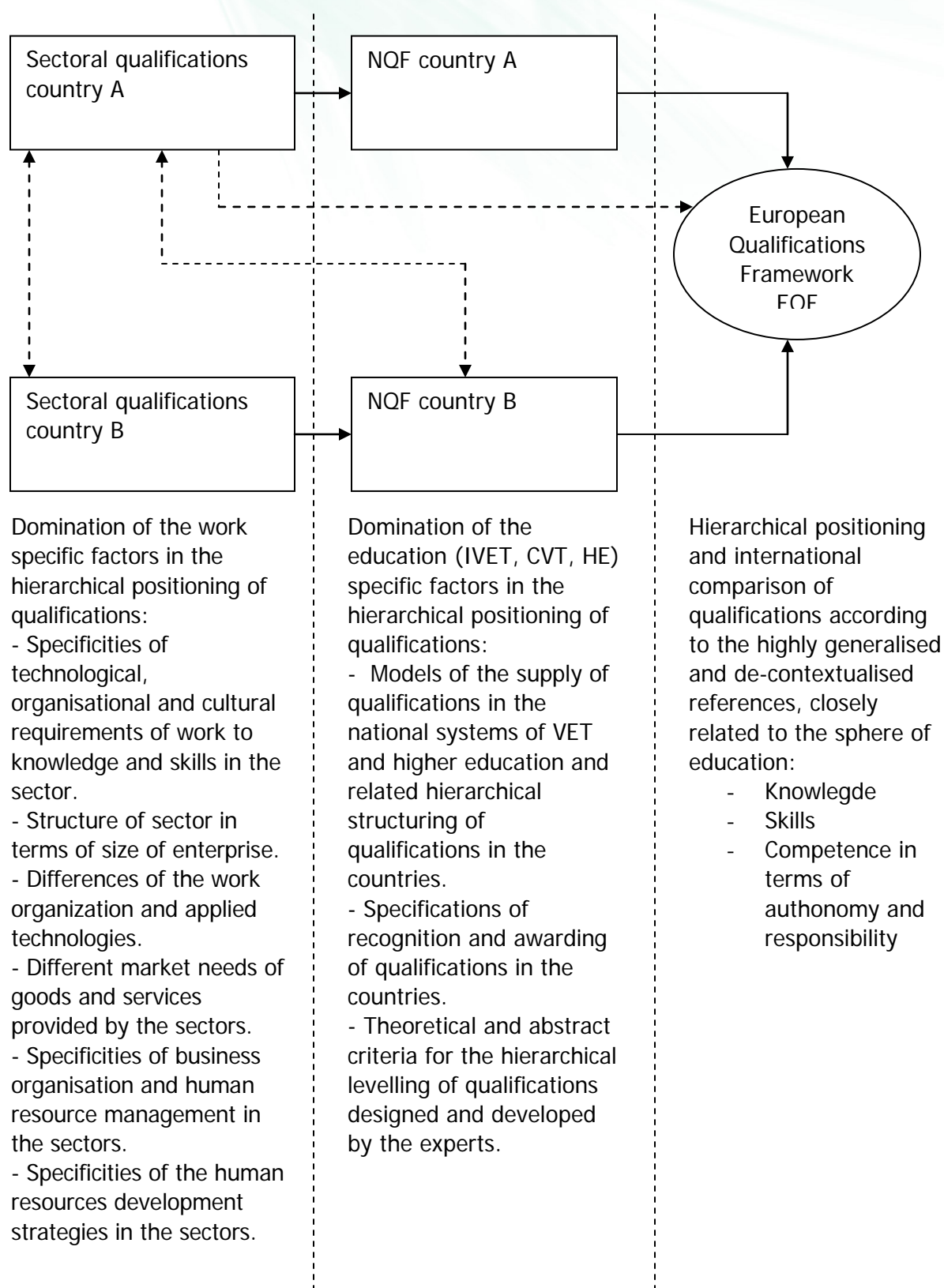


Fig. 1. Possibilities of the inter-country comparison of sectoral qualifications

1.1. Direct comparison and compatibility of sectoral qualifications between different countries without reference to NQFs and the EQF

Direct comparison and compatibility of sectoral qualifications, although it can provide very relevant and comprehensive information and data, is a very complicated and time consuming process due to the big variety of different specific factors which are necessary to take into consideration when directly comparing qualifications belonging to the same sector in the different countries. Such challenging research requires experienced researchers from the different disciplines of research (technological disciplines, sciences of education, psychology of work, sociology of work, etc.), developed sophisticated methods of research, high costs. Such comparison of qualifications requires to take in consideration challenging differences and specificities of sectors in the countries: size of the sector, strategies of competition, strategies and policies of human resource management and development, levels of technologies and dominating forms of work organisation, etc. These differences and specificities can be conceptual, organisational, technological, cultural and of other kinds. It would take a lot of time to achieve results of research which can be applied in the practices of education and training, skills development, human resources management and other fields. Therefore such comparative research is more inclined to academic character and faces difficulties to be used for applied research covering the activities and qualifications of the whole sector.

There can be discerned the following main factors of the influence of the sectoral environment and specificities to the comparability of qualifications in the sectors of different countries:

1. Structure of the sectors in terms of the size of enterprises: ratio between the number of the big enterprises and the SME's.
2. Structure of the sectors in terms of the demographical characteristics of the workforce: age, education level, country of origin (share of the immigrant workforce).
3. Levels of the business internationalization in the sectors (share of the domestic and international or foreign enterprises in the sector).
4. Levels of the development and institutionalization of industrial relations in the sectors.

All these factors have certain influences for the qualifications in the sectors in terms of their structure, contents, characteristics and usage in various situations. Due to the limited scope of the project it is not possible to make in-depth research and analysis of all factors of sectoral characteristics and environment and their influence to the levelling of qualifications. Nevertheless, there can be proposed some assumptions on these influences which could be verified with further research.

1. There can be discerned the following influences of the size of enterprises to the contents and structure of the qualifications of employees in the sectors:

Qualifications in big enterprises	Qualifications in SME's
There tend to dominate and develop more specialized and narrow qualifications with bigger weight of special functional competences and skills needed for the execution of work tasks in the concrete workplaces.	More general and extra-functional qualifications are required by more flexible work organization, shortage of human resources and possibilities for human resource management and development.
Competences of employees constituting	Development, upgrading and updating of

qualifications are more regularly and frequently updated, renewed and developed using rather wide possibilities of the continuing vocational training and skills development.	competences is rather irregular and comparatively random due to the limited financial and organizational possibilities in the provision and funding of continuing vocational training.
Qualifications of employees are more sensitive to the changes of the socioeconomic and organizational environment. Therefore the contents of qualifications can change rather quickly.	Contents of qualifications is rather stable due to more general and extra-functional competences which constitute the qualifications and the contents of activities encompassing execution of the different tasks and requiring multi-skilling.
Maintenance and development of competences constituting the qualifications are less dependent on the external training providers and the system of initial vocational training due to the availability of financial, human and organizational resources for the continuing vocational training.	Maintenance and development of competences constituting the qualifications are more dependent on the external financial and institutional support and cooperation with the initial vocational training institutions.
Qualifications and competences tend to be more strongly formalized and recognized in the practices of the human resource management of the company due to the more complex human resource management practices and more intensive industrial relations (more organized negotiations between the employers and unions) in the big enterprises.	The recognition of qualifications and competences acquired in informal and non-formal ways (experience based) is much weaker and irregular due to the comparatively weak and unstructured human resource management and industrial relations.
Qualifications are more "autonomous" from the public providers and at the same time more dependent on the enterprise. Big enterprises with the developed systems of human resource development usually establish their own qualifications frameworks.	Qualifications are less autonomous on the enterprise and sectoral level and more dependent from the public providers. SME's usually do not have sufficient possibilities nor the needs to develop their own frameworks of qualifications or to design the qualifications by themselves.
Qualifications tend to be more polarized in terms of the level of knowledge, skills and competences: there can be discerned elitary "high skills" qualifications versus "low skills" qualifications. This differentiation and polarization through the Matthew effect influence the accessibility of the development of the skills, knowledge and competences in the big enterprises, strengthening the polarization of qualifications. Sometimes it leads to the development of the polarization of "high-skilled – low skilled" workforce in the sector.	The pool of qualifications in the structure of the human resources of the SME's is more homogenous, depending on the type of the sector: in the SME's of the "high-skills" sectors there dominate "high-skills" qualifications and in the "low skills" sectors there dominate low and middle level qualifications.

Table 1. Qualifications in big enterprises and in SME's

Due to these influences the differences of the sectors in terms of the size of enterprises can pose difficulties in establishing a common reference for the levelling of qualifications in the sector.

Qualifications from different countries belonging to the same occupations and even having the same titles can significantly differ in terms of their contents (specialized versus broad, updated, actual versus outdated, more formalized versus less formalized, more enterprise dependent versus more centred on the public VET and higher education provision, etc.). Such situation implies the demand to use the external and more general references for the levelling of sectoral qualifications. Here the EQF and currently designed and developed National Qualifications Frameworks can be an important source of information.

2. Structure of sectors in terms of the age, education level of employees, their country of origin (share of the migrant workforce in the human resources of sector).

Differences in the structure of the sectors in terms of age of employees influence the differences of contents of qualifications in the following ways:

- Sectors with dominating or bigger share of senior employees tend to develop the qualifications which are more based on experience and are more stable. Practical experience, developed practical skills and knowledge of the workplace needs, requirements, norms of execution and cooperation with others are very important elements of such qualifications. The hierarchical structuring of qualifications in such sectors can be more influenced by the factor of seniority and loyalty to the enterprise and less by the quality of the competences of employees.

- Sectors with the higher share of young employees tend to develop qualifications which are more based on the human capital acquired in the initial vocational training and higher education as well as on the flexibility of employees and their abilities to apply the possessed human capital and to acquire the new knowledge and skills in highly competitive and changing work environment. Application of the new knowledge and know-how is one of the crucial characteristics of such qualifications. The hierarchical structuring of such qualifications in the human resources management practices is more based on the competitiveness of the possessed human capital, which is ensured by the quality of possessed knowledge, skills and competences.

3. Differences in the structure of human resources in the sectors in terms of the education level of employees are caused by the different conditions of the acquisition of qualifications. This variety of conditions is created by the different paths of the development of education systems and institutions, differences in the paths of the economic and social development, employment, technological development, differences in the evolution of the occupations, etc. These differences can create the situations when the same occupational positions in the sectors of different countries are occupied by the employees possessing the education and qualifications of the very different levels (for example, in some countries the mechanical engineers must have higher education diploma (Lithuania, France), in other countries they work with the certificates received after the completion of the VET schools or colleges (Austria). It presents obstacles for the levelling and direct comparison of the sectoral qualifications between the countries, because the same titles of qualifications can represent very different contents in terms of quality of competences. Besides, in the sectors with the lower level of education of employees the qualifications tend to be less strengthened by the underpinning knowledge and more based on the practical skills, while in the same sector with higher level of education of employees the underpinning knowledge will constitute more important part of qualifications.

4. Differences in the structure of human resources of sectors in terms of the share of the immigrant workforce can have the following influence on the differences of the contents of qualifications:

- Sectors with the higher volume of the immigrant low skilled and unskilled workforce usually have more precarious and insecure jobs and tend to develop the low skills equilibrium (Brown,

Lauder, Green, 2001). Such sectors can integrate the workforce with very different backgrounds of competences and qualifications (for example, construction sector in Lithuania in the period of the last 4-5 years). Qualifications and competences of the immigrant workforce are often less formalized and recognized, their contents can be very scattered and diversified.

- Sectors with a higher volume of the high-skilled immigrant workforce can also develop very different qualifications and competences of the employees, but this process is usually more structured and ordered by the human resources development strategies and policies and by the individual career development strategies. Therefore it often leads to the formal recognition of the acquired competences and qualifications. In general there can also be made an assumption, that the sectors with the higher volume of the immigrant workforce are closer to the certain assimilation of the competences and qualifications of their workforce, because the integration of the workforce with the different qualifications and competences tends to decrease the specificities of the sectoral qualifications and to increase the weight of similar and general elements and characteristics.

- Sectors with the lower volume and share of the immigrant workforce are stronger in preserving the specific characteristics of their qualifications and the processes of the acquisition and awarding of qualifications. All these differences can also create obstacles for the levelling of competences and qualifications of the same sector between the different countries.

5. Differences of the sectors in terms of their levels of internationalization (share of the domestic and international enterprises in the sector) can have the following influence on the levelling and comparability of the qualifications in the sectors:

- Qualifications in the more “internationalized” sectors (with higher presence of the international and foreign capital enterprises) can be easier comparable due to the reason that internationalization of the sector tends to equalize the structure of these sectors in terms of qualifications, as well as to assimilate the contents of qualifications in the sectors of different countries.

- Qualifications in the less ‘internationalized’ sectors (with domination of the domestic enterprises) contain more country specific characteristics and specifications and it is more complicated to compare such qualifications in different countries.

6. Differences of the sectors in terms of the levels of development of industrial relations can have the following influence on the levelling and comparability of the qualifications in the sectors:

- Qualifications in the sectors with a higher-level of development of industrial relations usually have more influence for the quality and equality of employment and career possibilities. Developed branch or sectoral agreements between the social partners concerning the wage levels (Germany) or the continuing vocational training of employees (France) create very favourable conditions for the development of the employees’ competences and acquisition of qualifications by motivating and empowering the employees and employers to cooperate and co-invest in the continuing vocational training and skills upgrading. Besides, intensive social partnership in vocational education and training and higher education is one of the most important preconditions for the development of the quality of qualifications, leading to higher employability, employment quality and competitiveness of the economy.

- Qualifications in the sectors with a lower level of development of industrial relations are more dependent on the formal education and training, which often must compensate the shortages caused by the reluctance of employers and employees to invest in training. With the domination of the formal public provision of qualifications it is much more difficult to acquire qualifications through the validation of non-formal and informal learning outcomes. Employers are less interested

in the development and provision of qualifications to the employees due to the risk posed by staff poaching.

For these reasons the differences in the development of industrial relations and social partnership in the same sector between the different countries can influence development of different skills and qualifications structures making the common levelling and comparability of sectoral qualifications more difficult.

In conclusion, it can be stated that the differences of sectoral environment and specificities influence the important differences of the structure and contents of sectoral qualifications in different countries. It poses certain difficulties regarding the comparability and compatibility of qualifications in the sectors of different countries, as well as for the setting of the parameters for the levelling of sectoral qualifications. Maybe such common criteria can be derived from the characteristics of activities and enterprises in the sector?

Specific factors related to the characteristics of activities and enterprises

1. Models of competition applied by the enterprises in the sector. Researchers and analysts discern three main types of competition models:

- competition based on price, which incurs the minimization of all production costs, including the investments to technologies and human resources (such companies compete on cheap, but unskilled and low skilled workforce). Domination of this approach of competition leads to the concentration of the enterprises of the sector on the low-skilled and unskilled work and to the domination of corresponding workforce in the sector.
- competition based on quality and innovations, which incurs the maximal exploitation and development of the existing potential of human resources and production technologies via investments to human resource development and research and development activities (such companies use high skilled professionals for competitive edge). Domination of this approach to competition results to the higher complexity of performed activities, higher autonomy and discretion in the execution of tasks, and higher share of high skilled workforce in the structure of human resource of sector.
- mixed approach combining both above described models, when the enterprise compete both on price and quality depending on the market sector, product, etc. This approach can bring wide variety of job design, work organization and levels of qualifications in the same sector.

For example, in the manufacturing, construction and other sectors very often the companies competing with the low-cost and price strategy become the subcontractors of the enterprises which compete on innovation. Outsourcing of low-skilled work to the countries of low labour costs for these companies permit them to optimise the productivity and to concentrate on the activities related to designing and development of innovative products, development of the new products and technological solutions, which give higher added value. Such division of work in the same sector between the low and high labour costs countries can have different implications for the development of the qualifications and skills structure in the sector:

- Concentration of higher level qualifications in the sector of country with high labour costs and significant reduction of the low-skilled and unskilled labour and corresponding qualifications in these countries. Outsourcing facilitates the sector to become more high-skilled sector. Concentration on higher skilled labour enhances the processes of continuing vocational training, skills upgrading, which ensures significant growth of high skilled human resources and increasing complexity and changeability of the work contents. Therefore it can happen that the knowledge,

skills and competence of high-skilled specialist working in such enterprise would be rather different from the knowledge, skills and competence of the specialist having the corresponding qualification (for example, production engineer or designer), but working in the enterprise which compete on low labour costs and perform the functions of subcontractor.

- Concentration of lower level qualifications in the sector enterprises competing on low labour costs and prices in the same country and especially in the countries with lower labour costs. Concentration of low skilled labour does not permit to create the same favourable conditions for the continuing training and skills upgrading of employees like in the enterprises competing with high-skills and innovations. It enhances the migration of the higher skilled employees seeking for more promising professional development and career from the companies competing on the low labour costs (subcontractors) to the enterprises competing on high-skilled and innovations (designers of products, technologies and services) in the sector of the same country and, of course, internationally (from low labour costs countries to higher labour costs countries). However there must be considered some exemptions related to the process called taylorisation of the high skills work arising because of the increasing international growth of the high skilled workforce and intensifying competition of high skilled employees on the international labour markets (Brown, 2006, 2008). From the other side, it also can be noticed, that in some cases the outsourcing and subcontracting relations between the enterprises competing on quality and innovations and those competing on low labour costs facilitates the transfer and dissemination of know-how from the first type companies to the second type. Therefore in longer perspective the subcontractor competing of low-skilled and low-cost work can shift to the mixed approach of competition, when the enterprise will develop sufficient pool of high skilled workforce.

2. Work organization and job design in the enterprises of the sector can be considered as the outcomes of the selected competition strategy. Competition based on price and labour costs minimization necessitates to apply Taylorist work organization and corresponding job design, which permits to recruit and exploit unskilled and low-skilled workforce. Competition based on quality and innovations requires the implementation of job design and work organization, which enables and enhances the creativity, flexibility, high autonomy and responsibility of performers in dealing with work tasks. It promotes multi-skilling and continuing development of skills and competences in the sector at the same time as changing the structure of the workforce and the contents of the activities.

3. Production models. The choice of production models also depends on the competition strategies and skills structure of the human resource of the enterprise. In turn, the production models influence setting and development of certain structures of skills and qualifications in the human resources of enterprises. For example, the mass production model is effective, when there are sufficient resources of medium or low skilled, but rather narrowly specialised workforce. Production model oriented to the individual market niches or individual orders demands more high-skilled, multi-skilled and universal employees, able to adapt to different situations and requirements of production. Therefore the variety of applied production models within the sector enterprises can influence significant differences in the contents of the qualifications, which formally have the same title or should be adhered to the same level. For example, a skilled carpenter working in a big construction enterprise applying the mass production model performs much more specialised and constantly repeating operations and is less exposed to the different changes requiring to make independent decisions or to cooperate with other skilled employees to solve the problems, than the carpenter working in a construction enterprise which serves various individual market niches and work on different individual orders. In such an enterprise, constantly changing requirements of

customers, wider variety of construction engineering solutions enriches the work contents and, in turn, facilitates enrichment of skills and competences. The specific characteristics of the work and enterprises in the sectors tend to create more divergences than convergences, what makes complicated to use them as common criteria for the levelling of sectoral qualifications.

Comparability of the structure of sectors in terms of qualifications and the contents of qualifications with regard to their internal structure

When analysing the comparability of sectoral qualifications between countries in the case of their direct comparison, it is important to consider the comparability of the structure of sector in terms of qualifications between the countries (comparison of the 'maps' of qualifications in the sector) and the comparability of the structure and contents of the sectoral qualifications in terms of their internal composition. To illustrate these issues, the outcomes of comparative analysis of qualifications in construction and hospitality sectors in Austria, Czech Republic, France, Ireland and Lithuania executed by the SECCOMPAT project partners are presented below:

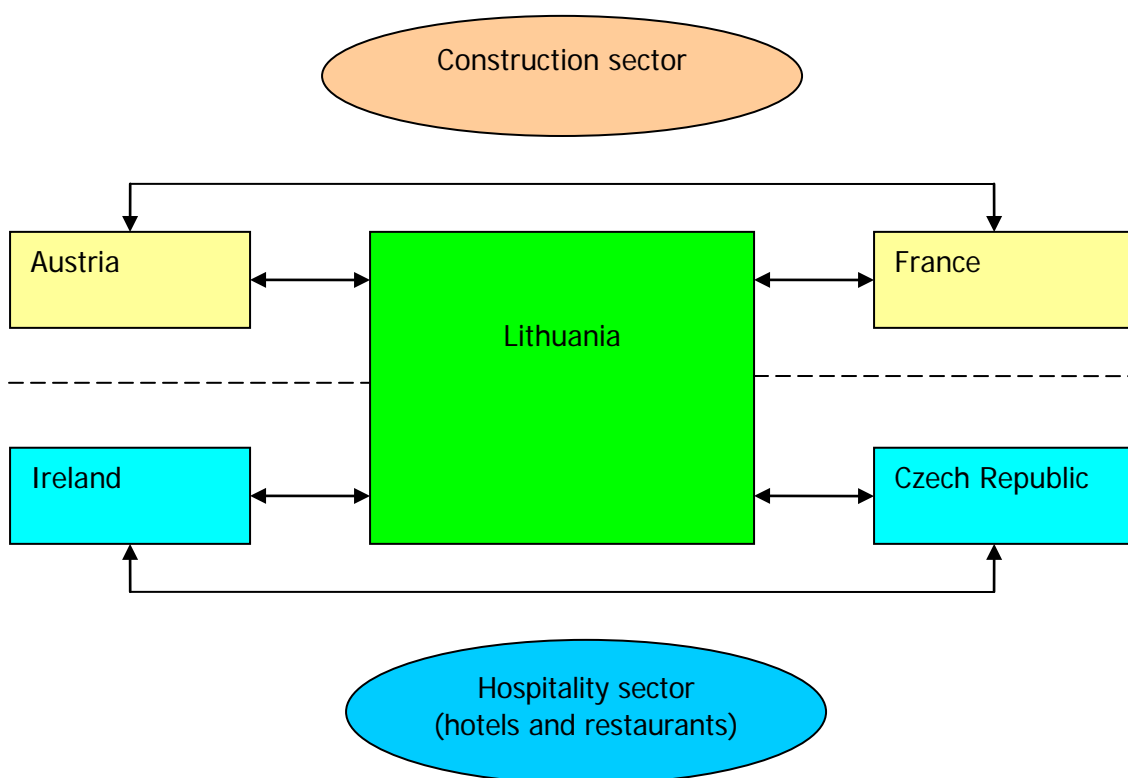


Fig.2. Scheme of the organization of comparison of sectoral qualifications

Approaches to the structuring of qualifications in the sectoral frameworks are quite different between the partners' countries. There can be discerned the following types of these approaches:

a. Occupational approach, when qualifications are grouped according to the occupations, each occupation encompassing a certain numbers of levels of qualification (Lithuania, France, Czech Republic). For example:

Bricklaying (qualifications) - Lithuania:

Bricklayer level 2

Bricklayer level 3

Bricklayer level 4

Bricklayer level 5

France:

Concrete pouring, reinforcing, spreading, levelling, smoothening and sealing worker

b. Approach stressing hierarchical structuring of qualifications, when qualifications are grouped according to their belonging to the different qualifications levels in the sector based on the characteristics of performance (Austria, Czech Republic), for example:

Construction sector qualifications in Austria:

Auxiliary workers (Bauhilfsarbeiter und Bauhilfsarbeiterinnen)

Semi-skilled workers often skilled in a different works of construction (Angelernte Bauarbeiter)

Skilled workers of construction after the apprenticeship (Facharbeiter)

Experienced foremen (Vizepolier)

Supervisors, construction site practical managers (Meister, Poliere, Obermeister, Hauptpoliere)

Technical and commercial employees of construction (Technische und kaufmännische Angestellte)

Waiter qualifications in Czech Republic:

Assistant waiter

Basic serving

Advanced serving

Bartender

Sommelier

In both cases there can also be noted some signs of mixed approach which encompass the occupational and level oriented approaches each having similar influence and importance for the structuring of qualifications in the sector (in basically all analysed countries). This is especially noticed in the occupations and qualifications related to the management and work organization (supervisors, high technicians and technical executives, draughtsman etc.). The qualifications have very clearly expressed vertical levelling combined with the occupational specialisation. For example, in the qualifications of the restaurants sector of the Czech Republic the qualifications of cooks are more structured according to the occupational approach (different fields of occupations and specialisations) while the qualifications of waiter – according to the approach of hierarchical levelling (above given example).

1. There can be discerned the following institutional and occupational foundations of the differentiation and structuring of sectoral qualifications:

a. Existing work practices and settings, existing pathways of skills upgrading combined with the structure of the qualifications supplied by the VET and higher education institutions. In

some areas of sectors, the existing work practices and settings predominate and they decide the way qualifications are structured. In other areas the characteristics and structure of the qualifications provided by the VET and higher education institutions play a major role in this regard. This can be noted in Lithuania and Czech Republic.

b. Collective agreements between the employers and unions of the sector which define the qualifications in the sector and their structuring (Austria, France). For example, in Austria sectoral qualifications in the building construction sector are based on the collective agreements (Kollektivvertrag) which are negotiated in every sector between Chamber of Commerce (Wirtschaftskammer Österreich) and Labour Union (Österreichischer Gewerkschaftsbund). In France the employers' organizations and unions are also actively involved in the definition of qualifications in the sectors.

2. Criteria for referencing of sectoral qualifications to certain levels are quite different:

a. Application of the functional, cognitive and general competences and their combinations in the different contexts of activity (Lithuania, Czech Republic). Research in the construction sector conducted by the Vilnius University in 2007 disclosed, that due to the big shortage of skilled workforce, the construction sector recruited a lot of unskilled and low-skilled persons having no formal qualifications nor professional experience in the field of construction and through training in the workplace and experiential learning this workforce was integrated in the sector.

b. Credentials acquired in the initial and continuing vocational training or higher education institutions (certificates or diplomas). This is especially valid for those sub-sectors and occupations which are traditionally regulated by the state-authorities (safety engineer, architect etc.) (Austria, France).

c. Credentials and the practice in the execution of activity in the field. This is especially clearly expressed for the higher level qualifications in the construction sector in Austria and France, but also can be noted in other countries (Lithuania, Czech Republic).

The similarities and differences in the occupational structure of the sectors in relation to the ordering of occupations and qualifications in the sectors

Construction sector, countries – Austria, France, Lithuania

Comparing the structure of the qualifications in the construction sector of Austria, France and Lithuania there can be discerned the following similarities and differences:

1. Looking at the hierarchies of the sectoral qualifications in the sectors, it can be stated that this sector in all compared countries is dominated by the qualifications demanding vocational education and training (skilled worker). There can also be found qualifications of low skilled worker, while qualifications, corresponding to more highly skilled specialists (technicians, forement) are not numerous and belong to the more technically complex occupations requiring higher level responsibility, autonomous application of the specific knowledge and skills, social and management skills.

2. Analysing the comparability of the qualifications structure of the construction sector between the 3 countries it can be noticed, that the maps of qualifications of France and Lithuania are more comparable to each other, than the structure of qualifications of Austria. The possible reason of this situation is that the qualifications in France and Lithuania are grouped in the similar ways – based on the existing occupations in the sector. The case of Austria is a little bit different - here the basic reference for the grouping of qualifications is based on the levels of skills and types of the performed activities (unskilled, semi-skilled, skilled, specially skilled / auxiliary works, supervision and foreman work). It can be noticed that the qualifications in the construction sector of France are quite narrow and permit holders to execute narrowly specialised work tasks. The main levelling criteria are the requirements posed by the autonomy and complexity of the executed tasks. Autonomy is a very important criteria for higher level qualifications. Despite the fact that the France is the only country which has implemented a formal system for the recognition of non-formally and informally acquired competences and qualifications (validation des acquis de l'expérience – VAE) the formal institutional acquisition of qualifications remains a very important factor of its adherence to certain levels. The structuring of qualifications in the construction sector in Lithuania is rather similar to the structuring of qualifications in France – the qualifications are grouped according to the typical sectoral occupations or fields of activities in the sector. The typology and structure of the occupations in the sector defines the disposition of the qualifications. There can also be noticed some links between the qualifications belonging to the different occupation or their groups – this is a result of the multiskilling of the employees in the sector which was especially enhanced by the recent economical and social changes, challenges of the increasing and intensifying competition on the national and international level and the shortages of the skilled workforce, when the employers were faced with the need to invest in the training of the available employees in order to widen their qualifications and in such way to fill in the skills gaps or to hire and train the unskilled workforce, also paying more attention to the wider and more flexible qualifications. Research in the construction sector of Lithuania, conducted by the group of sociologists from Vilnius University (2007) has disclosed, that the hierarchical structuring of qualifications in the construction sector is defined by the level of the development of the technological (functional) and social (general) competences. Higher level functional knowledge and skills become a very important symbolic capital which opens the wider possibilities for the advancement in the hierarchical structure of the qualifications in the sector. In this sense it can be stated that the structure of qualifications in the construction sector of Lithuania until recent times has been very open (it can be accessible for any workforce independently from their possessed skills and competences due to the practices of the internal training and professional socialization in the enterprises of the sector and provides rather free possibilities for the advancement in the hierarchy of qualifications depending on the employees efforts in the development of the skills and competences at the workplace). Nowadays, due to the crisis in the construction sector and decreasing needs of the workforce this situation changes and the sector again becomes more closed to the workforce which does not have the official (recognized) qualification related to the sector (Professional Standards for Construction, Hotels and Restaurants Sectors, 2008).

3. The main differences and difficulties in comparison of the construction sector qualifications maps appear at the higher level of qualifications. For example, it is rather complicated to find the analogues for the qualifications of the construction engineers and technicians, construction machinery engineers and technicians in Austria (Bauingenieure und Bautechniker, Baumaschineningenieure und Baumaschinentechniker), as well as for the structures of construction sector qualifications in France and Lithuania. Engineers in Austria have to have a diploma either

from a HTL (VET College plus 3 years practice on the job → *Ingenieur*) or Fachhochschule (University of Advanced Study → *Bachelor, Master*) or Technische Universität (Technical University → *Bachelor, Master, Doctor*). The highest level – Zivilingenieur or Architekt (*Civil Engineer, Chartered Architect*) requires a university degree, highly specified work experience and examinations at the Chamber of Architects and Engineers. In France, for example, the closest analogue to this qualification would be a high technician of construction technical-economic engineering (in charge of carrying out the technical-economic feasibility studies concerning the development of construction/installation "project", which includes determining the technical processes, methods of organization, implementation and flow-up of their costs - this includes undertaking, according to experience, related supervisory responsibilities). This example demonstrates, that seeking to understand the differences of sectoral qualifications between countries it is not sufficient to analyse only the maps of qualifications. Such analysis also requires to look more deeply into the structures of the qualifications themselves and to compare these structures of the analogical qualifications of the different countries.

Hospitality sector - Czech Republic, Ireland and Lithuania

Comparing the structure of the qualifications in the hospitality sector of Czech Republic, Ireland and Lithuania there can be discerned the following similarities and differences:

1. With the exception of the case of Lithuania the sector of hospitality is a medium and low skilled sector, dominated by the qualifications demanding vocational education and training.
2. The structure of the sector in terms of qualifications is quite similar and easily comparable between the analysed countries, especially in the part of lower levels of qualifications.
3. More complicated cases of comparison are encountered when comparing the qualifications of the higher levels. Here are several examples of this case (table 2):

Compared qualification	Czech Republic	Ireland	Lithuania
Senior cook (chef)	<p><i>Head of production – head chef</i></p> <p>Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information, evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, etc.</p>	<p><i>Cook</i> (cooking and finishing off the dishes, maintaining hygiene in the kitchen, planning and organization of the work in the kitchen, work with documents)</p>	<p><i>Chief of the kitchen</i> (cooking and finishing of the dishes, planning and organization of the work in the kitchen, keeping the order in the kitchen maintaining of the cleanness in the kitchen, work with documents).</p>
Hotel administrator	<p><i>Management of small accommodation facilities</i></p> <p>Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials and equipment according to desired results, assessment of quality of products and</p>	<p><i>Maitre d'hôtel (administrator)</i> (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees, selling of the hotel services, work with documents)</p>	<p><i>Maitre d'hôtel (administrator)</i> (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees, selling of the hotel services, work with documents). This</p>

	<p>services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, etc.</p> <p><i>Manager of hotel services</i></p> <p>Judging the relevance of specialised information, evaluation of the results of other activities with a view to their application, application of various procedures in response to various conditions and desired outcomes including the social point of view, solving problems related to generalisation and abstract thinking, integration of specialised knowledge in problem solving, suggestion of new procedures and products. Leadership of a team in complex professional activities in unpredictable conditions.</p>		<p>activity includes exercise of complex tasks in the context of work with unpredictable change applying comprehensive, specialised, factual and theoretical knowledge and a comprehensive range of practical skills and experience in the field.</p> <p><i>Chief maître d'hôtel (senior administrator)</i> (management and coordination of the activities of other employees, selling of the hotel services, work with documents, meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay). This activity includes management of complex organizational and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of principles.</p>
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Table 2. Comparison of the descriptors of hospitality qualifications in Czech Republic, Ireland and Lithuania

This comparison shows that it is quite difficult to compare these qualifications, because the descriptors are of the different level of comprehensiveness and put the accents on the different combinations of knowledge and skills.

Comparison of the structures of qualifications in the sectors of construction and hospitality of Austria, France, Lithuania, Czech Republic and Ireland

Comparing the structures of qualifications in the sectors of construction and hospitality in the project partners countries there can be discerned the following similarities and differences which influence the comparability of the contents of qualifications from the different sectors and countries:

1. Similarities, which increase the comparability of the contents of qualifications between countries:

a. The structure and contents of qualifications in the analysed countries are based either on learning outcomes or competences. In France, Austria, Czech Republic and Lithuania the contents of qualifications is described using competences, Ireland – in terms of competences and learning outcomes.

b. There can be noticed some similarities between the countries in terms of the applied typologies of competences. These similarities are noticed in the descriptors of qualifications of Lithuania, Czech Republic and partially Austria. In these descriptors there can be found functional, cognitive and general competences. Descriptors of qualifications from France use a little different typology of competences, but it can also be comparable with the proposed typology of functional, cognitive and general competences: technical core competences correspond to functional competences, capacities (cognitive, social and physical), correspond to cognitive and general competences, associated transferable competences correspond to the functional, cognitive and general competences which can be applied in the different work contexts and workplaces. The case of Ireland is more complicated and different, despite the fact, that the descriptors of qualifications of Ireland use the strands which by contents correspond to the proposed typology of competences: knowledge corresponds to the cognitive competences, know-how and skills correspond to the functional competences, competences correspond to the general competences.

c. The contents of the qualifications of the similar levels is quite similar in terms of the autonomy and complexity of the tasks and required competences or learning outcomes. These similarities are very clear from the comparison of the descriptors of qualifications of construction sector of Austria, Lithuania and France (similar work tasks and competences) and of the descriptors of hospitality sector of Czech Republic, Ireland and Lithuania.

2. Differences, which complicate comparison of the contents of qualifications between countries:

a. Differences caused by the different specific characteristics of the system of activities and vocational training. These differences are particularly evident analysing the

descriptors of Austria and Ireland. In the Austrian case it is quite robust structure of the *Hochbauer* and *Tiefbauer* qualifications, in the case of Ireland it is the flexible structure of the descriptors of qualifications based on the units, modules and learning outcomes. The specific qualifications as *Hochbauer* and *Tiefbauer* can pose the problems in finding the analogues in the other countries, while the flexible structure of the qualification like in Ireland is more easily comparable (but also can create some problems in comparison), because it permits a very wide variety of the possible sets of learning outcomes which make up the contents of qualification.

b. Differences in structures of qualifications caused by different approaches to the structural parts of qualifications and their classification. For example, in the case of Austria competences are described in the integrated way as the units of qualification without the differentiation in the types, for example: *knowledge of the types, qualities, formats and applications of the natural and artificial stone; to install the connection structures suitable for the different types of walls; to construct the walls and masonry elements (Kenntnis der Arten, Eigenschaften, Formate und Verwendung natürlicher und künstlicher Steine; Einsetzen der richtigen Verbandsarten für Wände aller Art; Herstellen von Wänden und Mauerwerksteilen; Herstellen von Ausmauerungen)*. In the case of Ireland, the qualifications are described using complex structure based on competences, units of qualifications, modules and derived learning outcomes. There are also the above mentioned differences of the typologies of competences (the case of France). These differences pose certain difficulties in comparing the qualifications of the different countries, but they do not prevent from the comparison based on the analysis of the contents of qualifications in terms of requirements of activities (autonomy, complexity, technological requirements, etc.).

3. There can be noted that the occupational contents of the sectoral qualifications between the countries is rather different, therefore differences arise in direct comparison of qualifications in the sectors of different countries.

Example:

In the descriptions of qualifications in Lithuania there can be discerned the units of qualifications and the functional, cognitive and general competences which compose this unit. It permits to track the changes of the contents of qualifications going from a lower level to a higher level.

In the structure of sectoral qualifications of Austria there can be noted a very comprehensive list of competences composing the qualification with the detailed description of the functional competences (skills) and knowledge, but without clear distinction of these elements.

In the structure of the description of construction sector qualifications in France there can be discerned three types competences structured by the tasks of activities (technical core competences, capacities - cognitive, social and physical and general associated competences).

The above described varieties of sectoral qualifications and their implied challenges in direct comparison of sectoral qualifications between the countries demand for additional measures and instruments which could provide the reference basis for more effective

and smooth comparison of sectoral qualifications between the countries. The next chapter will discuss the possibilities to apply for this purpose the National Qualifications Frameworks and the European Qualifications Framework.

1.2. Referencing sectoral qualifications from one country to the NQF levels of another

Referencing of sectoral qualifications from the one country to the NQF levels of another country involves certain risks and problems for the following reasons:

1. Differences in understanding of the concepts and definitions of qualifications, competences, etc.
2. Differences between the structures of sectoral qualifications and descriptors of the NQF in the other countries.
3. Different principles of structuring and attribution of qualifications to the 'levels' in the sectoral framework and in the NQF.

Even in the cases when it seems possible to attribute sectoral qualifications to the NQF levels of the other country, such attribution involves a high risk of mistakes and misunderstandings. Due to these reasons, this possibility of referencing will not be further explored or analysed in this project.

1.3. Referencing sectoral qualifications to EQF levels without referencing these qualifications to NQF levels in the country of origin

Referencing of sectoral qualifications to the levels of the EQF without referencing these qualifications to the levels of the NQF of their origin country can be executed in different ways. One of possible ways is the restructuring of sectoral qualifications according to the structure of the EQF descriptors.

The structure of the EQF descriptors (knowledge, skills, competence) in principle can be applied for the comparison of sectoral qualifications of different levels. The main difficulties and problems in using this structure arise in comparing the levels of knowledge and competence. EQF descriptors indicate the factual and theoretical knowledge, but the descriptors of sectoral qualifications of the countries very often integrate the knowledge with the cognitive skills and stress the abilities to apply knowledge in the different work situations and environments.

Project partners tried to use the structure of the EQF for the comparison of qualifications in the construction and hospitality sectors in 5 countries.

Each partner selected two qualifications in their analysed sectors for this research.

Partners from Austria, France and Lithuania compared the following qualifications in the construction sector:

Austria	France	Lithuania
Supervisor of building site / foremen Bauvizepolier, Bau(haupt)polier, Bauleiter (NQF 4, 5 ?)(EQF5)	Supervisor of building site preparation work operations (EQF4, FQF3)	Supervisor of the general construction works (organization of the execution of works in the workplaces, analysis of technical documents)/ Foremen (EQF5, LNQF5)
General construction works manager of the site Bauleiter von Grossbaustellen (EQF 6) (NQF 6 ?)	High technician of construction technical-economic engineering (EQF6, FQF3)	General construction works manager (EQF6, LNQF6)

Partners from Czech Republic, Ireland and Lithuania compared the following qualifications in the hospitality sector:

Czech Republic	Ireland	Lithuania
Head of production - head chef level 4 EQF	Culinary specialist level 3 EQF	Head chef level 4 EQF
Manager of the food preparation and serving sector level 5 EQF	Professional cook level 5 EQF	Production manager0 executive chef (culinary shop) level 5 EQF

Although in general there were no essential obstacles in applying the structure of EQF descriptors for the restructuring sectoral qualifications for the purpose of their comparison, the following difficulties were noted:

1. The original descriptors of qualifications in many cases describe knowledge, skills and competence in the combined units or combinations. Therefore splitting of these combinations according to the structure of EQF (knowledge, skills and competence) is rather difficult, subjective and questionable. For example, the description of knowledge in the descriptor of Austria stress the skillful application of the knowledge in the work process, making the underpinning knowledge the basis of the qualification and expertise of the supervisor. The skills in the descriptor of France and Austria are of a bit higher cognitive level, than the skills in the descriptor of foremen of Lithuania (to design the installation of construction site...) ensuring higher autonomy and responsibility of employees. The skills description in case of Austria is more comprehensive and holistic (there can be noticed very organic liaisons between the skills and underpinning knowledge). The same is applied for the description of knowledge of the Bauleiter von Grossbaustellen in case of Austria. The underpinning knowledge of this qualification is much more heavily based on knowing, understanding and applying of the different standards, norms, legal requirements and other external formal references than in the descriptors of France and Lithuania.

2. Similar problems occurred with the comparison of skills, because original descriptors stress rather different orientations and types of the skills: while in the descriptors of the manager of the food preparation and serving sector qualification in the Czech Republic managerial skills clearly dominate, in the description of the production manager/executive chief qualification in Lithuania and professional cook in Ireland the managerial skills are defined much less extensively. Instead, the practical skills which are needed in the production process are dominant. This creates problems in comparing these qualifications, because the skills described in the Czech descriptor only partially corresponds to the skills of the production manager/executive chief from Lithuania and professional cook from Ireland.

3. Descriptions of the competences also differ: in the descriptor of Lithuania and Ireland competences are expressed as a wide range key skills (abilities) and personal qualities, which are applied in the activities not specifying the tasks, while in the descriptor of Czech Republic several general competences are indicated and their application in different activities are given in a detailed manner.

The structure of the EQF descriptors (knowledge, skills, competence) in principle can be applied for the comparison of the sectoral qualifications of different levels. The main difficulties and problems in using this structure arise in comparing the levels of knowledge and competence. EQF descriptors indicate the factual and theoretical knowledge, but the descriptors of sectoral qualifications of the countries very often integrate the knowledge with the cognitive skills and stress the abilities to apply knowledge in the different work situations and environments. Dissecting the knowledge from the cognitive skills and the conditions of their application in the process of comparison can distort the understanding of the level of this knowledge. Similar problems are encountered in comparing general skills and abilities related to competence in terms of responsibility and autonomy. Autonomy and responsibility

depends not only on the general skills and abilities but also on the knowledge and skills levels. Therefore it is very complicated and risky to dissect the general skills and abilities from the knowledge and functional (practical) skills in comparing qualifications.

Referring to the previously discerned two dimensions of the comparability of the sectoral qualifications (the structures of the sectors of construction and hospitality in terms of qualifications and the structures of the qualifications in these sectors) the relationship between these two dimensions can be helpful for the evaluation of the comparability of sectoral qualifications and for the assessment of the potential of the EQF in the comparison of sectoral qualifications. There can be discerned the following typical cases of comparability for the each above mentioned dimension:

a. Comparability of the structures of sectors in terms of the qualifications.

1a. Smooth comparability of the structures of sectors in terms of the qualifications because of the similar occupational structure of the sectors and similar dispositions of the hierarchies of qualifications in the compared sectors (construction and hospitality sectors of Lithuania, Czech Republic, Ireland, France). This is especially valid for the areas of the lower levels of qualifications in the sectors. The possible reason of this situation is that the qualifications the sectors of these countries are grouped referring to the existing occupations in the sector.

2a. Comparison is possible, but due to the differences in the occupational structure and hierarchical structuring of qualifications caused by the different paths of development of the sectors in the compared countries, the application of certain methodical measures for referencing are required. This is the case for Austria, where the basic reference for the grouping of qualifications is based on the levels of skills and types of the performed activities (unskilled, semi-skilled, skilled, specially skilled / auxiliary works, supervision and foreman work). Similar problems are encountered in comparing the higher level qualifications and their groups between the countries, when it can be difficult to find analogues of qualifications between the countries.

b. Comparability of the structures of qualifications in the sectors.

1b. Smooth comparability due to the similar structure and contents of qualifications, when the structure and contents of qualifications in the analysed sectors are based on learning outcomes or competences and when the applied typologies of competences are similar between the sectors in the different countries (the case of Lithuania, Czech Republic and partially Austria).

2b. Comparison requires additional efforts and methodical aids, because of the differences of the structure and contents of the descriptors of qualifications in the sectors and countries (differences of the descriptors of qualifications in France, Ireland, Lithuania and Austria). These differences are caused by the different specific characteristics of the system of activities and vocational training or by different approaches to the structural parts of qualifications and their classification.

The relationship of these dimensions creates certain sets of conditions for the comparison of sectoral qualifications and for the application of the EQF in the comparison of sectoral qualifications from the different countries (Table 3):

<p>Possibilities of the application of the EQF in comparing the sectoral qualifications</p>	<p>1b. Smooth comparability of the structures of qualifications (the case of Lithuania, Czech Republic and partially Austria)</p>	<p>2b. Comparison of the structures of qualifications requires additional efforts and methodical aids, because of the differences of the structure and contents of the descriptors of qualifications in the sectors and countries (differences of the descriptors of qualifications in France, Ireland, Lithuania and Austria)</p>
<p>1a. Smooth comparability of the structures of sectors in terms of qualifications (construction and hospitality sectors of Lithuania, Czech Republic, Ireland, France)</p>	<p>Sectoral qualifications in the different countries can be compared relatively easy and this comparison does not require additional references and methodical aids. EQF can be used as the reference tool assuring correctness and precision of comparison.</p>	<p>The similarities of the structures of sectors in terms of qualifications permit to ignore the possibilities of the deviations of comparison related to the specificities of the sectors in the different countries. It also makes easier the referencing of the sectoral qualifications of compared countries to the levels. In this situation the EQF can be used as effective translation tool helping to overcome the differences of the structure and contents of the descriptors of qualifications in the sectors and countries.</p>
<p>2a. Comparison of the structures of sectors in terms of the qualifications is possible, but due to the differences in the occupational structure and hierarchical structuring of qualifications caused by the different paths of development of the sectors in the compared countries it requires to apply certain methodical measures for referencing (case of</p>	<p>In comparing the qualifications and defining the correspondence of their levels in the other countries it is important to consider the position of qualification in the hierarchical structure of the "home" sector and its possible equivalent in the sector of the compared country. The EQF becomes an important tool in defining the equivalents of the level of qualification, if the direct definition of the equivalents is not</p>	<p>The most complicated case, because the differences of the occupational structure and hierarchical structuring of qualifications in the same sector between the countries and the differences of the structure and contents of the descriptors of qualifications in the sectors and countries together significantly increases the possibilities of mistakes and deviations in comparing the qualifications. Here this comparison requires extensive study. In using the EQF for the comparison of qualifications it is very important to consider both the influence of the local occupational structure and hierarchical structuring of qualifications to the</p>

the construction sector of Austria).	possible or complicated due to the important differences in the occupational structures of sector in the different countries.	knowledge, skills and competence (in terms of autonomy and responsibility) of the compared qualifications, as well as to consider possible deviations in defining the equivalents of qualifications from the differing structures of their descriptors.
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Table 3. Relationship of the dimensions of the comparability of the sectoral qualifications and the possibilities for the application of the EQF in comparing the sectoral qualifications

1.4. Compatibility and comparison of sectoral qualifications between countries with the intermediation of NQFs of these countries and the EQF

In this case one of the most important factors of comparability of sectoral qualifications is the compatibility between the criteria for the referencing of qualifications to the levels of NQF and the contents and structure of qualifications in the sectors.

How does the structure of sectoral qualifications correspond to the criteria of the NQF levels at the conceptual level? How compatible are the elements of sectoral qualifications (competences, learning outcomes, units of qualifications) and the criteria of referencing of qualifications to the levels of the NQF? The bigger these differences are, the higher are probabilities of deviations in adhering sectoral qualifications to the levels of NQF.

1.4.1. NQFs in the comparison of sectoral qualifications between countries: problems and solutions

Referencing sectoral qualifications to the levels of NQF incurs the inevitable deviations and losses of accuracy of information about the contents of qualifications, because this referencing takes into account mainly those characteristics of the contents of qualifications which can be 'measured' and 'assessed' according to the logic and criteria of levelling of the NQF. Therefore the characteristics and elements of sectoral qualifications which do not fit to the logics and criteria of the NQF levels can be ignored or not taken into account, whatever their weight and importance for the leveling of qualification to the hierarchy of qualifications in the sector or in the field of professional activity. The referencing of sectoral qualifications to the NQF and levelling of these qualifications according to the NQF can reduce and simplify the information about the contents and characteristics of qualifications, i.e. about the requirements of qualifications for the knowledge, skills and abilities, which are defined by the characteristics of activities. Why can this happen? The possible reasons are the differences in the underlying characteristics and principles of the structuring of qualifications in the sectors and the National Qualifications Frameworks:

Structuring of sectoral qualifications according to the requirements and specifications of the professional activities of the sector	National qualifications frameworks (Young, 2005)
<ul style="list-style-type: none"> • developed in response to the specific technological, organisational and cultural needs and specifications of the work in the sector; • developed incrementally, applying adaptive and evolutionary approach, considering the existing context of social and labor and training relations in the sector; • based on the shared input from the employees, employers, providers of qualifications and other stakeholders of the sector; • (some) qualifications (sometimes) are tied to the diverse traditional and institutionalized forms and ways of provision specific to the sector ; • based on more or less stable and mutually recognised balance of influences, functions and powers of stakeholders of sector influenced by the traditional ways and forms of the designing, provision and awarding of qualifications; • permits the diversity of qualifications depending on the specifications of the sector of activities and the forms of the acquisition; • designing and development of new qualifications is based on the existing actual needs of sector. 	<ul style="list-style-type: none"> • developed from a national decision to establish a common framework of qualifications; • developed applying reformative (innovative) and /or revolutionary approach, very often ignoring the existing socioeconomic and cultural context and leading to the disruption or significant change of the existing paths of institutional development in the designing, provision and awarding of qualifications; • based on the top-down initiatives and centralized approach in designing and implementation of the framework; • implies changes of influences, functions and power relations of stakeholders involved in the processes related to qualifications; • establishes commonality across different qualifications and specifies qualifications in terms of standards, levels and outcomes; • implies presence of qualifications at any level and in all sectors regardless of the existence of need for them.

Table 4. Differences in the underlying characteristics and principles of the structuring of sectoral qualifications and the National Qualifications Frameworks

These differences of the underlying characteristics and principles of the structuring of sectoral qualifications and the NQFs can be partially explained by the different ways of evolution and development of the structuring of qualifications in the sectors and on the national level (Fig.3). The sectoral structuring of qualifications is traditionnaly more

oriented to the demand of skills, while the NQFs are oriented to the supply side – the systems of VET, higher education and continuing training. The structuring of qualifications in the sectors and enterprises come from the needs and requirements posed by the work organisation, job designing models, human resource management and development (continuing vocational training). Seeking to increase the effectiveness of these measures in coping with the challenges of competition enterprises and sectors design and implement the instruments for the standardisation and regulation of skills, like sectoral qualifications and their frameworks. Designing and implementation of the NQFs is more decided and influenced by the formation of the skills development policies on the national level (policies and strategies of VET and higher education and educational reforms). Governments seek to reform the provision of education striving to increase its responsiveness to the labour market needs and socioeconomic changes. Here come the initiatives to create and implement the instruments of standardisation and regulation of skills on the national level – National Qualifications Frameworks, national occupational standards etc.

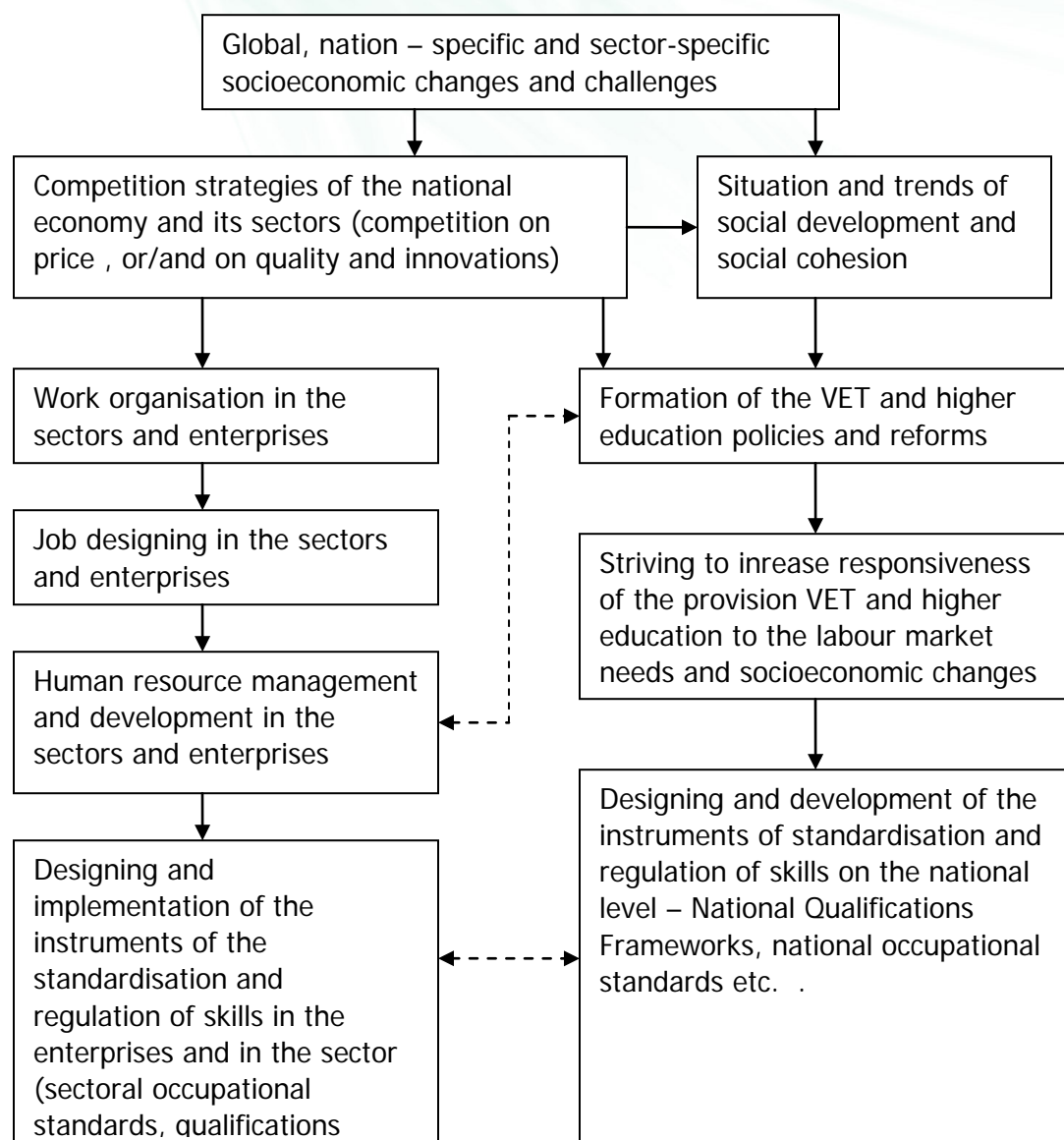


Fig. 3. Setting of sectoral and national instruments of skills development

Here we will examine the cases of Austria, France, Ireland, Czech Republic and Lithuania trying to find out the main problems and challenges related to the existing or potential roles and functions of the NQF's as the instruments facilitating international comparability of sectoral qualifications. Before analysing these cases it is necessary to consider, that only Ireland and France already implemented their National Qualifications Frameworks and only Ireland has officially completed the process of referencing their NQF with the EQF. Austria, Czech Republic and Lithuania are still in the process of designing and implementation of the NQF: Czech Republic and Lithuania have already designed their frameworks and are starting their implementation, Austria is in the process of the designing it's NQF.

Austria

Austria currently is in the process of the designing of the NQF. It is intended to design the NQF of 8 levels. It seems that the experts in Austria will refer to the example of EQF in designing of their NQF – at least the current discussions in the sectors of activities permit to draw such conclusion.

Analysing the debates on the NQF and its correspondence to the EQF there can be noticed the following:

1. Presently there is no mutual understanding on the coordination of vocational training levels to NQF level 5-8. University-sector claims levels 6 (BAC) – 7 (MAS) – 8 (PhD) exclusively, whereas the vocational sector prefers the principle of “equivalency not homogeneity”. Also undecided is permeability between vocational and university sectors. Representatives of VET strongly advice to follow the example of Germany to open all the NQF levels (also 6,7,8) to vocational education and training.
2. As it is indicated by the sectoral experts in the discussions of the NQF project, there is no common understanding and concept of the learning outcomes in Austria, which would lead to the operationalization of this concept. Therefore there are no guidelines how the learning outcomes should be defined and formed and what is their place in the descriptors of qualifications.
3. The participants of discussions indicated, that the generalised descriptors of the EQF and NQF will not always correspond to the contents of sectoral qualifications. There are and will be cases, when some leveling and referencing criteria of the NQF or EQF can be applied for referencing of sectoral qualifications, while other criteria can not be applied. For example, the criteria of the competence in the EQF level 4 as “supervision of routine work of others” can not be applied to the corresponding qualification of the electrotechnic sector in Austria, because in this sector the supervision of the work of others requires more work experience, especially in the workplaces with high voltage equipment.
4. There are still disputes about the referencing of some qualifications to the currently designed NQF and the EQF. For example, there are controversies and disputes referencing the qualification of the engineers provided by the higher technical schools (HTL- Ingenieur). Specifics with the Austrian degree of “Ingenieur” presents very illustrative case about the depth of the specificity of the sectoral qualifications and the challenges arising in referencing these qualifications to the NQF and to the EQF. The title of engineer (“Ingenieur”) is awarded to a graduate from HTL (Higher Vocational College) after a minimum 3-year continuing training and experience on the job – but without a further thesis, examination or else. This professional title is awarded by the Federal Ministry of Economy, Family and Youth. The representatives of the higher schools of construction argue for the referencing of this qualification to level 6, stressing the weight of competences gained during the 3 year practical training. The University sector does not agree with this argument, stating that there is a lack of credible assessment of competences acquired in the practice. The similar case is with referencing of the higher vocational college leavers qualifications (HTL-Abschluss) and the engineer qualification in the electric industry sector. The representatives of the higher vocational colleges (HTL Elektrotechnik) suggest to classify the qualifications of the HTL graduates

to the NQF- level 5 and the engineer qualification to level 6 like the BAC-degree. They refer to the fact, that these qualifications in the labour market are considered by employers as almost equivalents. The universities contradict this proposal stating, that the knowledge-base of electric technology studies has significantly expanded and the HTL are not able to provide such theoretical background which is required for the engineers, therefore the HTL schools leavers should complete the bachelor or master studies at the university to receive engineer qualification. Now in the current NQF-discussion it is proposed to put HTL-graduates on NQF- level 5 and qualification of engineer provided by the higher vocational college "HTL- Ingenieur" on level 6. Misunderstanding to non-Austrians occurs, because there still exists the title of diploma engineer ("Diplom- Ingenieur"). This used to be the academic title to graduates of Technical Universities long time ago. Since few years the Austrian Technical Universities also adopted the bachelor (level 6)/ master (level 7)/ doctoral (level 8) degree system. So the old Dipl.Ing is more or less equivalent to masters degree and the old Dr.tech. corresponds to doctoral degree nowadays. To make the things even more complicated there are also qualifications like architect (Architekt), civil engineer (Zivilingenieur), engineer experts (Ingenieurkonsulent) which are awarded by the Federal Chamber of Architects and Engineers and are referred to NQF 8.

Summarising the discussed case there can be listed the following references between sectoral qualifications in construction sector and the proposed NQF levels in Austria:

Higher Education:

Leaver of higher vocational college (HTL- Abschluss) = proposed NQF level 5

Engineer graduated from the higher vocational college (HTL- Ingenieur) = proposed NQF level 6

University degree:

Engineer (Diplomingenieur TU, FH) = old, equivalent to master degree (level 7)

Independent work:

Civil Engineer = Member of Chamber of Architects and Engineers (level 8).

5. Discussions of the sectoral stakeholders in Austria show, that there is strong support for the designing of the NQF which will treat vocational qualifications on an equal basis with academic qualifications and higher education degrees. For example, experts from the construction sector strongly support the proposal to reference the qualification of the civil engineer to level 8 (the same level as PhD) due to the fact, that this qualification is achieved by university graduates only after the long practice and difficult examinations and in comparison to the PhD graduate, the civil engineer will have more highly developed skills and competence, while the PhD degree holder will have a more highly developed knowledge dimension. The stakeholders of the sector stress that the NQF should treat the learning outcomes acquired in the work experience and formal training on an equal basis. They stress that the criteria of professional activity in the sector are of equal weight and importance for the referencing of qualifications to the levels of the NQF as the criteria of formal education and training. Such approach is very favorable for the approaching of the criteria and logic of structuring of qualifications in the sectors and the criteria of leveling of qualifications in the NQFs. However it also creates several challenges: (1) how to integrate the different approaches of the sectors in structuring of qualifications and valuing the knowledge and practical experience in

setting of the levels of NQF, and (2) how to ensure the comparability of referencing of qualifications to the NQF's of the other countries which do not take such approach of equivalency between academic and vocational qualifications and reserve the top levels of the NQF for the academic qualifications and degrees.

France

The situation of the NQF development in France can be defined as transitional. From the one side there exist many different tools for the structuring of qualifications on the national level, such as the structure of the 6 education levels established in 1969 and the National Repertory of Qualifications established in 2002 which includes all the qualifications delivered in France. From the other side, the introduction of the EQF induced the process for the revision and further development of the existing structure of education levels. A working group has been constituted with representatives from VET stakeholders, employers, officials from different ministries including the Ministry of Education and the Ministry of Labour, social partners and with statistics institutions in order to develop a common methodology for all French sub-systems, including Higher Education, to link the National Qualifications Framework (NQF) to the EQF. The referencing of sectoral qualifications to the EQF using as intermediation tool the education levels established in 1969 is quite complicated due to the several reasons:

1. The hierarchy of qualifications in the above mentioned structure of education levels is based on the hierarchy of formal initial education and training attainments with their strict attachment to the training institutions and the importance of the duration of training. Therefore this "educational framework" needs some translation tool in order to ensure its 'communication' with the learning outcomes based EQF. The example of such translation, developed by the National Commission of Vocational Qualifications of France (CNCV – Commission Nationale des Certifications Professionnelles) can be found in the report made by M'Hamed Dif (BETA) "Analysis of the compatibility of the designed national qualifications frameworks of France with the EQF".

2. There is a lack of clear correspondence between the levels of the EQF and the framework of education and training of France in the cases, when the level of the education and training of France can be referred to the several levels of the EQF (for example, level 5 corresponds to the EQF levels 1,2 and 3, level 1 – to the EQF levels 7 and 8).

Ireland

The referencing of the NQF of Ireland to the EQF was officially completed in June 2009. In general there is a rather smooth compatibility of the NQF of Ireland with the EQF levels both in terms of the structure of descriptors and in terms of conceptual backgrounds. The NQF levels are described more comprehensively than the EQF levels, what ensures better possibilities for more precise and exact matching of the NQF levels with the EQF.

Relatively high correspondence of the NQF descriptors to the requirements of sectors and sectoral qualifications was achieved by the wide consultations with the different sectoral

stakeholders in the process of development and implementation of the NQF. The sectoral stakeholders were also actively involved in the process of the referencing of NQF to the EQF. However, there are some evidences about the problems and challenges of the referencing of Irish sectoral qualifications to the NQF of Ireland and to the EQF. Here is the quotation from the National Report “Referencing of the Irish National Framework of Qualifications (NFQ) to the European Qualifications Framework for Lifelong Learning (EQF)”, which illustrates these challenges:

A matter of concern to certain Irish stakeholders is how sectoral qualifications/frameworks, particularly those that transcend national boundaries and which comprehend qualifications made by vendor bodies that are not sanctioned by public authority, will relate to the EQF. In broad terms, there is general support that such qualifications should be accommodated in national qualifications frameworks and the EQF, but no clear view as yet as to what mechanism should be used to achieve this. It seems that the key question that needs to be addressed is whether such sectoral qualifications/frameworks should be accommodated via inclusion in or mapping to one or more national frameworks and then referenced to EQF, or directly by inclusion in, or mapping to EQF, and back referencing to the national systems. Either way, a key issue that will need to be addressed is how external quality assurance – in a manner that would satisfy the national authorities – would apply to such sectoral qualifications/frameworks in order to facilitate their recognition through national qualifications frameworks and EQF. (Referencing of the Irish National Framework of Qualifications (NFQ) to the European Qualifications Framework for Lifelong Learning (EQF), 2009).

Other potential source of problems in referencing sectoral qualifications of Ireland to the NQF and the EQF is the referencing of the levels 7 and 8 of the NQF to the level 6 of the EQF and the referencing of the levels 1 and 2 of the NQF to the level 1 of the EQF, when the several levels of the NQF are referred to the one level of the EQF.

Czech Republic and Lithuania

The cases of the Czech Republic and Lithuania are very similar in many aspects: both countries are designed their NQFs and are in the initial stage of their implementation, in the Frameworks of both countries the levels are described on the basis of competences, both countries designed their NQFs under the strong influence of the EQF. For these reasons there are no significant formal obstacles or problems in referencing of the NQF levels of these countries with the EQF. Looking more attentively to the NQF design of these countries, the following aspects which can influence the referencing of the sectoral qualifications to the NQFs and the EQF can be noted:

1. In the NQF of **Czech Republic** there can be noticed some attempts to approach the specificities of sectoral qualifications with the generalised design of the NQF by introducing the partial qualifications and typical positions. As it is stated in the document “A Proposal for the Concept, Structure and Processes of the National Qualification Framework (2007) National Qualifications Framework Team, Prague” the partial qualification defines the set of knowledge, skills and abilities which are needed for the

specific job positions and work tasks and in the most cases acquired in the process of continuing training. Partial qualifications should facilitate the establishment of more "flexible" qualifications framework, better corresponding to requirements from the world of work (i.e from the sectors of professional activities):

A partial qualification is the basic NQF unit. When we describe qualification areas, we should always start with the enumeration of partial qualifications because the partial qualifications

correspond to requirements from the world of work. (A Proposal for the Concept, Structure and Processes of the National Qualification Framework , Prague, 2007)

A typical position is defined as *"only a source of activities or competencies (abilities) for delimiting a partial qualification. A partial qualification can be, but need not be equivalent to a typical position."*

It is understandable, that these measures should increase the compatibility of the NQF with the specific requirements of the sectors and sectoral qualifications. However, there are not yet any empirical evidences, how the introduction of partial qualifications and typical positions will affect these issues.

2. The designing of the NQF in **Lithuania** took the adaptive approach and did not challenge or have ambitions to make radical changes to the existing system of qualifications. The possible reason of such an approach was the domination of experts from the educational institutions with strong and clear approaches towards the qualifications. There was quite strong orientation to European Qualifications Framework to this adaptive approach. The design of the NQF in Lithuania coincided in time with the designing of the EQF, therefore it was not rational and even possible to avoid the references to the EQF.

Overall representation of the all social stakeholders in the designing of NQF was quite incomplete: strong representation of the experts from the VET and higher education, involvement of some employers organizations and the absence of trade unions.

The selected criteria which define the levels of the NQF have no evident origins from the requirements and conditions of the occupational sectors and world of work. There can be noticed that sometimes the descriptors of levels and structuring of levels are too robust and mechanistic, creating the lack of flexibility and incurring potential problems, when the characteristics of activities and their demands of competences in case of one qualification are very wide and can be referred to the different levels of qualifications. One of the main weaknesses of the overarching and comprehensive framework lies in the principal impossibility of this framework to grasp the rich variety and constant changeability of the qualifications, especially in the sectors which require high skills.

There is unsolved problem with the level 5, which is some kind of intermediary level between the 'vocational qualifications' (levels 1-4) and the 'higher education qualifications' (levels 6-8). Level 5 represents the qualifications for the activities related to autonomous work organization of skilled workers and management of the technological processes (for example, supervisors and technicians). Initially it was suggested, that these qualifications can be acquired through the short study cycles (up to 2 years) in the colleges. As far as there are no intentions to introduce these short

study cycles in the nearest future, at present there are no VET or higher education institutions which provide such qualifications, despite the fact that there is rather big demand of these qualifications in the labor market. These qualifications currently can be acquired only through the informal and experiential learning, but the complexity of the activity at this level requires specific knowledge and cognitive competences, which can be effectively acquired only in formal training and learning.

Reform of VET and incurred transformations of VET system in Lithuania enhanced rather intensive changes of the VET institutions – providers of qualifications. Therefore in the sectors of activities there are quite a lot of different qualifications, which are not provided today by the formal establishments, but they still ‘circulate’ in the labor market. These are the qualifications provided in the Soviet period, qualifications of the superior vocational schools which were later reformed to colleges and other different degrees and qualifications. The challenging question is how to integrate such qualifications without providers in the currently introduced NQF.

1.4.2. Involvement of sectoral stakeholders in the referencing of sectoral qualifications to the NQFs and to the EQF

The involvement of sectoral stakeholders in the referencing of sectoral qualifications to the levels of the NQF has a crucial impact for comparability of sectoral qualifications between the countries by referencing these qualifications to the NQFs and to the EQF. If this referencing is performed only by the experts of the NQF without the participation of the sectoral experts or with very limited their involvement, there can arise potential risk, that activity specific criteria for the structuring of knowledge (especially tacit knowledge), skills and key skills are ignored or underestimated, if these criteria do not correspond with the criteria prescribed by the NQF descriptors.

One of the possibilities to avoid the mistakes in comparing sectoral qualifications between the countries through their referencing to the NQF's of the responding countries and to the levels of the EQF is active involvement of the different sectoral stakeholders – employers associations, professional bodies, trade unions of the concerned sectors. The main reason, why such involvement is so important is that they can ensure the higher and better respect of the specific sectoral requirements and criteria for the levelling of qualifications in the process of comparison and referencing of sectoral qualifications to the levels of the NQF and the EQF. Therefore the effectiveness and reliability of comparison of sectoral qualifications between the countries depend on the trust between the sectoral stakeholders and the authorities managing the NQFs in the compared countries. Here there can be encountered interesting trust-building situations, because the sectoral bodies and stakeholders from the different countries can have a higher trust to each other, than to the specialised national authorities responsible for the awarding of qualifications and attribution of these qualifications to the NQFs.

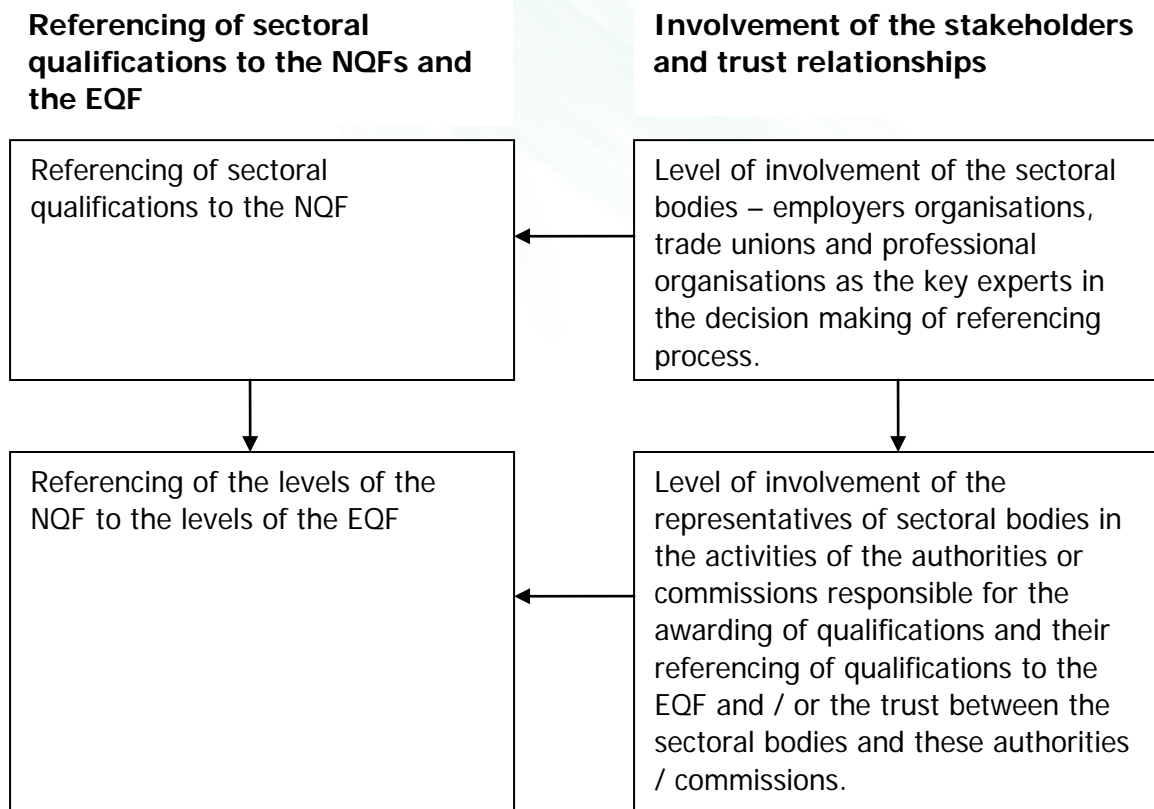


Fig 4. Trust relationships in the comparison of sectoral qualifications by referencing to the NQFs and the EQF

The trust between the stakeholders and state authorities in the process of referencing of sectoral qualifications to the NQFs and the EQF depends on many factors, but the level of involvement of these stakeholders in the processes is one of the most important. In this regard the situation in the different countries and even sectors can differ very significantly. Even the general trust relationships between the sectoral organisations of employers and trade unions, VET and higher education institutions and the state authorities responsible for the regulation and governance of the national system of qualifications can have very different qualities and level of development in the different countries. Such trust is established and developed through the processes and experiences of everyday cooperation between the stakeholders in the processes of designing and provision of qualifications, assessment of competences, awarding of qualifications. Therefore the level of trust very much depends on such factors as the models of the VET system, 'varieties of capitalism' and models of the public governance in the different countries. For example, there can be expected, that such trust would be higher developed in the dual model of VET and in the coordinated market economy, than in the market based VET and liberal market economy (Debating Varieties of Capitalism, 2009). This trust is also interdependent with the level of involvement of the social stakeholders in the design and implementation of the NQF and their roles in these processes. From the one side, weak general trust relationships between the sectoral organisations, providers of qualifications and state authorities lead to the weak level of

involvement of the social stakeholders in the processes of the design and implementation of the NQF increasing the centralised influence of state authorities in these processes and decreasing the trust of social stakeholders and society to the NQF. From the other side, well established and strong trust relationships between the social stakeholders and actors of the national systems of qualifications become the basis for the active involvement of the all stakeholders in the design and implementation of the NQF and increase the trust of all social stakeholders and society in the NQF. Involvement of the sectoral stakeholders in the design and implementation of the NQF can also become a very important factor of their competences and know-how in the fields of qualifications, the frameworks of qualifications and the referencing of sectoral qualifications to the NQF and the EQF.

1. Level of involvement of sectoral bodies – employers organisations, trade unions and professional organisations as the key experts in the decision making of referencing sectoral qualifications to the NQF. Sectoral stakeholders can be involved in the decision making of referencing sectoral qualifications to the NQF in different ways – by participating in the designing of occupational standards, awarding of qualifications etc. Their role can differ from the expert role in the decision making to the formal consent and approving of the solutions proposed by the governmental institutions, which regulate the system of qualifications. This will have the different influence to the comparability of sectoral qualifications between the countries through the referencing of these qualifications to the NQFs. If the sectoral stakeholders are very weakly involved in the decision making of referencing sectoral qualifications to the NQF with the role of formal consent or approval of solutions proposed by the government institutions of the involved countries, there is a high probability, that the proposed references of sectoral qualifications in the NQFs will not be equivalent and will not be trusted by the stakeholders themselves in the involved countries. Similar outcomes can be expected if the involvement of sectoral stakeholders in referencing the sectoral qualifications to the NQF is weak and too formal only in the one of involved countries.

2. Level of involvement of the representatives of sectoral bodies in the activities of the authorities or commissions responsible for the awarding of qualifications and their referencing of qualifications to the EQF. This involvement is important for the two reasons:

- To ensure the equivalence of referencing national qualifications levels and sectoral qualifications to the EQF by providing their expertise and knowledge of the contents of sectoral qualifications in the process of referencing; it requires active and intensive participation of sectoral stakeholders in discussing the correspondence of the levels of the NQF with the EQF levels considering the positioning of sectoral qualifications in the NQF.

- To create and strengthen the trust of sectoral employers and employees in the process of the referencing of sectoral qualifications to the NQF and to the EQF; for this purpose only the fact of the involvement and participation of the sectoral stakeholders in the process of the referencing of NQFs to the EQF can give the initial impulse for the building of trust of sectoral employers and employees in the EQF.

2. Potential of the EQF to be an effective measure for the comparison of sectoral qualifications

Referring to the executed project research activities there can be discerned the following possibilities of the effective use of EQF for the comparison of these qualifications:

1. One of the potential problems in referencing sectoral qualifications to certain levels of the EQF is that the characteristics of the autonomy and responsibility sometimes are not sufficient for this purpose, and the characteristic of complexity of activity is not explicitly reflected in the EQF descriptors. For example, in the case of Austria such problem can be noticed in referencing the qualifications of construction engineers and technicians, construction machinery engineers and technicians, accounting and purchasing specialists. These activities are rather specialised and require autonomous and responsible work according to the general requirements and standards, but one of the main parameters distinguishing the levels of these qualifications is the complexity of activity. One of the challenges and problems in the international comparison of the sectoral qualifications is consideration of the fact, that occupational criteria defining the qualifications in the sector and referencing the qualifications inside of the sector can be different in the compared countries. These differences are influenced by the different evolution of the occupations in the countries, differences in the technologic specifications of work, work organisation, different structures of the enterprises and workplaces, and the differences in the pathways of the skills development in the different countries. For this reason the contents of the qualification with the same title can be rather different between the countries.

2. Some difficulties appear in the cases when the descriptors of compared sectoral qualifications seem to have more or less different structure from the structure of the EQF descriptors. This is the case of the descriptors of qualifications in France. Here the qualifications are described basing on the typology of the technical core competences, corresponding to functional competences or skills, capacities (cognitive, social and physical), corresponding to cognitive and general competences, or knowledge and competence and associated transferable competences, corresponding to the skills, knowledge and competence which can be applied in the different work contexts and workplaces. These differences can create the problems related to the different understanding and definition of the described structural parts of qualifications and possible deviations in finding the equivalents between the differently defined elements.

3. Analysing the qualifications of the construction sector and, partially, from the hotels and restaurants sector of Lithuania there can be noticed one rather distinctive and important difference between the contents of qualifications which should be attributed to the levels 3 and 4 (EQF). First of all, the work tasks and competences required for the accomplishment of these tasks in the qualifications of the 3rd level in many cases are less numerous than in the qualifications of the 4th level and the complexity of contents of these tasks and competences is also quite lower in the level 3 than 4. Level 4 qualifications in many cases involve the application of the wider range of

knowledge and skills in the accomplishment of more complex work tasks often related to the wider range of options and variants of the execution and its results. For example, the bricklayer of level 3 makes simple masonry structures of several types (eg., walls), while the bricklayer of the level 4 can make wide range of different masonry structures including the sophisticated options like arches, arched ceilings etc. The further diversification of the variability of work tasks can also be noted in the level 5 but it is not so important and distinctive as between the levels 3 and 4. However, such characteristics are rather weakly represented in the EQF descriptors, i.e. these descriptors lack of the criteria for the levelling of qualifications according to the variability of tasks and their execution and complexity of the activity.

4. The structure of the EQF descriptors (knowledge, skills, competence) in principle can be applied for the comparison of sectoral qualifications of different levels. The main challenge in this field is to use this structure in the integral way (to integrate the descriptors of knowledge, skills and competence) in the process of comparison.

5. Referencing of sectoral qualifications to the NQFs in the countries present multiple challenges and difficulties for the international comparability of sectoral qualifications by using their references to the NQFs and to the EQF. These challenges are related to many factors: the differences in the underlying characteristics and principles of the structuring of qualifications in the sectors and the National Qualifications Frameworks, the differences in the approaches of the NQFs to the sectoral qualifications, different levels of involvement of the sectoral stakeholders in the designing of the NQFs and referencing of sectoral qualifications to the NQFs and to the EQF, etc. Therefore it is essentially important to be aware about these challenges and to seek for the appropriate solutions on how to approach sectoral qualifications and the NQFs in regard to level descriptors, criteria of referencing of qualifications to the levels, as well as in the processes of the awarding and quality assurance of qualifications.

Reccomendations for the policy makers

Evaluating the above described scenarios of inter-country referencing of sectoral qualifications there can be discerned the following opportunities and useful know-how of these scenarios in regard to development of sectoral qualifications, designing of the NQFs and the implementation of the EQF:

1. Direct inter-country comparison of sectoral qualifications without referencing to the NQFs of the involved countries and to the EQF:

The differences of the structures of sectors in terms of qualifications and in the structure of sectoral qualifications have to be taken into account and respected, because they originate from the socioeconomic and cultural evolution of the sectors in the different countries, including the different models of the provision of qualifications. The main scope in setting the instruments for the inter-country comparison of sectoral qualifications should be to distinguish the similarities and differences of these qualifications related to their contexts, but not to 'homogenise' these qualifications seeking to neutralise or abolish the contextual differences, as obstacles for the comparison of qualifications, and, subsequently, for the mobility of workforce. These inter-

country differences of sectoral qualifications are the challenges for their inter-country comparison and the challenges for the mobility of workforce, but in the same time these challenges and difficulties provide the unique possibilities to enrich the human capital by acquiring competences, which are developed in the different sectoral contexts and respond to their specific requirements and conditions. This is the real added value of sectoral qualifications and competences and of the mobility of workforce and learners to their personal and professional development, which would be weakened or lost if the differences of the structures of sectors in terms of qualifications and in the structure of sectoral qualifications between the countries would be reduced.

2. Referencing of sectoral qualifications to the EQF without referencing to the NQFs of the countries:

'Contextualisation' of the EQF in sectoral terms by overwriting it according to the context of the sectors or enriching the current descriptors of levels with the sectoral characteristics of knowledge, skills and competence can be useful and effective practice enhancing the comparability of sectoral qualifications. However, this approach is basically feasible only in those sectors which have developed institutional infrastructure and stakeholders' representation on the European level. If such initiative will be undertaken by the sectoral stakeholders and organisations on the national level, such 'contextualised EQF descriptors' will inevitably more reflect and correspond to the national and not European specificities and characteristics of the sectoral qualifications.

3. Comparison of sectoral qualifications with the referencing through the NQFs and the EQF:

National Qualifications Frameworks create additional challenges and problems for the inter-country comparison and referencing of sectoral qualifications due to the different origins and aims of these instruments. However, in the same time referencing of sectoral qualifications to the NQFs and, subsequently to the EQF, provides important advantage for the inter-country comparison. Despite of the widespread rethorics about

the influence of globalisation to the homogenisation of the contents of qualifications and decreasing role of the formal institutional acquisition of qualifications, the most of qualifications are acquired in the institutions of the national VET and higher education and in the most sectors 'formal' acquisition of qualifications in the national VET and higher education institutions dominates over the non-formal and informal ways. Referencing of sectoral qualifications to the NQFs helps to consider the influence of the national systems of VET, higher education and continuing training for the inter-country comparability of sectoral qualifications. Besides, the NQFs, due to the increasing spread of this instrument, can become the basis for inter-country comparison of qualifications in those sectors, which do not have developed stakeholders structures and institutions on the European level.

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Annex No. 1

**COMPARABILITY OF THE STRUCTURE OF
QUALIFICATIONS IN THE SECTORS OF
CONSTRUCTION AND HOSPITALITY IN AUSTRIA,
CZECH REPUBLIC, FRANCE, IRELAND AND
LITHUANIA**

**Synthesis report of the work package No. 2 (First
Draft)**

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1. METHODOLOGICAL BACKGROUND FOR THE COMPARATIVE ANALYSIS OF THE SECTORAL QUALIFICATIONS BETWEEN THE COUNTRIES AND THE USE OF THE EUROPEAN QUALIFICATIONS FRAMEWORK

Seeking to disclose the possibilities and limitations of the EQF in comparing of sectoral qualifications between the countries there can be discerned the following levels of the comparability and comparison of the sectoral qualifications:

1. Conceptual level is defined by the comparability and compatibility of the main concepts and terms related to qualifications in the sectoral and national contexts. What are the similarities and differences of the concepts of qualifications, learning outcomes, competences, knowledge etc.? The level of compatibility and comparability of these concepts and their understanding by the different stakeholders of the sectors can directly influence the possibilities of the comparison of qualifications, as well as the needs and possibilities to use the reference instruments and measures (like the EQF) in order to improve the common understanding needed for the comparison of qualifications. The more this conceptual level of the sectors in different countries is similar, the easier is to compare the qualifications between these sectors. There can be noticed important influence of the National qualifications frameworks and systems in this field, because in many cases sectors use the concepts and terms elaborated in these systems and frameworks. In such cases it becomes very difficult to discern any purely sectoral approach towards the concepts and terms. In order to implement and to apply EQF as a common referencing tool it is necessary to evaluate the flexibility of the EQF methodological basis and the main grounding concepts.

2. Contextual level: comparability of the sectoral environment and context of designing, provision and usage of qualifications – structure and development of the sectors, the situation of VET and human resource development in the sector, applied policies of skills development, etc. It is important to understand the main factors of the context of sectors, influencing the sector specific characteristics of qualifications as well as those factors which facilitate the comparability of the sectoral qualifications in the sectors of different countries.

3. Contents level is defined by the comparability of the contents of the sector in terms of qualifications (map of qualifications of the sector), as well as the comparability of the contents of sectoral qualifications in terms of their composition of the other units, like competences, units of qualification etc.

Conceptual level of the comparability of qualifications

Can the EQF be the effective instrument of comparison of qualifications in terms of comparability and compatibility of the main concepts and terms related to qualifications in the sectoral and national contexts?

Analysing the basic concepts and terms of the EQF and their capacities to generalize the understanding and interpretation there can be discerned the following concepts and their definitions:

Learning outcomes defined by the EQF as statements of what learner knows, understands and is able to do on completion of a learning process and expressed in terms of knowledge, skills and competence (European Commission, 2008).

Competence defined by the EQF as 'proven ability to use knowledge, skills and personal, social and/ or methodological abilities, in work or study situations and in professional and personal development. In the context of European Qualifications Framework, competence is described in terms of responsibility and autonomy.' (European Commission, 2008).

Qualification by the EQF defined as 'formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards' (European Commission, 2008).

Whereas the concept of qualification does not cause significant controversies in the understanding and interpretation in the different national, sectoral or institutional contexts and does not pose significant challenges for comparison process, this is not the case of the concepts of the competence (and competences) and learning outcomes providing much more space and possibilities for the different interpretations and, subsequently, different applications in the practices related to designing, provision and awarding of qualifications. One of the core and underlying differences in understanding and interpretation of these concepts is the difference in the orientation of the frameworks of qualifications and VET systems towards the performance output or to the attainment of the education and training standards (Brockmann, Clarke, Winch, 2008). These differences are caused by the core characteristics of the VET systems and models and interrelationships between the VET systems and socioeconomical models. The orientation of qualifications frameworks and VET systems towards the performance output is typical for the 'market model' of the VET and liberal market economies (the UK, Ireland). One of the main factors influencing the development of this approach in the 'market model' of the VET and liberal market economies is the orientation to the current needs of the workplace performance and the flexibility of the acquisition of narrow skills needed of the accomplishment of the particular tasks at the workplace. Critics of this approach stress that this approach is based on 'a Taylorist separation of conception and execution, with the NVQ's designers deciding which actions constitute competent performance and candidates simply demonstrating that they can perform actions' (Grugulis, 2007). The orientation towards the attainment of the education and training standards is typical for the school based and especially dual model of the VET and for the regulated market and neocorporativist socioeconomic systems of the 'continental Europe' (Delamare Le Deist, Winterton, 2006, Brockmann, Clarke, Winch, 2008). This approach is based on assumption, that the 'learning process is provided through the curriculum, intended to enhance the value of the labour itself, unattached to a specific output' (Brockmann, Clarke, Winch, 2008) requiring more holistic understanding of the learning outcomes and competences, as well as more attention to the organization and regulation of the process of learning and training basing it on the coordination of the interests of social stakeholders. How these two orientations or

approaches can be reconciled in such a 'meta-framework' of qualifications as the EQF? What are the implications of these differences of approaches for the comparability and compatibility of the sectoral qualifications and for the application of the EQF in this process? In the scientific discussion there can be noticed different answers to these questions. Brockmann, Clarke, Winch state that these approaches are in methodologically incompatible with each other and the EQF can not resolve this problem:

The EQF, or indeed any qualification framework, cannot be used to assess any particular workplace-based performance, but is a template for schemata, which are used to classify performances of a different order. It follows that there must be a structural symmetry between the design of the EQF and the national qualifications for which it is meant to act as a comparator. Currently, however, the EQF retains an ambiguity that different countries may interpret in different ways with some, like Germany regarding it as a comparator of standards and others, like England regarding it as a comparator of learning outcomes. This very ambiguity belies the difficulties inherent in operating such a system when performance is assessed not just according to output in the workplace but according to the development of individual labour through a curriculum and, where something more than narrow task-related skills and basic knowledge is required (Brockmann, Clarke, Winch, 2008).

Bremer notes the problems related to the lack of the quality of the EQF what implies the decoupling of the education and training systems from the vocational requirements (Bremer, 2008). Grollmann doubts whether any generic framework of qualifications 'can actually be applied to the variety of contexts and sectors of education and work'. He states that 'linear grading concept does not depict the reality of solving tasks and coping with challenges in vocational education and the world of work' implying that 'the subjective dimensions and the graduation of levels on which such knowledge and skills are being developed would need to come under scrutiny in relation to the settings in which that learning is taking place' (Grollmann, 2008). Critics note the incoherence of the functions which are prescribed to learning outcomes in the EQF to provide 'a notional progression in which achievement at each level beyond level 1 implicitly presupposes achievement at level 1 and all the levels below the one which is currently being assessed' and 'to provide a means of establishing whether someone has satisfied the criteria at any given level irrespective of their achievements at any other level .' (Brockmann, Clarke, Winch, 2008).

Markowitsch and Luomi-Messerer note that the EQF 'is very much a political/pragmatic tool and not a scientific/empirical tool' implying that its designing and constitution is based on the compromise between the scientific and systematic approach and the political requirements of more pragmatic character (Markowitsch, Luomi-Messerer 2008). Following this approach there can be stated, that the practice of the usage of the EQF in referencing the qualifications can generate the solutions for the existing inconsistencies of the approaches and concepts of learning outcomes and competences.

Analysing this problem of the compatibility of concepts of the competences and learning outcomes there can be discerned the following levels of the formation of these concepts with the specific factors influencing the formation of these concepts at the each level:

- level of the institutions of the work represented by the sector or branch institutions, enterprises, their human resources development policies and strategies and their participation in the designing, provision and awarding of qualifications;
- national level represented by the national policies of education and human resource development, national qualifications systems and frameworks;
- European Union level represented by the EU policies and strategies and their instruments.

At the each of this level the development of the concepts of competences and learning outcomes are influenced by the different compromises between the scientific-systemic approach and the practices of the VET, employment and human resources development.

1.1.1. Level of the institutions of the work in the formation of the concepts

Level of the institutions of the world of work represented by the sector or branch institutions, enterprises, their human resources development policies and strategies, participation of these institutions in the designing, provision and awarding of qualifications. *At this level certain collective concepts of competences and/or learning outcomes are constituted and developed, applied in the representation, defence and implementation of the interests of the different social groups related to work and learning. Here we can discern the concepts of competences of employers (enterprises) and their organizations, unions and other employee organizations, VET and educational institutions.*

There can be proposed the following assumptions about the socioeconomic factors influencing the formation of the concepts of qualifications, competences, learning outcomes and other concepts of the qualifications frameworks:

- The level of organization and development of the social stakeholders: the more stakeholders are organized and their activities developed in the field of education, training and human resources development, the bigger is their influence in the formation of the concepts and terms.
- Proactive approach of the employers and unions towards learning and human resources development. This approach is important to understand the role of concepts and terms.
- The ratio of power of the stakeholders in the branches: more powerful stakeholders (for example, employers organizations) have more influence in the formation of the concepts;

The models of the socioeconomic development of the society, their evolution influence the powers of the social stakeholders and the ways of their relations are very important factors for the evolution of the concepts of competences and learning outcomes at the institutional level (for example, in a liberal model of the welfare state enhances the constitution and development of the concepts of competences and learning outcomes as an instrument of effective human resource management and development; a social democratic model of the welfare state creates preconditions for social stakeholders to understand the competences and learning outcomes more as the possibilities and measures for the development of employment and social cohesion, etc.). Historical evolution of the socioeconomic development of the society plays the most important role here (*theory of the dependence on the path of historical development proposed by Douglass C. North (North 1990).*

Relationship between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts'. At the level of the institutions and branches of the world of work one of the most important factor for the formation of the concepts related to qualifications are the concrete practices of the employment , management and human resources development. These practices have direct impact on the understanding and application of these concepts.

The influence of the practices of the employment, management and human resources development in formation of the concepts' can be noticed by the following factors:

1. Preference to use the term competence instead of the learning outcomes and very strong orientation towards the approach of learning outcomes in the vocational education and training. The term of competence ethimologically is closer to the practical activity and its needs and this makes it more relevant to the institutions and branches of the world of work. In the definitions of the concept of competence there is a very strong emphasis on the origin of the competence from the needs and requirements of the workplace and enterprise, when these are treated like "raison d'être" of the competence:

*"Professional competence is a combination of knowledge, skills, experience and behaviours exerced in the precise context. The competence appears since the **moment of its application in the professional situation**. Therefore it must be designed, evaluated, validated and developed in the enterprise."*

*"Key competences – individual or collective (competences) which **provide to the enterprise the competitive advantage and fit to the core of the work** (individuelles ou collectives sont celles qui donnent un avantage concurrentiel à l'entreprise et qui correspondent au coeur du métier)" (La compétence professionnelle, enjeu stratégique, 1998).*

The similar attitude is expressed towards the qualifications:

Professional qualification ensures the **potential resources** which are **applied by the employee for the disposition of employer**. It is the combination of the knowledge, skills and professional behaviour **recognized as useful and valorized by the profession in the function of typical situations**. (La qualification professionnelle garantit les ressources potentielles mises à la disposition de l'employeur par le salarié. Elle est un socle de savoirs, savoir-faire et comportements professionnels reconnus utiles et valorisés par une profession en fonction de situations types. Elle est indiquée à priori au moment de la conclusion du contrat de travail.) *(La compétence professionnelle, enjeu stratégique, 1998)*

Here it is stressed that the qualification is the potential resource shared by the employer and employee, but defined and recognized referring not to the needs of the concrete workplace but to the value for the occupation, or profession.

2. Stressing of the instrumental character of the learning outcomes, competences and qualifications and their use in the human resource management and development practices.

Learning outcomes should focus on their "usefulness" for employment and employability. (...) This new approach, focussing on competences and no more only on academic titles, should also strongly contribute to reach the parity of esteem and links between VET and general education, in particular with higher education. (...) In order to be fully consistent with the learning outcomes approach, the logic should be based on professions and work organisation and not on the results of academic input orientated system. (UEAPME, 2006)

The instrumental character of the concept of competence is disclosed through the use of this concept for the management of the individual performance in work organization and human resource management:

*Competence is the **construct which permits to explain the differences of the individual performance**. (La compétence est une construction qui permet d'expliquer des différences individuelles dans la performance).*

*Application of the competence permits to **respond to the requirements of flexibility and reactivity** due to:*

- *the **new forms of the work organization**,*
- *the modernized and operational **human resource management***

(L'utilisation de la compétence permet ainsi de répondre à des impératifs de flexibilité et de réactivité grâce à :

- *de nouvelles formes d'organisation du travail,*
- *une gestion des ressources humaines modernisée et outillée.) (La compétence professionnelle, enjeu stratégique, 1998)*

3. The recognition, that the individual /employee is the solely responsible for the development of his/her competence, leaving for the employers only the responsibility to stimulate and to help individual to achieve it.

What is very important to emphasize here is that no-one but the individual can be responsible for his or her competence development. It is not the case any more that management thinks for the employees and tells them what they should learn and whether they should learn. Every individual must continuously be hunting for new competence, and the management responsibility is to stimulate this and to make it possible when the proposals come. (...) more and more people should be paid according to what they can do and not according to what, at a certain moment, they do. (<http://www.lifelonglearning.co.uk/conference/sp08-rl.htm>)

4. In the countries with the dual system of vocational education and training, the institutional and sectoral approaches to the concepts of competences and learning outcomes are much wider and based on the balance between the needs of the education and training and the needs of work. This is very typical for Germany and Austria, where the competences are regarded through the dimensions of the practical/professional competence (Fachkompetenz) and personal competence (Personalkompetenz) and it encompass very wide range of the underpinning knowledge, skills and abilities (ibw, 2008; Becker, Spöttl, 2008). This approach to competence is related to the European traditions of 'core occupational competence' and "places a firm emphasis upon the acquisition of a broad set of technical, methodological, strategic and socio-communicative capabilities." (Competence and human resource development in multinational companies in three European Union Member States, 2001)

What are the implications of the relying of the concepts of qualifications, competences and learning outcomes on the concrete practices of the employment, management and human resources development for the comparability of the sectoral qualifications frameworks and for the usage of the NQF and EQF in comparing the sectoral qualifications?

The approach of the concepts of qualifications, competences and learning outcomes based on the concrete practices of the employment, management and human resources development in the most cases lacks of consistency and common reference due to the existing diversity of the above mentioned practices. Therefore these concepts are too related to the contexts of these practices of the employment, management and human resources development and their application in comparison of qualifications inevitably causes failures of understanding and interpretation.

For this reason it is needed to find a more neutral approach towards the concepts of qualifications and competences, for example, in the national policies of education and human resource development, national qualifications systems and frameworks.

1.1.2. National level represented by the national policies of education and human resource development, national qualifications systems and frameworks

The main factors influencing the constitution and development of the concepts of qualifications, learning outcomes and competences at the national level are:

- national policies of education and human resource development,
- national qualifications systems and frameworks;

Relationship between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts'. Relationship between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts' at the national level can be disclosed by searching the answers to the following questions:

1. What is the role and influence of the national system of education and the world of work (employers) in designing and development of the conceptual basis of the national qualifications frameworks and systems in the countries? How the existing socioeconomical model and the model of VET system influence the designing and development of the conceptual basis of the national qualifications frameworks and the national systems of qualifications?

2. What is the consensus of the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts' of the national qualifications systems and frameworks? How this consensus is reflected by the applied main concepts and definition?

Overview of the concepts of learning outcomes and competences in the project partners' countries

Lithuania

In Lithuania designing and development of the conceptual basis of the national qualifications framework and system has been performed by the experts of the

education, training and human resources development. The initial stage of the designing of the National System of Qualifications and the National Qualifications Framework was the designing and development of the conceptual basis of the system and framework. Here the main players were the experts from the education and training institutions, universities, Ministry of Education and Science and the Ministry of Social Affairs. The drafts of the concepts were discussed and agreed in the wider circle of the stakeholders involving the representatives of the employers, unions, education and training institutions, etc. There can be stated, that conceptual basis of the National System of Qualifications and the National Qualifications Framework was designed basing on the scientific- systemic approach and then enriched and supplemented by referencing to the practices of the employment, management and human resources development. Looking for the possible reasons of this approach there can be distinguished the following:

1. Lack of the coherent, consistent and developed practices of the employment, management and human resources development which could become the source for the designing of the conceptual basis of the National Qualifications System and Framework. It was related to the overall lack of experience of post-soviet society and state in the market economy, democratic civil society, social partnership and the influence of this shortage of experience for the development of the education, training, human resources development and industrial relations. For this reason the designers of the National System of Qualifications and the National Qualifications Framework paid a lot of attention for the analysis of the experiences and know-how of the countries which at the moment had already designed and established their systems and frameworks of qualifications: Scotland, Ireland, France, Finland, Australia, New Zealand.

2. Lithuania is a small country in terms of population and has rather homogenous and transparent system of education and training dominated by the state institutions. Vocational education and training is based on the school model which increase the role of VET institutions, government and related VET experts in the discussions on the conceptual issues of the vocational training, qualifications and human resources development policies. Despite the fact that the reform of vocational education and training aimed at wide decentralization of the VET system orienting it to the needs of the labour market, at the same time the Ministry of Education and Science and other governmental institutions retained and in some regards even strengthened their power and influence upon the vocational education and training. The Ministry of Science and Education and the Ministry of Social Security and Labour are still the main policy makers, initiators and coordinators of the Lithuanian VET system. Based on the legal acts of Lithuania, mainly the state or the state founded institutions, with the exception of the Chamber of Commerce and the Chamber of Agriculture, remain the main actors in the VET system. For this reason the governmental institutions have had a big influence in proposing and disseminating (or even imposing) the concepts of competences and qualifications. The scientific-systemic approach of the concepts of the National Qualifications Systems and Framework should increase the expertise and methodological quality of the contents of the Framework but in the same time it poses the bigger challenge to ensure the common acceptance of the conceptual basis of Framework amongst the stakeholders in order to persuade them, that the Framework is not imposed by the group of experts, but is designed with the wide participation of the all stakeholders and interest groups.

Consensus of the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts' of the National Qualifications System and Framework is achieved by the discussion and dissemination of the basic concepts designed according to the scientific-systemic approach with the all stakeholders involved in the development of the human resources on the national, sectoral and regional levels. Looking at the conceptual issues one of the core ideas which provide the sound basis for this consensus is the idea, that qualifications are designed and assessed by the world of work, referring to the existing and future needs of the professional activities. This idea is rather clearly expressed both in the concepts of qualifications and competences, as well as in the conceptual design of the descriptors of the National Qualifications Framework.

The descriptors of qualifications levels are based on two main parameters:

- (a) competences, as the abilities to perform certain tasks and operations in the real or imitated context of activity
- (b) characteristics of activity in terms of autonomy, complexity and changeability of activities.

Competences in the concept of the National Qualifications Framework are defined by the knowledge, skills, attitudes and approaches acquired during learning at a training institution or at the workplace. The concept of competence is derived from the world of work, or, more precisely, from the interface of the fields of work and learning. Competences are understood as learning outcomes applied in carrying out a professional activity and referred to the requirements and specifications of the system of activities. According to this definition, a qualification is defined as the entirety of acquired competences required by a certain professional activity and recognized by the relevant State institutions.

The concept of competence in the national qualifications system of Lithuania attributes an important role to integrating systematically provided knowledge and skills in designing and providing competences and qualifications. Knowledge acquired in the general education plays a crucial role in progressing from one qualification level to another (especially in the first level of qualifications).

The concept of competence used in the National System of Qualifications and in the National Qualifications Framework of Lithuania is derived from the interrelations between the world of work and the system of education and are understood as a bridge between the system of work and the system of education (Concept of the National Qualifications System of Lithuania 2007).

The defined functional, cognitive and general competences are constituted of the skills, knowledge and key skills and abilities with different weight of these components, depending on the type of competence: skills predominate in the functional competences, knowledge – in the cognitive competences and the key skills and abilities – in the general competences (Fig.).

Functional competences		
Skills	Knowledge	Key skills and abilities

Cognitive competences		
Knowledge	Skills	Key skills and abilities

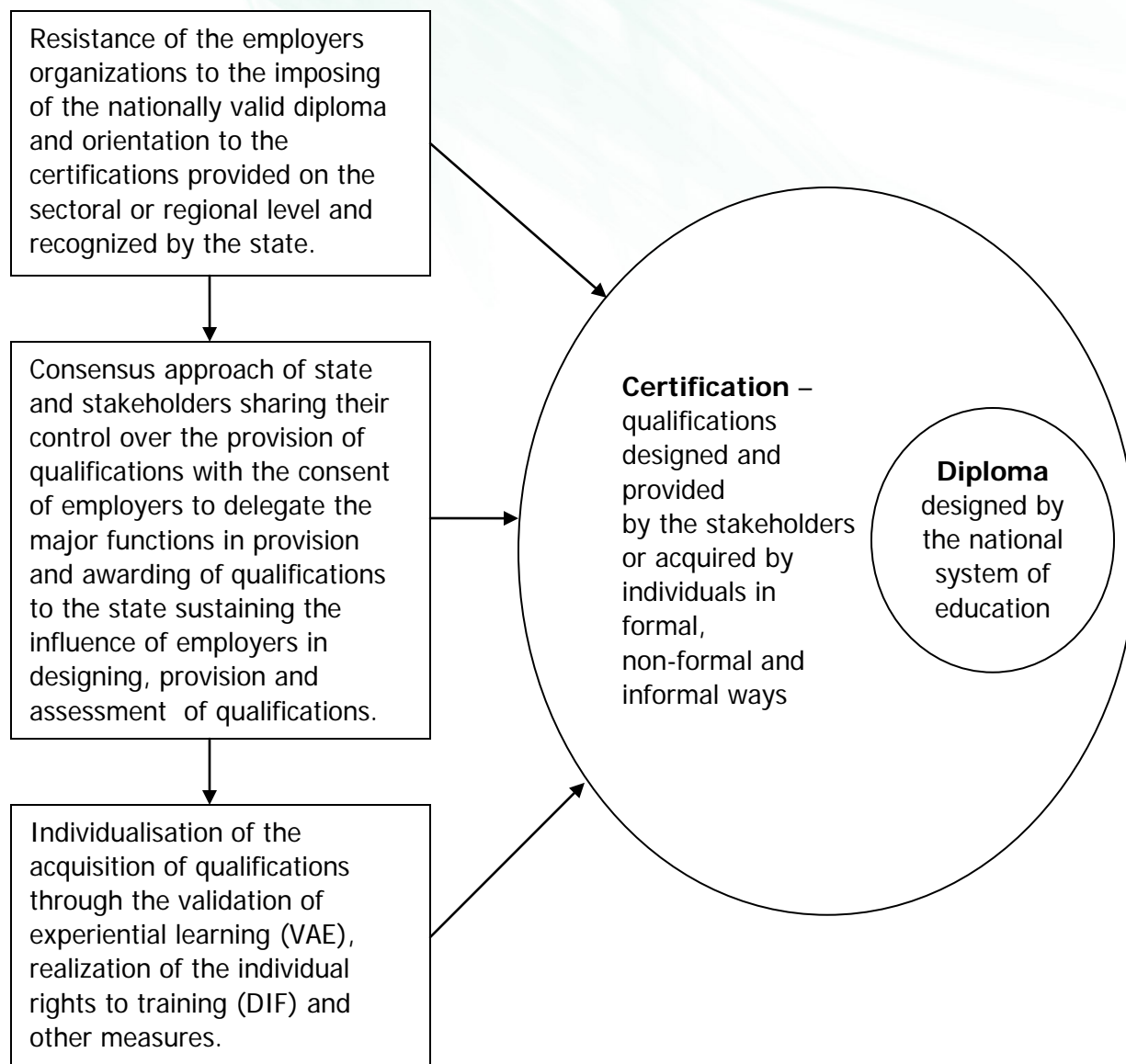
General competences		
Key skills and abilities	Knowledge	Skills

Fig.: Composition of functional, cognitive and general competences

There can be concluded that the strive to tune the concepts of the education system and the world of activities in the scientific-methodological approach of the designing of conceptual basis of the National Qualifications Framework of Lithuania is one of the most important measures to achieve the compromise between the theoretical-methodological approach and the real practices of the employment, management and human resources development.

France

The designing and development of the concepts of the National Qualifications Framework and especially the concept of qualification (certification) in France was influenced by the consensus based policy of the continuing vocational education and training which acquired more definitive policy structure in the law on the lifelong learning and social dialogue introduced in 2004. The implementation of the recognition of the experiential learning (validation des acquis de l'expérience-VAE) by the social modernization law of 2002 and the introduction of the corresponding instruments facilitating the individual rights in training expanded the notion of 'certification' and made it less dependent from the formal training. Qualification in terms of certification acquired the functions of the measure or instrument of the individual social promotion and development. Fabienne Maillard and José Rose note, that the concept of 'certification' encompass and subsumes all the existing pathways to the occupations including all existing titles of qualifications besides the diploma elaborated by the ministries.



Historically the development of the concept of 'certification' in France was influenced by the two approaches: a) the resistance of the employers organizations to the imposing of the nationally valid diploma and orientation to the certifications provided on the sectoral or regional level and recognized by the state which later turned to b) consensus approach of the employers, other stakeholders and state institutions seeking to share their control over the provision and awarding of qualifications, combined with the intentions of employers to liberate themselves from the organizational and financial constraints related to the provision of qualifications by delegating this function to state in the same time sustaining certain influence and participation in designing, provision and assessment of qualifications. This process was strongly enhanced by the intensifying international competition and development of the strong neocorporatist structures on the sectoral and regional levels.

According to Anne-Marie Charraud the term of certification poses certain problems, because it is very influenced by the European reflections with the domination of the

anglo-saxon approaches to qualifications. The European projects of cooperation and mutual trust enhance the simplification of the approaches and practices related to qualifications.

According to José Rose, despite of the wide diversity of qualifications, diploma and their providers, the system of qualifications in France is largely dominated by the diploma issued by the national system of education and these qualifications are regarded in the society as a hard currency comparing to the other 'certifications'. The qualification in France is still very strongly determined by the theoretical knowledge and theory based training.

Annie Boudier notes the importance of the recognition and validation of the learning potential of work situations which was the basis of a new engineering method to design qualifications - the activity-based terms of reference (référentiels d'activité) applied with the creation in 1985 of the Baccalauréat Professionnel (vocational baccalaureate) (Boudier, 2008).

This new engineering method was extended to all vocational qualifications concerning both initial and continuing training. Nowadays, qualifications wanting to be included in the national framework must prove that they have been designed by a special commission where social partners have agreed on the occupational profile at which the qualification is targeted, with the help of an activity-based term of reference (référentiel d'activité).

There can be concluded that the conceptual basis of the National Framework of Qualifications in France was designed with the domination of the theoretical-methodological approach due to the strong influence of the state and national system of education in the provision of qualifications. However, the concept of 'certification' is very wide, the framework is based on consensus approach of state and stakeholders sharing their control over the provision of qualifications with the consent of employers to delegate the major functions in provision and awarding of qualifications to the state and the individualisation of the acquisition of qualifications through the validation of experiential learning (VAE), realization of the individual rights to training (DIF) and other measures. These factors ensure strong liaisons of the concepts with the real practices of the employment, management and human resources development.

Czech Republic

The designing and development of the conceptual basis of the national qualifications framework and system in the Czech Republic is very similar to the above described case of Lithuania and is based on the scientific - systemic approach and then enriched and supplemented by referencing to the practices of the employment, management and human resources development. The reasons of it are the same as indicated in the analysis of the case of Lithuania.

In the case of Czech Republic there can be noticed, that the scientific - systemic approach and orientation towards the concepts of learning outcomes and competences is integrated in the state led curricular reform in initial vocational education at the upper secondary level. The curriculum of VET is based on learning outcomes and competences "which systematically supports the complementarity and equivalence of all acquired skills, independently of how they were acquired."

The understanding of the concept of competence is very wide, encompassing knowledge, skills, attitudes, habits and other personal qualities of the graduate and described from the position of the student. Therefore competence defines the skills or knowledge that the student (learner) should have, how (s)he should act and which activities (s)he should be capable of performing.

Similarly like in France and in other countries the designing of the National Qualifications Framework in the Czech Republic is closely related with the practices and procedures of the evaluation and recognition of the learning outcomes achieved in the continuing vocational training, as well as through the professional experience. The laws foreseen rather flexible ways for the achievement of qualifications by introducing the partial qualifications.

The approach of classification of competences indicates the intentions to find the compromise between the requirements of the scientific-systemic approach and the needs posed by the really performed activities. Competences consist of the skill and a knowledge components (scientific-systemic approach) and classified both according to the type of activity and level of expertise (needs posed by the really performed activities).

There are discerned the following three components of competence:

- *Special competences, which describe what a worker in the given position should be capable of from a technical point of view, e.g. diagnosis of automotive problems, measurement of electrical quantities, double entry bookkeeping, etc.*
- *General competences, which describe what a worker in the given position should be capable of beyond his or her specialisation, in other words skills not specific to his or her area of expertise, like teamwork, decision making, problem solving, management, etc.*
- *Technical knowledge, which describes the technical background of the particular position. This refers not to specific information, but rather to subjects which form the technical background of the position, such as glass preparation, organisation of postal transport, diseases of farm animals.*

Similarly like in the case of Lithuania it can be noticed the importance of the underpinning knowledge expressed as the knowledge from the subjects forming the technical background of the performed work.

There can be concluded that the conceptual basis of the National Framework of Qualifications in France was designed with the clear domination of the theoretical-methodological approach due to the strong influence of the state and national system of education in the provision of qualifications. Again, there can be noticed the intentions to seek the consensus between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts of competences and their classification methods.

Austria

Designing and development of the conceptual basis of the national qualifications framework and system in Austria is also performed by the experts of the education, training and human resources development. It provides institutional possibilities for the establishment of the coherent and homogenous conceptual basis of the National Qualifications Framework. However there must be considered other very important

factors which requires strong consideration in designing and implementing of the concepts and which pose certain challenges in this process:

1. Dual system of the vocational education and training, which is initially oriented to the input and not learning outcomes approach with the strong emphasis on the structured institutionalized training providing wide and strong underpinning knowledge needed for the accomplishment of the tasks of activities. As it was stated before, the compatibility of the dual system with the learning outcomes and competences approach is quite problematic due to some fundamental differences in these approaches.

2. Extensive involvement of the social partners in implementing VET decisions, especially in the field of the development of curricula and qualifications. In Austria social partners make a major contribution to formulating the regulations and ordinances prescribing the content of the company-based part of apprenticeship training, as well as they are responsible for the maintaining of the technical institutes (Fachhochschulen) providing the continuing vocational training. This situation poses the requirement to settle a general understanding of the underlying concepts of the VET, qualifications and learning outcomes between the social partners and state, because the training in Austria must comply with legally stipulated content (Winterton, 2007). The result of this process is the concepts of qualifications and competences based on the input approach typical for the dual VET system and the strong "attachment" of the stakeholders to these concepts making them rather suspicious to the initiatives to alter them with other concepts and approaches.

These factors can partially explain the situation, that in Austria there are no general understanding and concept of the learning outcomes and competences not only on the national level, but also in the sectors (Lassnig, Vogtenuber, 2008). The analysis of the application of the learning outcomes approach in Austria shows, that only some elements of the learning outcomes are present in the all training, learning and study plans and curricula and there is no systematic and complete approach based on the learning outcomes in these fields (). Some experts propose, that the learning outcomes approach must be introduced in the centralized way as a Top-Down-Process, coordinated by the government indicating, that this is the only way to design the coherent descriptors of the national Qualifications Framework (Lassnig, Vogtenuber, 2008). There can also be noted, that the orientation towards the learning outcomes differentiates in the fields of training: in some sectors and fields of training this orientation is stronger than in other (). For example, in some vocational education and training standards in the sector of construction (Ausbildungsordnung für den Lehrberuf TiefbauerIn) the orientation towards the learning outcomes approach is even stronger than in other standards.

The vocational education and training standards in general are input oriented: there are listed knowledge, skills and transferable competences grouped in units indicating what is the need of training the learner must know and be able to do prescribed from the perspective of what knowledge and skills there has to be provided to the learner by the VET institution.

Concept of competence in Austria is more used in the curricula of the higher vocational and technical schools (höhere technische und gewerbliche Lehranstalten -

HLA). The general training aims in these curricula are designed according to the learning outcomes approach and are based on the concept of competence differentiated into specialized professional competence (der Fachkompetenz), methodical competence (Methodenkompetenz), social competence (Sozialkompetenz) and personal competence (Selbstkompetenz) (). While the education and training tasks of the some subjects are described with the orientation to the learning outcomes, there still prevails input perspective with in field-specific education and training goals. The analysis of the contents of the descriptors of the qualifications profiles of the higher education – bachelor and masters degrees study programs shows that there exists some confusion in use of the concepts of training contents, training goals and learning outcomes and the descriptors are written both on the perspective of the learners and educational institutions.

Experts indicate, that for the classification of the learning outcomes into the future NQR it is required to establish a broadly accepted understanding of basic terms, a uniform methodical approach as well as a comparison methods based on fixed criteria ().

There have been launched some initiatives for the designing of „education standards “ in the field of general and vocational education with the aim to design the transparent and learning outcomes based qualifications. The competences indicated in the education standards concerns the core fields of instruction subjects (e.g. English) or the core topics of the entire vocational field of training (e.g. the higher institute for electro-technology). The education standards from the school-based education and training are in a close relationship with the National Qualifications Framework by representing the learning outcomes indicated in the training curricula.

Concluding there can be noticed that the conceptual basis of the National Framework of Qualifications in Austria was designed with the domination of the theoretical-methodological approach fostered by the national system of education, experts and involved social partners. Dual system of vocational training and active involvement of the social stakeholders in the curriculum design and standards development activities presuppose the favorable conditions to achieve consensus between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts of qualifications, competences and learning outcomes in Austria.

Ireland

Designing and development of the conceptual basis of the National Qualifications Framework of Ireland is based on the compromise approach between the scientific-systemic way of concepts design and the ideas from the real practices of the employment, management and human resources development. There can be discerned the following factors which influenced such approach in designing and development of the conceptual basis of the National Qualifications Framework in Ireland:

1. Tradition of the voluntarism and liberal-market orientation combined with the interest based involvement and participation of the stakeholders in the VET, higher education and human resources development policies. Combination of the market voluntarism and active social partnership involvement were one of the most important characteristics of the transformation of the economy since the late 1980s (Winterton,

2007). It implied the requirement to combine the voluntarism and involvement of the all stakeholders in the policies of education, training and human resources development. Equally in the designing of the National Qualifications Framework the wide involvement of the stakeholders has been combined with the reference to their interests related to the designing, provision and awarding of qualifications. It also implied the needs to search for the wide conceptual basis of the Framework which would refer to the diversity of the interests and needs of the stakeholders.

2. Fast economic development and rapid “internationalization” of the labor market with the growing flows of the migrant workforce posed important challenges for the management of the human resources in the all levels: enterprise, sector and national level. These challenges were related both with the issues of the economical effectiveness and the social justice and cohesion related to the positioning of the migrant workforce into the structures of the national economy. National Qualifications Framework being one of the key responses to this challenges it had to be transparent, clear and widely accessible. It implied the necessity for the designers of the conceptual basis of the Framework to consider the existing needs, requirements and practices of the human resource management and development in the different sectors of economy and to propose wide, flexible, inclusive and understandable conceptual basis of the Framework. There can be noticed rather strong determination to make the National Qualifications Framework the real instrument for the comparison, evaluation, communication related to qualifications for the wide society, especially for the learners and employers (*Learners and employers need to be able to compare awards*). It implies the requirement of the visibility of the elements, clarity of the relationships within the Framework and its transparency. Again, from the one side it requires the unified and systemic approach in designing the concepts of the framework (scientific-systemic approach) and from the other side it requires strong relationships of these concepts with the existing reality of the qualifications, training and human resource development.

3. Variety of the existing providers of awards and qualifications demanded to consider the existing practices and experiences in the provision and awarding of qualifications. In the same time it posed the requirement of the unified and systemic approach in the structuring of qualifications, as well as unified approach in the field of the conceptual basis of structuring.

How this compromise between the setting of the unified conceptual basis of the Framework and making it flexible and inclusive is achieved? From the point of view of the institutional organization here can be stressed the absence of the direct central regulation in favor of the delegation of functions from the National Authority of Qualifications to the awarding bodies.

“The Authority has no direct role in setting standards for awards (beyond supporting the maintenance and improvement of standards through the framework) or in assessment: these are matters for the awarding bodies and providers. It is the responsibility of awarding bodies to develop named awards – that is, the awards that learners receive for achievement in a specific field of learning. As a result, the standards of awards are expressed increasingly in terms of framework learning outcomes. Following on from this, education and training providers are increasingly describing the learning associated with their programmes and the component modules within these programmes in terms of the

standards to be achieved, i.e. as learning outcomes, rather than in terms of the inputs and processes associated with the learning."

Even the "translation" of the Framework level indicators and award-type descriptors into training programmes and aligning of the assessment methods was delegated to the individual training providers and awarding bodies. Authority only provides the support for the individual training providers and awarding bodies in these processes.

Another important factor is the wide involvement of the stakeholders in designing the main concepts and definitions. Social partner representatives actively participated in the Consultative Group established for the designing of the National Qualifications Framework, they are also the members of the National Qualifications Authority and of the Awards Councils.

In the consultation process, prior to 2003, the definition of knowledge, skill and competence was identified by various commentators as containing an important indication of the philosophy of learning underpinning the Framework. ... The approach adopted by the Authority has been to be as broad as possible in spelling out our understanding of knowledge, skill and competence, while recognising that learning which is not assessed against standards cannot be included in the Framework.

All this led to the development of the comprehensive, wide and flexible underlying concepts of the National Qualifications Framework, seeking to obtain the acceptability of the Framework amongst the stakeholders and users and , in the same time, to ensure its coherence and operativeness:

Proceeding from the expression used in the legislation, which defined learning as "knowledge, skill or competence", the Authority developed an understanding of how learning might be further analysed or parsed, first into three strands of knowledge, know-how and skill and competence and then further into eight sub-strands. This analysis drew on a number of different intellectual traditions, ancient and modern, formulating an understanding that was deliberately eclectic and hence as comprehensive as possible. Pragmatically this had the effect of being intelligible and acceptable to a wide variety of stakeholders, which is an essential feature for such a key element of a national framework, while at the same time having coherence.

Despite of the fact that the implementation of the National Qualifications Framework was one of the most important factors facilitating the dissemination and use of the learning outcomes in the field of education, training and human resource development, the research of the impact of Framework evidences, that this impact of Framework "on the widespread and effective use of learning outcomes within the education and training system" is rather limited and "the use of learning outcomes is contested in some sectors and amongst some providers." (Background paper on the development, implementation and impact of the National Framework of Qualifications and related policies on access, transfer and progression, 2008).

One of the possible reasons for this situation is that the objective to design the comprehensive and all inclusive conceptual basis for the National Qualifications Framework resulted to its complexity what in turn, decreased the clarity and acceptance of the Framework to the stakeholders and citizens. The conceptual basis of the National Qualifications Framework of Ireland is very rich in the concepts and contain the concepts of knowledge, skill, competence and learning outcomes having rather complicated inter-relationships in the above mentioned structure of the eight sub-strands.

Concluding there can be noticed that the conceptual basis of the National Framework of Qualifications in Ireland was designed seeking to find the compromise and balance between the theoretical-systemic approach fostered by the need of coherence of the Framework and the need for the wide acceptability and applicability of the concepts due to the liberal and interest-based cooperation approach in designing the framework. This relative consensus between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the conceptual basis of the Framework besides the positive effects had some impact on the increase of the complexity of the concepts decreasing the transparency and clarity of the concepts and Framework itself.

1.3. European Union level represented by the EU policies and strategies and their instruments

The development of these concepts of competences at the EU level is a relatively very recent process, related to the following factors:

- increasing international mobility of learners and employees'
- the development of the single EU labour market;
- EU socioeconomical development strategies (Lisbon strategy) and related policies

The concepts of competences in the international meta-frameworks of qualifications (European Qualifications Framework) are defined in a more abstract way, applying culturally and politically neutral definitions.

Relationship between the scientific-systemic approach and the practices of the employment, management and human resources development in formation of the concepts' at the European Union level can be disclosed by analysing the contents of the applied concepts and definitions and the process of the agreement on these concepts in the designing and implementation of the European Qualifications Framework and other similar EU policy instruments.

One of the possible ways can be the analysis of the compatibility of the concepts used at the national level with the concepts used in the European Qualifications Framework.

There can be discerned the following criteria of this comparative analysis:

1. Methodological compatibility of the concepts related to the level of compatibility of the theoretical-methodological approaches on which the concepts are built. Are the concepts used in the national qualifications frameworks compatible with the concepts of the EQF on the methodological basis and what are the implications of the possible methodological incompatibilities for the application of the EQF ?

2. Similarities and differences in the width of the concepts used in the NQF and in the EQF. Whether the concepts used in the EQF encompass the contents of the analogue concepts in the National Qualifications Frameworks, or vice-versa, the concepts of the NQFs are wider than the concepts used in the EQF? What are the implications of these situations for the application of the EQF in the comparison and compatibility of qualifications?

Case 1: The concepts and notions used in the EQF are sufficiently wide and generic and encompass the concepts used in the National Qualifications Frameworks of the countries. Implications: it enables the flexible use of the EQF in comparing the qualifications and learning outcomes between the countries; it poses the problems if the

concepts applied in the EQF are too generic and wide to encompass the meanings which can be incompatible on the methodological basis.

Case 2: The concepts and notions used in the National Qualifications Frameworks are wider than the analogue concepts used in the European Qualifications Framework. Implications: it does not impede the process of comparison of qualifications with the help of the EQF if the core/basic elements of the concepts in the National Qualifications Frameworks and the EQF coincide.

3. Application and further differentiation of the concepts in terms of classifications of the designed objects.

Criteria of analysis Compared concepts	Interpretation in the National Qualifications Frameworks of the countries					Interpretation in the EQF: similarities and differences
	Lithuania	Austria	Czech Republic	France	Ireland	
Qualification	Qualification is defined as entirety of the acquired competences required by the certain professional activity and recognised by the empowered state institutions. The recognition of qualification is confirmed with the nationally approved diploma and certificates.	EQF definition applied: A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.	A complete qualification is person's ability to perform an occupation, possibly several occupations. A complete qualification is the ability to perform a certain occupation (possibly several occupations); A partial qualification is the ability to perform a certain work activity or a coherent set of work activities enabling to perform a profession.	Professional qualification (certification) registered in the national register of qualifications attests qualification – capacity to realize the professional activities in the context of the different work situations according to the degree of responsibility defined in the descriptor of qualification. Definition of this concept can be developed and interpreted following two	Qualification is defined as an award – proved and certified set of learning outcomes needed for the performance of the activity or its part. Four classes of award-types have been identified for the Framework : major, minor, special-purpose and supplemental. major award-types are the principal class of awards made at each level, and capture a typical	In principle the understanding and interpretation of the concept of qualification in the national qualifications frameworks and systems of the analysed countries corresponds to the definition used in the EQF. The central point and basis of this similarity is the indication that qualification is a formal recognition of the acquired learning outcomes (EQF, NQF Ireland) or competences (NQFs of Lithuania, France, Czech Republic) required

				<p>approaches : : collective approach and individual approach.</p> <p>In the first case, it is the social recognition of the mastery in knowledge, skills and competences which are necessary for the work at the workplace.</p> <p>In the second case, the qualification of a person presents his/her individual operational capacity to occupy certain workplace. (La validation des acquis de l'expérience : mode d'emploi – Centre Inffo 2005)</p>	<p>range of achievements at the level – for example, Junior Certificate at Level 3, or Honours Bachelor Degree at Level 8</p> <ul style="list-style-type: none"> • a minor award-type provides recognition for learners who achieve a range of learning outcomes, but not the specific combination of learning outcomes required for a major award • special-purpose award-types are made for specific, 	<p>for the execution of professional activities and work tasks. The definitions of qualifications in many cases disclose the structure of qualifications and even distinguish the types of qualifications referring to their scope (complete and partial qualifications in the NQF of Czech Republic, major, minor, special purpose and supplemental awards in the NQF of Ireland). In the case of France the concept of qualification integrates individual (more subjective) and</p>
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				<p>Qualification can be achieved in the process of training and awarded with the diplome, titre (titre) or certificate of vocational qualification (CQP).</p> <p>Vocational qualification provided by the ministry of employment is called 'professional title' (« titre professionnel »). This title evidences that its bearer masters the competences, abilities and knowledge permitting to exercise</p>	<p>relatively narrow, purposes – for example, the Safe Pass certification of competence in health and safety in the construction industry</p> <ul style="list-style-type: none"> • supplemental award-types are for learning which is additional to a previous award. They could, for example, relate to updating and refreshing knowledge or skills, or to continuing professional development. 	<p>collective (objective) approaches. Semantically there can be noticed the exception of the term of 'award' used to designate the qualification in the NQF of Ireland. This term stresses that the provision of qualification is based on the official decision of the state authorities based on the certain demonstrated 'merits' or achievements of the candidates.</p>
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				qualified occupational activities. (Art 1 du décret n° 2002-1029 du 2 août)		
Methodological compatibility	There can not be noticed any significant obstacles for the compatibility of the concepts of qualifications in the analysed NQFs on the methodological level.					
Similarities and differences in the width of the concepts	The width of the concepts of qualifications differs due to the fact, that some concepts integrate the typologization of qualifications according to their structure (NQFs of the Czech Republic, Ireland) or according to the approaches of their development and application (NQF of France). However, these differences do not present significant problems for the comparability of the concepts.					
Application and further differentiation of the concepts in terms of classifications of the designed objects	The further differentiation of the concepts in terms of classification of designed qualifications and their elements can pose certain problems of comparability and compatibility on the conceptual level, because it is not evident, whether, for example, the partial qualification in the National Qualifications Framework of Czech Republic can be comparable to the units of qualifications in the NQF of Lithuania or to the certain types of awards (special – purpose, minor, supplemental) in the NQF of Ireland. This question demands further clarifications and investigations.					
Learning outcomes	The term of learning outcomes is not used in the texts of the National Qualifications Framework of Lithuania. It is replaced by the term of	EQF definition applied: Learning outcomes means statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge,	The term of learning outcomes is not explicitly used in the National Qualifications Framework of Czech Republic. It is replaced by the term of	The term of learning outcomes is not explicitly used in “cadre des certifications professionnelles” in France. It is replaced by the term of	Results of the training and learning process in terms of knowledge, skills, abilities, through the evaluation and assessment leading to the	The concept of learning outcomes is used in the NQF of Ireland and the concept of learning outcomes from the EQF is applied in the designing of the National Qualifications

	competences.	skills and competence	competences.	competences and other terms.	acquisition of awards – qualifications.	Framework of Austria. In the NQFs of Lithuania, Czech Republic and France this concept is not explicitly applied and it is replaced by the concept of competences.
Methodological compatibility	The concept of learning outcomes used in the EQF is sufficiently wide, general and comprehensive, as well as neutral not to pose the obstacles and problems for the comparison and comparability of the qualifications from the NQFs which are based not on learning outcomes, but on competences or other similar concepts. For example, the competences in this context can be defined as the learning outcomes applied in the work process – in execution of the work tasks and solution of work problems.					
Similarities and differences in the width of the concepts	The concept of learning outcomes used in the EQF is not 'tied' to the requirements or specifications of the professional activity as it is in the case of the concept of competences. In turn it can integrate the different types of learning outcomes acquired in the all fields of education and training and applied in the different contexts (of professional activity and beyond it).					
Application and further differentiation of the concepts in terms of classifications of the designed objects						
Competences	The ability to perform a work task in real or	Concept of competence in Austria is more used in the	Vocational competencies (abilities)	Competence is defined as the capacity to	Competence in the National Qualifications	The concepts of competence in the NQF's of the

	<p>simulated situations. Competences are based on knowledge and practice acquired through learning and studies. The quality of competences is dependent on work experience of an individual. Competences required for wider activity (profession) fall under the category of qualification.</p>	<p>curricula of the higher vocational and technical schools (höhere technische und gewerbliche Lehranstalten - HLA). The general training aims in these curricula are designed according to the learning outcomes approach and are based on the concept of competence differentiated into specialized professional competence (der Fachkompetenz), methodical competence (Methodenkompetenz), social competence (Sozialkompetenz) and personal competence (Selbstkompetenz)</p>	<p>determine what an individual should know as regards vocational skills and knowledge (e.g diagnosis of vehicle defects, electrical quantity measurement, double entry bookkeeping, etc.);</p> <p>General competencies (abilities) (cross-sectional, transferable, interdisciplinary) determine what an individual should manage beyond his or her qualification, that is the ability to cope with a certain complex of activities</p>	<p>combine a set of knowledge (savoirs), skills (savoir-faire) and general abilities (savoir-être) seeking to accomplish the task or execute the activity. It is always the objective of professional activity (finalité professionnelle). The result of the application of competence is evaluated in the certain context referring to the autonomy, available resources etc.</p>	<p>Framework of Ireland is understood as a capacity of a person to act in the work expressed in the substrands of the work context (width, changeability, limits, familiarity with context), autonomy of execution (individual and work in groups), ability to learn and insight.</p>	<p>analysed countries do not contradict to the contents of the concept of competence defined in the EQF. The only significant difference is that the concept of competence in the EQF is wider and encompasses the abilities to 'use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development' while the concepts of competence in the analysed NQFs are more concentrated on the requirements and needs of professional</p>
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			regardless of vocational qualification (e.g. work in a team, decision making, problem analyses, people management, etc.).			activities.
Methodological compatibility	The main problems of the methodological compatibility of the concepts of competence in the NQFs of Lithuania, Austria, Czech Republic, France and Ireland are related to the differences in defining the structure of competences and the differences of the typologies of competences. How to compare the functional, cognitive and general competences (Lithuania) with the professional (Fachkompetenz), methodical (Methodenkompetenz), social and personal competences (Personalkompetenz) in Austria or to the vocational and general competences in the Czech Republic? There can be found some parallels, as for example, functional competences → professional competence (Fachkompetenz) → vocational competence, but these comparisons require more comprehensive and deep analysis of the contents of concepts.					
Similarities and differences in the width of the concepts	The last part of the definition of the competence in the EQF states that in the context of the EQF 'competence is described in terms of responsibility and autonomy' does not directly reflect the contents of the definitions of competence in the NQFs of the analysed countries. In the concept of the NQF of Lithuania autonomy, complexity and changeability are the characteristics of activities which pose the requirements of competences. In the NQFs of Czech Republic, France and Ireland autonomy and responsibility are also understood as the context of activity which influences the requirements of competences.					
Application and further differentiation of the concepts in terms of classifications of the designed objects						

http://www.cncp.gouv.fr/CNCP/contenus/supp/supp_glossaire.htm

1.2. Contextual level of the comparability of qualifications: the influence of the sectoral environment and specificities to the comparability and compatibility of qualifications in the sectors of different countries

There can be discerned the following main factors of the influence of the sectoral environment and specificities to the comparability and compatibility of qualifications in the sectors of different countries:

- Structure of the sectors in terms of the size of enterprises: ratio between the number of the big enterprises and the SME's.
- Structure of the sectors in terms of the demographical characteristics of the workforce: age, education level, country of origin (share of the immigrant workforce).
- Levels of the business internationalization in the sectors (share of the domestic and international or foreign enterprises in the sector).
- Levels of the development and institutionalization of industrial relations in the sectors.

All these factors have certain influences for the qualifications in the sectors in terms of their structure, contents, characteristics and usage in various situations. Due to the limited scope of the research project, limits of the time and budget resources the research of the factors of the sectoral characteristics and environment and their influence to the comparability and compatibility of qualifications is not foreseen in this research project. Nevertheless, there can be proposed some assumptions on these influences which could be verified with the further researches.

There can be discerned the following influences of the size of enterprises to the contents and structure of the qualifications of employees in the sectors:

Qualifications in the big enterprises	Qualifications in the SME's
There tend to dominate and develop more specialized and narrow qualifications with bigger weight of special functional competences and skills needed for the execution of work tasks in the concrete workplaces.	More general and extra-functional qualifications are required by the more flexible work organization, shortage of the human resources and possibilities for the human resource management and development.
Competences of employees constituting qualifications are more regularly and frequently updated, renewed and developed using rather wide possibilities of the continuing vocational training and skills development.	Development, upgrading and updating of competences is rather irregular and comparatively random due to the limited financial and organizational possibilities in the provision and funding of continuing vocational training.
Qualifications of employees are more sensitive to the changes of the socioeconomic and organizational environment. Therefore the contents of qualifications can change rather quickly.	Contents of qualifications is rather stable due to more general and extra-functional competences which constitute the qualifications and the contents of activities encompassing execution of the different tasks and requiring multi-skilling.
Maintenance and development of competences constituting the qualifications are less dependent on the external training providers and the system of initial	Maintenance and development of competences constituting the qualifications are more dependent on the external financial and institutional support and

vocational training due to the availability of financial, human and organizational resources for the continuing vocational training.	cooperation with the initial vocational training institutions.
Qualifications and competences tend to be more strongly formalized and recognized in the practices of the human resource management of the company due to the more complex human resource management practices and more intensive industrial relations (more organized negotiations between the employers and unions) in the big enterprises.	The recognition of qualifications and competences acquired in the informal and non-formal ways (experience based) is much weaker and irregular due to the comparatively weak and unstructured human resource management and industrial relations.
Qualifications are more "autonomous" from the public providers and in the same time more dependent on the enterprise. Big enterprises with the developed systems of human resource development usually establish their own qualifications frameworks.	Qualifications are less autonomous on the enterprise and sectoral level and more dependent from the public providers. SME's usually do not have sufficient possibilities nor the needs to develop their own frameworks of qualifications or to design the qualifications by themselves.
Qualifications tend to be more polarized in terms of the level of knowledge, skills and competences: there can be discerned elitary "high skills" qualifications versus "low skills" qualifications. This differentiation and polarization through the Matthew effect influence the accessibility of the development of the skills, knowledge and competences in the big enterprises, strengthening the polarization of qualifications. Sometimes it leads to the development of the "high-skilled – low skilled" workforce in the sector.	The pool of qualifications in the structure of the human resources of the SME's is more homogenous, depending on the type of the sector: in the SME's of the "high-skills" sectors there dominate "high-skills" qualifications and in the "low skills" sectors there dominate low and middle level qualifications.

Due to these influences the differences of the sectors in terms of the size of enterprises can pose the difficulties in comparing the qualifications without the references to the national qualifications frameworks and the EQF. Qualifications from the different countries belonging to the same occupations and even having the same titles can significantly differ in terms of their contents (specialized versus broad, updated, actual versus outdated, more formalized versus less formalized, more enterprise dependent versus more centred on the public VET and higher education provision, etc.). Such situation poses the demand to use the external and more general references, such as national qualifications frameworks and the EQF.

2. Structure of sectors in terms of the age, education level of employees, their country of origin (share of the migrant workforce in the human resources of sector).

Differences in the structure of the sectors in terms of age of employees influences the differences of qualifications in the following ways:

- Sectors with the dominating or bigger share of the senior employees tend to develop the qualifications which are more based on experience and are more stable. Practical experience, developed practical skills and knowledge of the workplace needs, requirements, norms of execution and cooperation with others are very important elements of such qualifications. The hierarchical structuring of qualifications in such sectors can be more influenced by the factor of seniority and loyalty to the enterprise and less by the quality of the competences of employees.
- Sectors with the higher share of the young employees tend to develop qualifications which are more based on the human capital acquired in the initial vocational training and higher education as well as on the flexibility of employees and their abilities to apply the possessed human capital in highly competitive and changing work environment. Application of the new knowledge and know-how is one of the crucial characteristics of such qualifications. The hierarchical structuring of such qualifications in the human resources management practices is more based on the competitiveness of the possessed human capital which is ensured by the quality of possessed knowledge, skills and competences.

Differences of the structure of human resources in the sectors in terms of the education level of employees are caused by the different conditions of the acquisition of qualifications. This variety of conditions is created by the different paths of the development of education systems and institutions, differences in the paths of the economical and social development, employment, technological development, differences in the evolution of the occupations, etc. These differences can create the situations when the same occupational positions in the sectors of different countries are occupied by the employees possessing the education and qualifications of the very different levels (for example, in some countries the nurses have higher education diploma, in other countries they work with the certificates received after the completion of the VET schools or courses). It presents important obstacles for the direct comparison of the sectoral qualifications in the countries, because the same titles of qualifications can represent very different contents in terms of quality of competences.

In the sectors with the lower level of education of employees the qualifications tend to be less strengthened by the underpinning knowledge and more based on the practical skills, while in the same sector with higher level of education of employees the underpinning knowledge will constitute more important part of qualifications.

Differences in the structure of the human resources of sectors in terms of the share of the immigrant workforce can have the following influence on the differences of the contents of qualifications:

- Sectors with the higher volume of the immigrant low skilled and unskilled workforce usually have more precarious and insecure jobs and tend to develop the low skills equilibrium (Brown, Lauder, Green, 2001). Such sectors can integrate the workforce with very different backgrounds of competences and qualifications (for example, construction sector in Lithuania in the period of the last 4-5 years). Qualifications and competences of the immigrant workforce are often less formalized and recognized, their contents can be very scattered and diversified.
- Sectors with the higher volume of the high-skilled immigrant workforce can also develop very different qualifications and competences of the employees, but this process is usually more structured and ordered by the human resources development strategies and policies and by the individual career development strategies. Therefore it often leads to the formal recognition of the acquired competences and qualifications.

In general there can also be made an assumption, that the sectors with the higher volume of the immigrant workforce are closer to the certain assimilation of the competences and qualifications of their workforce, because the integration of the workforce with the different qualifications and competences tend to decrease the specificities of the sectoral qualifications and to increase the weight of similar and general elements and characteristics.

- Sectors with the lower volume and share of the immigrant workforce are more strong in preserving the specific characteristics of their qualifications and the processes of the acquisition and awarding of qualifications.

All these differences can also create obstacles for the comparability of competences and qualifications between the different countries.

3. Differences of the sectors in terms of their levels of internationalization (share of the domestic and international enterprises in the sector) can have the following influence on the comparability of the qualifications in the sectors:

- Qualifications in the more "internationalized" sectors (with higher presence of the international and foreign capital enterprises) can be easier comparable due to the reason that internationalization of the sector tends to equalize the structure of these sectors in terms of qualifications, as well as to assimilate the contents of qualifications in the sectors of different countries.

- Comparison of the sectoral qualifications between the same sectors with the different extent of internationalization (very different shares of the international enterprises in the sectors) can pose certain problems due to the differences of the structure and contents of qualifications.

4. Differences of the sectors in terms of the levels of development of industrial relations can have the following influence on the comparability of the qualifications in the sectors:

- Qualifications in the sectors with the higher-level of development of industrial relations are usually more influential to the quality and equality of employment and career possibilities. Developed branch or sectoral agreements between the social partners concerning the wage levels (Germany) or the continuing vocational training of employees (France) create very favorable conditions for the development of the employees competences and acquisition of qualifications by motivating and empowering the employees and employers to cooperate and co-invest in the continuing vocational training and skills upgrading. Besides, intensive social partnership in vocational education and training and higher education is one of the most important preconditions for the development of the quality of qualifications, leading to higher employability, employment quality and competitiveness of the economy.

- Qualifications in the sectors with the lower level of development of industrial relations are more dependent on the formal education and training, which often must compensate the shortages caused by the reluctance of the employers and employees to invest in training. With the domination of the formal public provision of qualifications it is much more difficult to acquire qualifications through the validation of the non-formal and informal learning outcomes. Employers are less interested in development and provision of qualifications to the employees due to the risk posed by the poaching.

Concluding there can be stated, that the differences of sectoral environment and specificities influence the important differences of the structure and contents of the sectoral qualifications in the different countries. It poses certain difficulties of the comparability and compatibility of qualifications in the sectors of different countries. Therefore these differences of sectoral context

can be a very important factor which implies the need to apply the national qualifications frameworks and the European Qualifications Framework in comparing the qualifications.

2. Research of the structure and contents of the sectoral qualifications and their compatibility with the EQF

1. Analysis of the structure and contents of qualifications in the construction / or hospitality sectors in the partner countries. This task consists of two parts:

a. Definition the existing qualifications levels in the sector indicating their criteria: characteristics of activities – work complexity, autonomy of execution, changeability, specific characteristics of the socio-professional roles, work organization, etc. The results of analysis can be presented in the following table:

Sector / subsector	Occupations in the subsectors (fields of work)	Qualifications ordered according to the sectoral levels indicating reference to the level of EQF	Description of the criteria of qualifications levels in the sector
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b. The analysis of sectoral qualifications and their hierarchy in the sector should also evaluate the analysis of the structure and contents of qualifications in terms of the units of qualifications (or similar elements) and competences. In this field there should be analyzed two different hierarchically ordered groups of sectoral qualifications for each analyzed sector. For example: *kitchen assistant, assistant of cook, cook, chief of the kitchen; junior waiter, waiter, waiter-barmen, supervisor of barmen; assistant of bricklayer, bricklayer, senior bricklayer, foreman of bricklayers*. This analysis should include the definition and listing of the units of qualifications (if they exist in the sector) and competences (cognitive, functional, general - social, personal, etc.). It should be indicated what qualitative and quantitative changes in the combination of competences constituting the qualification are central and determinant for the attribution of qualification to the certain level in the sectoral framework or hierarchy of qualifications.

The results of such analysis can be presented in the following table:

Qualification:	Competences constituting the units of qualification / or qualification as a whole			Which competences are determinant for the attribution of qualification to the certain level in the sectoral framework or hierarchy of qualifications?
	Functional	Cognitive	General	

There can be discerned the following sources of information for this analysis:

- occupational standards (if they exist);
- VET standards (if they exist);
- data of different researches of activities available in the partners countries;
- in case of the absence of above mentioned sources of information the partners can execute small research of activities by interviewing the employees or experts in the sector.

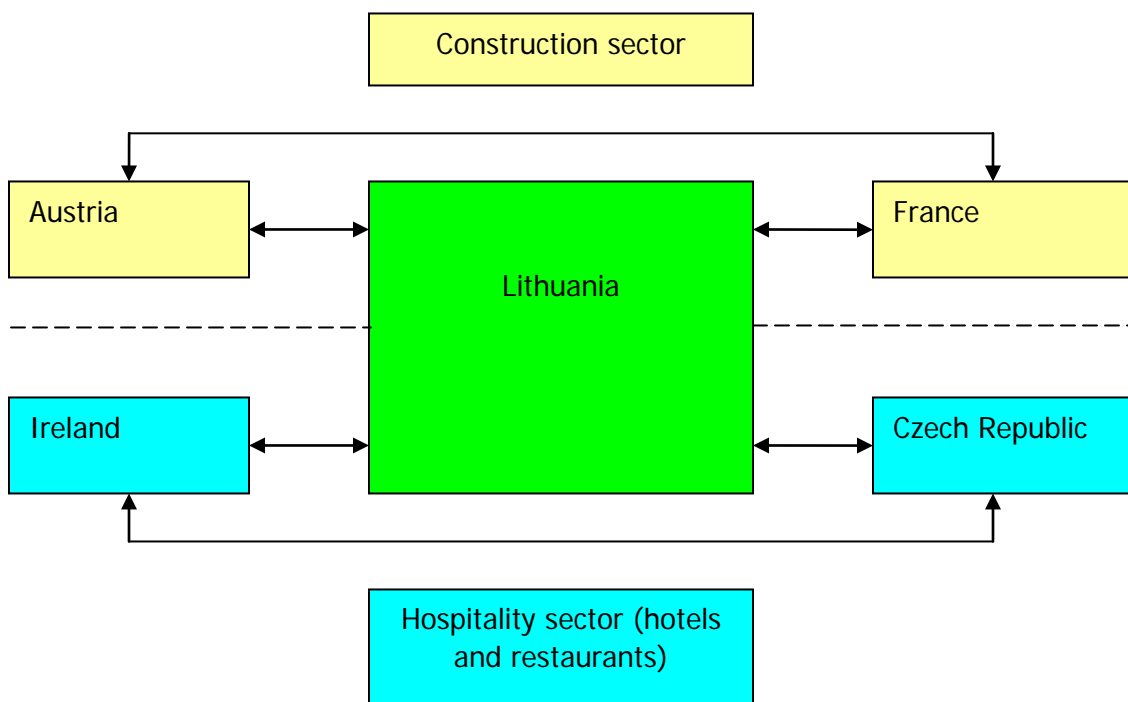
For definition of the structure and contents of sectoral qualifications frameworks (1st table) it is sufficient to analyse the information available from the existing documents: occupational standards, VET standards, different catalogues and registers of qualifications and then to discuss the completed tables with the local experts in the sector.

For the analysis of the structure and contents of qualifications in the sector (2nd table) there can also be used information from the existing documents. If these sources of information are not available there can be conducted panel interview with the group of experts in the field with the questions listed according the contents of the proposed table:

- *What are the main work tasks of the skilled execution of work?*
- *Can there be discerned the units of qualifications? If so, what are these units?*
- *What competences constitute qualification or the units of qualification? (What competences are needed for the execution of the tasks of activities?).*
- *Which competences are determinant for the attribution of qualification to the certain level in the sectoral framework or hierarchy of qualifications?*
- *What are the most common ways of the acquisition of qualification (formal initial and continuing training, non formal and informal learning, etc.)?*
- *How this qualification is recognized and awarded? Are there any sector specific procedures or requirements for the recognition or awarding of qualification?*

3. Referring to the data obtained from the previous researches there should be analysed how the hierarchy of the sectoral qualifications frameworks correspond to the EQF in terms of the attribution to the levels and in terms of the correspondence between the competences of sectoral qualifications to the EQF level descriptors.

The comparison of qualifications is executed in 2 sectors (construction and hospitality) and in 3 countries for each sector:



Comparison is executed in 2 stages:

1. Comparison of the *maps of qualifications* identified by the partners in the analysis of the work package 2. This comparison has to answer the following questions:

What are the similarities and differences in the occupational structure of the sectors and in the relation of the ordering of occupations and qualifications in the sectors?

What are the similarities and differences in the criteria of levelling of qualifications in the sectors?

What are the similarities and differences in the numbers of levels of sectoral qualifications between the countries? Can there be noticed any clear matches of the hierarchical sets of qualifications in the sectoral frameworks of different countries?

On which levels there can be noticed the biggest differences in the levelling of qualifications?

2. Comparison of the structure of selected and analysed qualifications of the same sectors belonging to the analogical (or close/similar) levels in the sectoral frameworks. This comparison has to provide the answers to the following questions:

What are the similarities and differences in the structural units of composed qualifications in terms of size of these units and their type (units of qualifications, competences, learning outcomes) as well as their numbers?

How the contents of the compared qualifications match to each other in terms of autonomy, responsibility and complexity of activity? Where are the biggest mismatches of the contents of qualifications? What are the similarities and differences of the criteria for the description of the contents of qualifications?

2.1. Research of the structure and contents of the sectoral qualifications and their compatibility with the EQF

After the preliminary analysis of the first draft reports of research there can be noted the following:

3. Approaches of the structuring of qualifications in the sectoral frameworks are quite different between the partners' countries. There can be discerned the following types of these approaches:

c. Occupational approach, when qualifications are grouped according to the occupations, each occupation encompassing certain numbers of levels of qualification, which can be adhered to certain levels of the EQF (Lithuania, France, Czech Republic). For example:

Bricklaying (qualifications) - Lithuania:

Bricklayer level 2 (EQF)

Bricklayer level 3 (EQF)

Bricklayer level 4 (EQF)

Bricklayer level 5 (EQF)

France:

Concrete pouring, reinforcing, spreading, levelling, smoothening and sealing worker (EQF3, FQF5)

d. More levelling oriented approach, when qualifications are grouped according to their belonging to the different qualifications levels in the sector based on the characteristics of performance (Austria, Czech Republic), for example:

Construction sector qualifications in Austria:

Auxiliary workers (Bauhilfsarbeiter und Bauhilfsarbeiterinnen) (EQF1,2)

Semi-skilled workers often skilled in a different works of construction (Angelernte Bauarbeiter) (EQF3)

Skilled workers of construction after the apprenticeship (Facharbeiter) (EQF 4)

Experienced foremen (Vizepolier) (EQF4)

Supervisors, construction site practical managers (Meister, Poliere, Obermeister, Hauptpoliere) (EQF5)

Technical and commercial employees of construction (Technische und kaufmännische Angestellte) (EQF1-5)

Waiter qualifications in Czech Republic:

Assistant waiter (EQF 2)

Basic serving (EQF 3)

Advanced serving (EQF 3)

Bartender (EQF 3)

Sommelier (EQF 3)

In both cases there can also be noted some signs of mixed approach which encompass the occupational and level oriented approaches each having similar influence and importance for the structuring of qualifications in the sector. This is especially noticed in the occupations and qualifications related to the management and work organization (supervisors, high technicians and technical executives, draughtsman etc.). The qualifications have very clearly expressed

vertical levelling combined with the occupational specialisation. For example, in the qualifications of the restaurants sector of Czech Republic the qualifications of the cooks are more structured according to the occupational approach (different fields of occupations and specialisations) while the qualifications of waiter – according to the approach of hierarchical levelling (above given example).

4. There can be discerned the following institutional and occupational basements of the differentiation and structuring of sectoral qualifications:

c. Existing work practices and settings, existing pathways of skills upgrading combined with the structure of the qualifications supplied by the VET and higher education institutions. In some areas of sectors predominate the existing work practices and settings and they decide the way of the structuring of qualifications, in other areas the characteristics and structure of the qualifications provided by the VET and higher education institutions plays the major role in this regard. This can be noted in Lithuania and Czech Republic.

d. Collective agreements between the employers and unions of the sector which define the qualifications in the sector and their structuring (Austria, France). For example, in Austria sectoral qualifications in the building construction sector are based on the collective agreements (Kollektivvertrag) which are negotiated in every sector between Chamber of Commerce (Wirtschaftskammer Österreich) and Labour Union (Österreichischer Gewerkschaftsbund). In France the employers' organizations and unions are also actively involved in the definition of qualifications in the sectors.

5. Criteria for ascribing sectoral qualifications to certain levels are quite different:

a. Application of the functional, cognitive and general competences and their combinations in the different contexts of activity (Lithuania, Czech Republic). Research in the construction sector conducted by the Vilnius university 2 years ago disclosed, that due to the big shortage of the skilled workforce construction sector recruited a lot of unskilled and low-skilled persons having no formal qualifications nor professional experience in the field of construction and through training in the workplace and experiential learning this workforce was integrated in the sector.

b. Credentials acquired in the initial and continuing vocational training or higher education institutions (certificates, diploma). This is especially valid for those sub-sectors and occupations which are traditionally regulated by the state-authorities (safety engineer, architect etc.) (Austria, France).

c. Credentials and the practice in the execution of activity in the field. This is especially clearly expressed for the higher level qualifications in the construction sector in Austria and France, but also can be noted in other countries (Lithuania, Czech Republic).

2.2. Comparison of the *maps of qualifications* in the sectors of construction and hospitality /in Austria, Czech Republic, France, Ireland and Lithuania

The similarities and differences in the occupational structure of the sectors in relation to the ordering of occupations and qualifications in the sectors

Construction sector, countries – Austria, France, Lithuania

Map of qualifications in the construction sector of Austria

Qualifications of the construction sector in Austria can be divided in two main groups: qualifications of workers and employees (or specialists). The qualifications of workers are further divided according to their levels into the following groups of qualifications:

a. External auxiliary staff in the construction sector (security, safety, catering services etc. - Sonstiges Hilfspersonal). These are usually low skilled employees with the qualifications which can be adhered to the EQF level 1.

b. Auxiliary construction workers (Bauhilfsarbeiter und Bauhilfsarbeiterinnen). These workers are usually low skilled or unskilled. Their qualifications can be adhered to the EQF level 1 (for those having until 6 months of work experience) or to the EQF level 2 (for those having more than 6 years of the work experience). The main criterion for the levelling of these qualifications is work experience.

c. Semi-skilled workers (Angelernte Bauarbeiter) which are often skilled in a different sector or profession. These workers already possess the knowledge and skills needed for the execution of tasks in certain occupations and their qualifications can be adhered to the EQF level 3. Workers with these qualifications execute the work tasks requiring both manual work and the use of different machinery and equipment. There can be mentioned the following qualifications of this group: (worker for preparation of road construction, operators of loading machinery, crane operators, miners, welders, masonry workers, concrete workers, railway builders, etc. - Asphaltierervorarbeiter, Baggerführer, Drittelführer, Düsenführer, Eisenbahnoberbauvorarbeiter, Führer von Turm-, Derrick- Kränen, Grädern, Straßenfertigern, Zugmaschinen. Sprengmeister, Führer von Zugmaschinen, Lastkraftwagen, Raupenfahrzeugen, Lokomotiven, Heißmischmaschinen. Mineure, Montierer im Eisenbahnoberbau, Schweißer. Steinmaurer, Asphaltiererarbeiter mit Gußasphalt, Eisenbieger und Eisenflechter, Gerüster, Schaler, Abbrucharbeiter im Straßenbau von Hand aus, Asphaltierer mit qualifizierten Tätigkeiten, Bermenschlichter, Betonierer, Gleiswerker, Grundbauleger, Kesselmann).

d. Skilled workers (Facharbeiter). This group of qualifications can be further divided into apprentices (Vorarbeiter, Lehrling) and skilled workers (Facharbeiter). Apprentices are trained in 3 ways: 1st: A Contract of apprenticeship is established between the apprentice master (employer, e.g. construction company, builder) and the apprentice. 2nd: Competences not covered by the employer are covered by a federal "Lehrwerkstätte". 3rd: Vocational school (3 years during apprenticeship). Skilled workers (Facharbeiter) acquire their qualifications only after passing the final examination ("Lehrabschlussprüfung"). These qualifications can be adhered to the EQF level 4 (apprentices – Vorarbeiter can also be attributed to the EQF level 3). The main

criterion for the attribution of qualifications to this level or group is the acquired, assessed and recognised competences leading to the awarding of qualification.

e. Specially experienced foremen (Vizepolier). There are no formal requirements for the acquisition of the "Vizepolier" qualification, usually specially experienced foremen are appointed to this qualification. This qualification is attributed to the EQF level 4.

The qualifications of employees (specialists) are divided into the following levels:

1. Senior foremen (Meister, Poliere, Obermeister, Hauptpoliere). They are employed as auxiliary staff for the managers and engineers in transmitting and distribution of the tasks of work to the workers. Skilled workers of construction can acquire the qualification of the senior foremen (Poliere) after the minimal work experience of 10 years in the construction. The main criteria for the acquisition of this level of qualification - work experience in the field of occupation. This level of qualification can be adhered to the EQF level 5.

2. Technical and Commercial employees (Technische und kaufmännische Angestellte). This group of qualifications is subdivided into 5 levels and one special group: "Polier".

The first level is composed of the auxiliary office workers - typists, copiers, etc. (Kassenboten, Schreibkräfte, Vervielfältiger, Stenotypisten). The main occupations are auxiliary office and commercial tasks. These qualifications are acquired after the completion of at least 2 years course in the vocational school or 6 years in the secondary school. These qualifications can be attributed to the EQF level 2.

The second level is composed of the auxiliary specialists of the construction technical field (auxiliary technical staff, designers of drawings, auxiliary staff of storage of materials, etc. - Bautechnische Gehilfen, Bauzeichner, Kanzleihilfen, Magazinsgehilfen, Stenotypisten, Telefonisten, Lagerführer). Their work consists of auxiliary technical tasks, work according to the instructions and prescribed requirements. The qualification is acquired after the completion of the 2 years course in the vocational school in the fields of construction or close occupational fields (carpenters, electricians, gas and water installation specialists, plumbers etc.) or through the corresponding work experience in the fields of construction work. These qualifications can be attributed to the EQF level 3.

The third level consists of the qualifications of construction engineers and technicians, construction machinery engineers and technicians, accounting and purchasing specialists (Bauingenieure und Bautechniker, Baumaschineningenieure und Baumaschinentechniker, Buchhalter, Einkäufer). The work is rather specialised and requiring autonomous and responsible work according to the general requirements and standards. The qualification is acquired after the completion of the vocational training in the construction or related field and at least after 4 years of work practice in the field. These qualifications can be attributed to the EQF levels 4 and 5.

The fourth level consists of the employees in purchasing, managers and supervisors of construction works, senior machinery engineers, and accountants (Baukaufleute, Bauleiter, erste Baumaschineningenieure, Bilanzbuchhalter, Statiker). Work of the higher level

occupations requiring autonomous and highly responsible execution of commercial, managerial and technical tasks, human resource management, and management of the construction site works. The qualification is acquired after the studies at the higher school or passing of the construction master craftsman examination and minimal 1 year of practice in the field. These qualifications can be attributed to the EQF level 5.

The fifth level of qualifications includes the manager of the big construction sites or departments of construction enterprises (Bauleiter selbständiger Großbaustellen, Leiter von selbständigen Abteilungen). Highly responsible managerial work. The qualification is acquired after the completion of the studies at the higher school or passing of the construction master craftsman examination and minimal 4 year of practice in the field. These qualifications can be attributed to the EQF levels 6 and 7.

Map of qualifications in the construction sector of France

Qualifications of the construction sector in France can be classified according to the sub-sectors of the construction sector and occupations in these sub-sectors. There can be distinguished the following sub-sectors, occupations and qualifications:

1. Clearing site and laying down ground foundations

1.1. *Clearing site, Laying down ground-foundations and preparing necessary building tools and materials (ROME code n°: 42111). Attributed qualifications:*

- Clearing site and ground preparation worker (EQF1),
- Preparing binder and ground coating materials/products worker (EQF1),
- Spreading coating materials worker (EQF1),
- Construction tools and materials manipulator (EQF1),

The persons having these qualifications execute simple tasks (requiring basic general knowledge and skills) under direct supervision in structured context. Qualification acquisition requirement: end of lower-secondary school level with interest and/or experience in the field.

- Masonry assistant worker (EQF2).

This qualification permits accomplishing tasks, requiring basic general knowledge and skills, under direct supervision in structured context. Qualification acquisition requirements: CAP (Professional Aptitude Certificate) in the domain.

1.2. *Construction and maintenance of the building pathways, pavements, ground piping and drainage systems (ROME code n°: 42112)*

- Pavement, driveway and lawn ground construction/maintenance worker (EQF2). This qualification permits accomplishing tasks and relatively simple solutions by selecting and using (with some autonomy) basic tools and materials. Qualification acquisition requirement: end of lower-secondary school level with interest and/or experience in the field.

- Ground piping and drainage system installation/maintenance worker (EQF3). This qualification permits executing specific tasks (requiring general and factual knowledge with a range of cognitive and practical skills) in the domain with some autonomy within the framework

of the guidelines of work requirements and context. Initial qualification acquisition requirements: CAP (Professional Aptitude Certificate) or BEP (Professional Studies Diploma) in the domain.

1.3. *Construction and assembly works of concrete (ROME code n°: 42113)*

- Concrete preparation and homogenisation worker (EQF3). This qualification permits to execute tasks selecting and using (with some autonomy and adaptability to the context) basic and domain specific methods, tools, materials, information, solving task-related simple problems. Minimum initial qualification requirement in the domain is usually a CAP (Professional Aptitude Certificate).

- Concrete pouring, reinforcing, spreading, levelling, smoothening and sealing worker (EQF3).

- Assembling prefabricated/reinforced concrete structures worker (EQF3).

These qualifications permit to execute tasks selecting and using basic and domain specific methods, tools, materials, information, solving task-related related simple problems (requiring general and factual knowledge with a range of cognitive and practical skills). Minimum qualification requirement in the domain is usually a CAP (Professional Aptitude Certificate).

- Professional concrete worker (EQF4). This qualification comprises solutions to specific problems of work, autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repairs, supervision of the routine work of others. Qualification requirements: professional experience in different activities of concrete construction activities, and usually holding to a CAP (Professional Aptitude Certificate) or BEP (Professional Studies Diploma) in the domain.

1.4. *Masonry(bricklaying) (ROME code n°: 42114)*

- Masonry bricklayer (executing simple masonry/bricklaying tasks and operations under the guidelines and supervision of a professional bricklayer) (EQF2). This qualification permits to execute masonry tasks and operations with a very limited autonomy under the responsibility and the supervision of professional mason. Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

- Professional masonry bricklayer (dealing with different masonry tasks and operations, including undertaking repairing actions and team work organisation and supervision) (EQF3). This qualification permits to accomplish masonry tasks and problem solutions with autonomy and responsibility by selecting and applying methods, tools, materials, including the responsibility for repairing, supervision of the routine work of others, evaluation and improvement of work results. Initial qualification level requirement within French FQF is BP or BT (level 4).

2. *Setting-up building structures*

2.1. *Setting-up metal and concrete building structures (ROME code n°: 42121)*

- Pre-assembler of metal and reinforced concrete parts of building structures (EQF2). Minimum qualification requirement in the domain is usually a CAP (Professional Aptitude Certificate).

- Mounting worker of metal and reinforced concrete building structures, including scaffolding, lifting and carrying equipment mounting, organisation and supervision of team working tasks and operations (EQF3). This qualification comprises self-management of work execution together with the supervision of the routine work of others, generation of solutions to

specific problems of work. Initial qualification level requirement within French FQF is BP (Vocational certificate) or BT (Technician Certificate) (level 4) in the domain.

2.2. *Setting-up timber building structures (ROME code n°: 42122)*

- Carpenter assisting in producing, processing and assembling and mounting different timber structures of the building (EQF2). This qualification permits to execute simple tasks (requiring basic general knowledge and skills) and solve routine problems under direct supervision and using simple rules and instruments. Formal qualification requirement: CAP or BEP as a carpenter.

- Carpenter in charge of producing, processing and assembling and mounting different timber structures of the building, including the organisation and supervision of team-work tasks and operations wooden structures preparation and mounting (EQF3). This qualification permits to accomplish tasks and to solve related problems (with some autonomy and adaptability to work assignments and context) by selecting and applying methods, tools, materials, including supervision and repairing responsibility (requiring general and factual knowledge with a range of cognitive and practical skills). Formal qualification requirement starting by CAP or BEP (level FQF5) and ending up as team leader with level 3 in EQF (FQF4).

2.3. *Roofing (ROME code n°: 42123): Flat roofing*

- Roofer assisting in flat roofing with tiles, slate or melting coating (EQF2). This qualification permits to execute roofing simple tasks and solving routine problems under direct supervision and using simple rules and instruments. Formal qualification requirements: CAP or BEP.

- Roofer in charge with flat roofing tasks, including repairs, team work organisation and supervision (EQF3). Formal qualification requirement: BP or BT.

2.4. *Roofing (ROME code n°: 42123): Arched roofing*

- Roof thatching worker (assisting in setting and covering arched roofing structures) (EQF2). Formal qualification requirements: CAP or BEP.

- Thatcher in charge of setting and covering arched roofing structures, including maintenance, organisation and supervision of team work roofing tasks and operations (EQF3). Formal qualification requirement: BP or BT.

2.5. *Installing water-proofing and insulation systems (ROME code n°: 42124)*

- Installer of water proof system (in the building roofs, walls, floors, terrace and façade) (EQF3).

- Installer of sound proof and thermal insulation systems (EQF3).

These qualifications permit to accomplish tasks and solve related problems by selecting and applying methods, tools, materials, including supervision and repairing responsibility. Formal qualification requirement: BP or BT.

3. Equipment installation

3.1. *Installation and maintenance of the electric components (ROME code n°: 42211).*

- Installation and maintenance of electrical wiring and light - construction electrician (EQF4).

- Installation and maintenance of electrical heating and ventilation components - construction electrician (EQF4).

- Installation and maintenance of electrical security and alarm components - construction electrician (EQF4).

These qualifications permit accomplishing tasks and solving related problems by selecting and applying methods, tools, materials, including supervision and repairing responsibility. Formal qualification requirement: BP or BT.

3.2. *Installation and maintenance of health and thermal facilities (ROME code n°: 42212)*

- Worker of installation, launch and maintenance of the heating system facilities (EQF4).

- Worker of installation, launch and maintenance of the ventilation /air conditioning facilities system (EQF4).

These qualifications comprise self-management of work execution together with the supervision of the routine work of others, generation of solutions to specific problems of work. Initial qualification level requirement within French FQF is BP (Vocational certificate) or BT (Technician Certificate) (level 4) in the domain.

- Welding -plumbing worker (EQF3).

- Lagging worker (EQF3).

These qualifications permit to accomplish specific work tasks and solving problems by selecting appropriate materials, instruments and methods of work, supervision of the routine work of others. Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain

4. Installation of fitments

4.1. *Installing of latches, hinges and locking systems (ROME code n°42221)*

- Joiner (processing, assembling, fitting and maintenance of wooden products, supports and structures including doors and windows) EQF2

- Installer of hinges, latches and locking system (EQF2)

These qualifications permit to execute specific work tasks and solving problems (with some autonomy and adaptability to work requirements and context) by selecting appropriate materials, instruments and methods of work with a certain autonomy. Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

4.2. *Panel adaptation and fitting (ROME coden°42222)*

- Partition and support fitments installation worker (EQF2).

- Kitchen and storage fitments installation worker (EQF2).

These qualifications permit to accomplishing specific work tasks and solving problems by selecting appropriate materials, instruments and methods of work (with some autonomy and adaptability to work requirements and context). Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

5. Finishing touches

5.1. *Installation of surface rigid coating (ROME code n°: 42231)*

- Wall coating worker with rigid coating products such as ceramics, tiles and synthetic products (EQF3).

- Floor and terrace coating worker (with rigid products such as tiles, earthenware, ceramics etc) (EQF3).

These qualifications permit to accomplish specific work tasks and solving problems (with some autonomy and adaptability to work requirements and context) by selecting appropriate materials, instruments and methods of work with a certain autonomy. Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

5.2. *Installation of surface flexible coating (ROME code n°: 42232)*

- Coating worker assisting in the preparation of flexible coating materials and products (such painted paper, textiles, carpets, etc.) (EQF2). Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

- Coating skilled worker in charge of flexible coating, including organisation and supervision of team working tasks and operation (EQF3). This qualification permits to accomplish specific work tasks and solving problems by selecting appropriate materials, instruments and methods of work (with some autonomy and adaptability to work requirements and context). Minimum initial access qualification requirements within French FQF are CAP or BEP in the domain or as a professional: BP (professional Certificate)/ BT (Technician Certificate).

5.3. *Painting and decoration (ROME code n°: 42233)*

- Home painting decorator assisting in the preparation of the painting and decoration supports and products, including simple painting and paperhanging tasks and operations (EQF2). Minimum initial access qualification requirements within French FQF are CAP or BEP in the domain.

- Home painting decorator in charge of painting, decoration repairing operations, including the organisation and supervision of team working tasks and operations (EQF3). Minimum initial access qualification requirements within French FQF are CAP or BEP in the domain or as a professional painting-decorator: BP (professional Certificate)/BT (Technician Certificate).

6. Supervisors, high technicians and technical executives

6.1. *Supervisors (ROME code n° 61231 and code n° 61232)*

- Supervisor of building site preparation work operations (EQF4).
- Supervisor of construction and maintenance of driveways and underground drainage system operations (EQF4).

- Supervisor of concrete construction, assembly and maintenance work operations (EQF4).

- Masonry work operations supervisor (EQF4),
- Supervisor of setting-up and maintenance of metal and concrete building structures operations (EQF4),

- Supervisor of setting-up and maintenance of timber building structures operations (EQF4);

- Supervisor of roofing work operations (EQF4),
- Supervisor of work operations connected with the installation and maintenance of water proofing, insulation, ventilation, health and thermal facilities systems (EQF4).

- Technical supervisor of the operations of electrical components installation and maintenance (EQF4);

- Supervisor of fitments installation and maintenance operations (such as panel adaptation and fitment, rigid and flexible and coating). (EQF3);

- Supervisor of finishing touches operations (such as painting and decoration) (EQF3).

These qualifications comprise taking the responsibility of accomplishing various construction operations on the site through team work organisation and supervision with adaptability to work requirements and circumstances in solving related problems. Formal

qualification requirement are CAP, BEP, BP (professional Certificate) or BT (Technician Certificate) in the domain.

6.2. *Draughtsman (ROME code n° 61221)*

- Draughtsman (in charge of transforming «the future building project» into drawing projects and technical solutions by using his/her construction and architecture related knowledge and techniques in compliance with regulations concerning building construction or space management standards. This might include taking the required responsibility of directing, coordinating and monitoring team working in the domain) (EQF5). This qualification permits to exercise basically functional complex tasks requiring a comprehensive, specialised, factual and theoretical knowledge, including a wide range of cognitive and practical skills which are necessary for the development of creative solutions to complex and unpredictable problems. Minimum initial qualification requirement in the domain is BAC+2 or 3.

6.3. *Head of construction technical- economic engineering (ROME code n° 61223 and n° 61224)*

- High technician of construction technical-economic engineering (in charge of carrying out the technical-economic feasibility studies concerning the development of construction/installation "project", which includes determining the technical processes, methods of organization, implementation and flow-up of their costs. This includes undertaking, according to experience, related supervisory responsibilities). (EQF6). This qualification permits to exercise, manage and supervise complex technical-economic feasibility projects, including taking the responsibility for functional decision-making in unpredictable work context. Initial formal qualifications: BAC+2 (such as BTS: High Technician Diploma) in the domain.

- Construction technical-economic engineer (in charge of carrying out the technical-economic feasibility studies concerning the development of construction/installation "project", which includes determining the technical processes, methods of organization, implementation and flow-up and their costs. This includes undertaking, according to experience, related supervisory responsibilities). (EQF7). This qualification permits to exercise, transforming, managing and supervising complex technical-economic and professional activities, approaches and strategies requiring highly specialised knowledge and problem-solving skills. Qualification requirements: 2nd cycle of the university level of certification (Master degree in the domain).

6.4. *Architect (ROME code n°: 61211)*

Architect in charge of conceptualising and expressing by means of sketches or diagrams of the configuration of a construction project (a building/or a construction space). Identifying the technical possibilities which are best suited to the construction site and taking into account the constraints imposed by the client, the urbanisation and the environmental scheme and standards. This includes taking the responsibility of the overall construction operations programming, organisation and follow-up. (EQF8). Exercising, transforming, managing and supervising complex technical-professional activities, decision making process and strategies in unpredictable work contexts, using advanced knowledge and specialised skills and techniques (with substantial authority, innovation, autonomy and commitment to the development and implementation of new ideas and processes) in the domain. Qualification requirements: 2nd or the 3rd cycle university level of certification in architecture.

7. Road construction

7.1. *Road construction and maintenance (ROME code n°: 42111, 61 223, 61231 and 61232)*

- Road construction preparation worker dealing with the preparatory work on the road construction site (EQF1). This qualification comprises execution of simple tasks (requiring basic general knowledge and skills) and solving routine problems under direct supervision and using simple rules and instruments. Initial qualification requirement: end of lower-secondary school level with interest and/or experience in the road construction field.

- Road construction and maintenance worker dealing with preparation of site ground, digging works, driving and manipulating road construction machines, tools and materials, laying down the road basement and coating (EQF2). This qualification comprises executing work tasks and operations with some autonomy under the responsibility and the supervision of professional road construction supervisor. Initial qualification level requirement within French FQF is CAP or BEP (level 5) in the domain.

- Worker on the construction and maintenance of pavements, driveways and cycling pathways (EQF2). Qualification requirement: end of lower-secondary school level with interest and/or experience or holding a CAP (Professional Aptitude Certificate) in the domain.

- Supervisor of road construction works (organising, supervising work teams operations on the construction site) (EQF3). Responsible for the accomplishment of road building works on the site through team work organisation and supervision with adaptability to work guidelines and context requirements in solving related problems. Formal initial qualification requirement are usually CAP (Professional Aptitude Certificate), BEP (Professional Studies Certificate) in the domain.

7.2. Head of road building and maintenance technical-economic engineering (ROME code n° 61223 and n° 61224)

- High technician in road construction technical-economic engineering (in charge of carrying out the technical-economic feasibility studies concerning the development of a road construction "project", which includes determining the technical processes, methods of organization, implementation and flow-up and their costs. This includes undertaking, according to experience, related supervisory responsibilities). (EQF6). Qualification permits to exercise, manage and supervise complex technical and professional activities, including the responsibility for the operational decision-making processes in an unpredictable work context. Initial formal qualifications: BAC+2 (such as BTS: High Technician Diploma) in the domain.

- Road construction technical-economic engineer (in charge of carrying out the technical-economic feasibility studies concerning the development of road construction "project", which includes determining the technical processes, methods of organization, implementation and flow-up and their costs. This includes undertaking, according to experience, related supervisory responsibilities). (EQF7). Qualification permits to exercise, transform, manage and supervise complex technical-economic and professional activities, approaches and strategies requiring highly specialised knowledge and problem-solving skills. Qualification requirements: 2nd cycle of the university level of certification (Master degree in the domain).

There can be noticed that the qualifications in the construction sector of France are quite narrow and permits to execute narrowly specialised work tasks. The main levelling criteria are the requirements posed by the autonomy and complexity of the executed tasks. The autonomy is very important criteria for the higher level qualifications. Despite the fact that the France is probably the only country which implemented the system of the recognition of the non-formally and informally acquired competences and qualifications (validation des acquis de l'expérience – VAE) the formal institutional acquisition of qualifications remain very important factor of its adherence to certain levels.

Map of qualifications in the construction sector of Lithuania

The structuring of qualifications in the construction sector in Lithuania is rather similar to the structuring of qualifications in France – the qualifications are grouped according to the typical sectoral occupations or fields of activities in the sector. The typology and structure of the occupations in the sector defines the disposition of the qualifications. There can also be noticed some links between the qualifications belonging to the different occupation or their groups – this is a result of the multiskilling of the employees in the sector which was especially enhanced by the recent economical and social changes, challenges of the increasing and intensifying competition on the national and international level and the shortages of the skilled workforce, when the employers were faced with the need to invest in the training of the available employees in order to widen their qualifications and in such way to fill in the skills gaps or to hire and train the unskilled workforce, also paying more attention to the wider and more flexible qualifications.

Research in the construction sector of Lithuania, conducted by the group of sociologists from the Vilnius University (2008) has disclosed, that the hierarchical structuring of qualifications in the construction sector is defined by the level of the development of the technological (functional) and social (general) competences. Higher level functional knowledge and skills become a very important symbolic capital which opens the wider possibilities for the advancement in the hierarchical structure of the qualifications in the sector. In this sense there can be stated that the structure of qualifications in the construction sector of Lithuania until recent times has been very open (it can be accessible for any workforce independently from their possessed skills and competences due to the practices of the internal training and professional socialization in the enterprises of the sector and provides rather free possibilities for the advancement in the hierarchy of qualifications depending on the employees efforts in the development of the skills and competences at the workplace). Nowadays, due to the beginning of the crisis in the construction sector and decreasing needs of the workforce this situation changes and sector again becomes more closed for the workforce not having the official (recognized) qualification related to the sector.

Analysing the structure of qualifications in the construction sector of Lithuania there can be distinguished two sub-sectors: general construction, or the construction of the inhabitant buildings and the special construction, which includes road building, building of bridges and other communications. Each sub-sector consists of the following occupations which encompass the groups of qualifications of the different size and hierarchical height:

Subsector: general construction

1. Bricklaying

Qualifications:

Bricklayer (simple unsophisticated masonry constructions, assistance in repair of masonry constructions - EQF2). The level of qualification is decided by the work executing simple tasks under direct supervision in structured context.

Bricklayer (bricklaying in making ordinary masonry constructions, simple operations of repair of masonry constructions - EQF3). The level of qualification is decided by selection and applying of basic methods, tools, materials, information, solving simple work problems.

Bricklayer (bricklaying in making different masonry constructions, execution of repair of masonry constructions, team work organization - EQF4). The level of qualification is decided by solution of specific problems in a field of work, autonomy of execution of task within certain guidelines of work context, supervision of the routine work of others, evaluation and improvement of work results.

2. Concrete works (concrete pouring)

Qualifications:

Concrete worker (assistance in making simple concrete items and constructions - EQF2). The level of qualification is decided by work executing simple tasks under direct supervision in structured context.

Concrete worker (concrete pouring and repair of concrete constructions - EQF3). The level of qualification is decided by selection and applying of basic methods, tools, materials, information, solving simple work problems.

Concrete worker (concrete pouring, repair of concrete constructions, team work organization - EQF4). The level of qualification is decided by finding of solutions to specific problems of work, autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repair, supervision of the routine work of others.

3. Concrete floor pouring works

Qualifications:

Concrete floor pouring worker (concrete floor pouring - EQF3). The level of qualification is decided by selection and applying of basic methods, tools, materials, information, solving simple work problems.

Concrete floor pouring worker (concrete floor pouring and team work organization - EQF4). The level of qualification is decided by solutions to specific problems of work, autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repair, supervision of the routine work of others.

Looking at these qualifications there can be stated, that the qualifications levels in the construction sector corresponding to the EQF levels 2, 3 and 4 are defined by the following characteristics of activities:

Level, corresponding to the EQF level 2 - execution of simple tasks and solving routine problems under direct supervision and using simple rules and instruments.

Level, corresponding to the EQF level 3 - accomplishment of tasks and solution of problems by selecting and applying methods, tools, materials, responsibility for the completion of tasks, repair of faults. Autonomous accomplishment of simple work tasks and problems with the supervision and assistance of higher skilled employees.

Level, corresponding to the EQF level 4 - accomplishment of tasks and solution of problems by selecting and applying methods, tools, materials, responsibility for the completion of tasks, repair of faults, supervision of the routine work of others, evaluation and improvement of work results. Higher autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repair, supervision of the routine work of others.

These characteristics define the levels of qualifications in the most of the cases with the rare exceptions, when the content of activity includes some special performance methods or technologies.

4. Assembling of the ferroconcrete structures

Qualifications:

Assembler of ferroconcrete structures (execution of the general construction work, assembling of ferroconcrete structures - EQF3).

Assembler of ferroconcrete structures (incl. team-work organization - EQF4)

5. Assembling of metal structures

Qualifications:

Assembler of metal structures (assembling of metal constructions - EQF3).

Assembler of metal structures (assembling of metal constructions and team-work organization - EQF4)

6. Flat roofing

Qualifications:

Roofer working with melting coat (covering of flat roofs - EQF2).

Roofer working with melting coat (covering and repair of flat roofs - EQF3).

Roofer working with melting coat (covering, repair of flat roofs, incl. team work supervision - EQF4).

7. Span roofing

Qualifications:

Thatcher of span roofs (assembling and covering of span roof structures - EQF2).

Thatcher of span roofs (assembling, covering and repair of span roof structures - EQF3).

Thatcher of span roofs (assembling, covering, repair of span roof structures, team work organization - EQF4).

8. Iron and tinsmith works

Qualifications:

Tinsmith (simple tin cover (iron) works, repair of tin coverings - EQF3).

Tinsmith (specific tin cover (iron) works, repair of tin coverings - EQF4).

9. Clearing and handling of the building environment

Qualifications:

Worker of the environment handling (preparation of the construction site, elementary operations of installing of the pavements and lawns - EQF2).

Worker of the environment handling (preparation of the construction site, installing of the pavements and lawns - EQF3).

Worker of the environment handling (preparation of the construction site, installing of the pavements and lawns, team work organization - EQF4).

10. Woodworking of construction

Qualifications:

Carpenter (wood processing, production and assembling of wooden structures, assembling of timbered walls, wooden finish, assembling of windows and doors - EQF2).

Carpenter (wood processing, production and assembling of wooden structures, assembling of timbered walls, wooden finish, assembling of windows and doors, repair of wooden products and structures - EQF3).

Carpenter (wood processing, production and assembling of wooden structures, assembling of timbered walls, wooden finish, assembling of windows and doors, repair of wooden products and structures - EQF4).

11. Painting

Qualifications:

Housepainter (simple painting and paperhanging tasks and operations, assistance to more skilled employees - EQF2).

Housepainter (painting and paperhanging, repair of painted surface - EQF3).

Housepainter (painting and paperhanging, repair of painted surface, supervision of the teamwork - EQF4).

12. Lagging

Qualifications:

Lagging worker (simple auxiliary operations in lagging and finishing of lagged structures - EQF2).

Lagging worker (lagging, finishing and repair of lagged structures - EQF3).

Lagging worker (lagging, finishing and repair of lagged structures, teamwork organization – EQF4).

13. Plasterboard mounting

Qualifications:

Plasterboard assemblers (mounting, finishing and repair of plasterboard walls and ceilings - EQF2). Execution of the simple tasks and solving simple problems under the supervision of the higher skilled employees.

Plasterboard assemblers (mounting, finishing and repair of plasterboard walls and ceilings - EQF3). Higher responsibility for the completions of tasks in work, autonomous execution of the correction and repair works, selecting and applying basic methods, tools, materials and information.

Plasterboard assemblers (mounting, finishing and repair of plasterboard walls and ceilings - EQF4). Autonomy in the completions of tasks in work, execution of the correction and repair works, selecting and applying basic methods, tools, materials and information in solving specific problems, broader work context.

14. Tiling

Qualifications:

Tile layer (laying of tiles - EQF2).

Tile layer (laying of damp-course and tiles- EQF3). Higher responsibility for the completions of tasks in work, broader functions of activities, selecting and applying basic methods, tools, materials and information.

Tile layer (laying of damp-course and tiles- EQF4). Autonomy in the completions of tasks in work, selecting and applying basic methods, tools, materials and information in solving specific problems, broader work context.

15. Technical woodworking

Qualifications:

Woodworker (manual and machined processing of wood, finishing of wood, laying of wooden floor and parquet floor, mounting of windows and doors - EQF3).

Woodworker (manual and machined processing of wood, finishing of wood, laying of wooden floor and parquet floor, mounting of windows and doors, production of wooden parts and products, repair of wooden products - EQF4).

16. Plastering

Qualifications:

Plasterer (simple plastering - EQF2).

Plasterer (simple plastering, unsophisticated decorative plastering, repair of plastering - EQF3).

Plasterer (simple plastering, decorative plastering, repair of plastering - EQF4).

17. Electrical system works

Qualifications:

Electrician of the building electrical system (preparatory operations for installation of the electrical system - EQF2).

Electrician of the building electrical system (installation of the simple electrical system and elements of systems - EQF3).

Electrician of the building electrical system (installation of the electrical system-EQF4).

Electrician of the building electrical system (installation and repair of the complex electrical systems - EQF5).

Qualifications level corresponding to the EQF level 5 appears in more complex and responsible occupations of the construction sector - as, for example, in the occupation of the electrical system works. This qualifications level is defined by the following characteristics of activities: review of performance of self, use of comprehensive, specialized, factual and theoretical knowledge in the field of work, exercise of management and supervision in the context of work with unpredictable change.

18. Plumbing

Qualifications:

Plumber (preparatory internal and external plumbing and sewerage works, preparation for the installation of the heating systems - EQF2).

Plumber (internal and external plumbing and sewerage works, installation of the heating systems - EQF3).

Plumber (complex internal and external plumbing and sewerage works, installation of the complex heating systems, testing of the sewerage and heating systems - EQF4).

19. Welding

Qualifications:

Welder (welding of metal constructions and their elements - EQF2).

Welder (welding of metal constructions and their elements, welding of plastic profiles, testing of welded joints - EQF3).

Welder (welding of metal constructions and their elements, welding of plastic profiles, welding of pressure vessels and piping, testing of welded joints - EQF4).

Coordinator-supervisor of the welding operations (preparation of welding specifications, testing and quality control of welds, selecting welding equipment, materials and technologies, supervision and organization of welding work - EQF 5). Exercise of management and supervision in the context of work with unpredictable change, review of performance of work applying comprehensive, specialised, factual and theoretical knowledge and experience in the field.

Coordinator-supervisor of the welding operations (supervision and management of the complex welding processes and projects, coordination and organization of the welding operations and works, preparation of quality standards and technical documentation - EQF 6).

Qualifications, corresponding to the EQF level 6 appears only in the technically complex and managerial occupations of the construction sector. These qualifications are defined by the following characteristics of activities: management of complex technical and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of principles.

20. Installation of the ventilation systems

Qualifications:

Assembler of the ventilation systems (preparatory operations for the mounting of the ventilation systems - EQF 2).

Assembler of the ventilation systems (mounting of simple ordinary ventilation units and equipment - EQF 3).

Assembler of the ventilation systems (mounting of ventilation systems and execution of fire-fighting and thermal insulation of ventilation systems - EQF 4).

Assembler of the ventilation systems (mounting of complex ventilation systems and execution of fire-fighting and thermal insulation of complex ventilation systems, execution of the testing and adjustment of ventilation systems - EQF 5).

21. Management and supervision of the general construction works

Qualifications:

Supervisor of the general construction works (organization of the execution of works in the workplaces, analysis of technical documents - EQF5).

Manager of the general construction works (organization of the execution of construction works on the site, quality control, analysis and preparation of technical documents - EQF6).

Manager of the general technical maintenance of the building (technical supervision and maintenance of the construction works, analysis and preparation of the technical documents - EQF6).

22. Management of the specific construction works

Qualifications:

Manager of the mounting of electrical system (organization of the mounting of electrical system, analysis and preparation of technical documents - EQF6).

Manager of the plumbing installation work (organization of the mounting of plumbing and sewerage systems, analysis and preparation of technical documents - EQF6).

Manager of the mounting of low-voltage electrical installations (organization of the mounting of low-voltage electrical installations, analysis and preparation of technical documents - EQF6).

23. Management of the construction companies and their departments

Qualifications:

Manager of the department of construction company (organization of the construction work, communication with customers, analysis and preparation of technical documents, communication with subcontractors - EQF6).

Manager of the construction company - EQF7. Management and transforming complex work contexts requiring new strategic approaches, taking the responsibility for reviewing the strategic performance of organization.

Qualification corresponding to the EQF level 7 appears only in the occupation of the highest level management of construction companies.

Subsector: road building

Qualifications:

Roadman (preparation of the building site, simple preparatory and auxiliary works and operations - EQF2).

Road building and maintenance worker (preparation of the site, ground, digging works, laying of the basement of roads, laying and processing of the paving, marking and painting of roads, exploitation of road building machines - EQF3).

Road building and maintenance worker (preparation of the site, ground, digging works, laying of the basement of roads, laying and processing of the paving, surface processing of roads, marking and painting of roads, repair of roads, exploitation of road building machines - EQF4).

Road building and maintenance worker (preparation of the site, ground, digging works, laying of the basement of roads, laying and processing of the paving, surface processing of roads, marking and painting of roads, repair of roads, exploitation of road building machines, supervision and organization of team working - EQF5).

Comparability of the *maps* of qualifications in the construction sectors of Austria, France and Lithuania

Comparing the structure of the qualifications in the construction sector of Austria, France and Lithuania there can be discerned the following similarities and differences:

➤ Looking at the hierarchies of the sectoral qualifications in the sectors there can be stated that this sector in the all compared countries is dominated by the qualifications corresponding to the EQF levels 3 and 4. There can also be found qualifications corresponding to the EQF level 2, while qualifications, corresponding to the EQF levels 5 and 6 are not numerous and belong to the more technically complex occupations requiring higher level responsibility, autonomous application of the specific knowledge and skills, social and management skills.

➤Analysing the comparability of the qualifications structure of the construction sector between the 3 countries there can be noticed, that the maps of qualifications of France and Lithuania are more comparable to each other, than the structure of qualifications of Austria.

The possible reason of this situation is that the qualifications in France and Lithuania are grouped in the similar ways – based on the existing occupations in the sector. The case of Austria is a little bit different - here the basic reference for the grouping of qualifications is based on the levels of skills and types of the performed activities (unskilled, semi-skilled, skilled, specially skilled / auxiliary works, supervision and foreman work).

➤ The main differences and difficulties in comparison of the construction sector qualifications maps appear on the higher level of qualifications. For example, it is rather complicated to find the analogues for the qualifications of the construction engineers and technicians, construction machinery engineers and technicians in Austria (Bauingenieure und Bautechniker, Baumaschineningenieure und Baumaschinentechniker) structures of construction sector qualifications in France and Lithuania. In France, for example, the closest analogue to this qualification would be a high technician of construction technical-economic engineering (in charge of carrying out the technical-economic feasibility studies concerning the development of construction/installation "project", which includes determining the technical processes, methods of organization, implementation and flow-up of their costs. This includes undertaking, according to experience, related supervisory responsibilities). But this qualification is attributed to the EQF level 6. It is interesting, that the qualification of the construction engineer today is almost inexistent in Lithuania (maybe it is due to the changes in the work organization and technologies in the construction sector permitting wider multi-skilling and driving more attention to the managerial and not engineering functions), but when this qualification was present in the sector, it included the higher education and could be adhered to the EQF levels 6 or 7. This example demonstrates, that seeking to understand the differences of sectoral qualifications between countries it is not sufficient to analyse only the maps of qualifications. Such analysis also requires to look more deeply into the structures of the qualifications themselves and to compare these structures of the analogical qualifications of the different countries. It will be done in the next chapter of this report.

2.2.3. Hospitality sector, countries – Czech Republic, Ireland, Lithuania

Map of qualifications in the hospitality sector of Czech Republic

Qualifications in the subsector of restaurants are grouped according to the 3 rather big occupations: cooking, waiter work and management of restaurant.

1. Cooking qualifications:

Kitchen helper (EQF 2)

Cook for dumpling production (EQF 2)

Cook for preparation of fast food (EQF 2)

Cook - distributor (EQF 2)

The following requirements of the performance of activity and characteristics of activities permit to ascribe these qualifications to the EQF level 2:

Familiarity (be familiar) with work procedures and technological standards, selection of appropriate procedures, selection of appropriate raw materials, assessment of quality of work and products, diagnostics of technological problems or while operating machines and equipments, application of correct technological procedures.

Cook preparing the hot meals (EQF 3)

Cook preparing the cold meals (EQF 3)

Cook preparing the meals to order (EQF 3)

Cook producing of desserts in restaurants (EQF 3)

Restaurant industry worker (EQF 3)

The following requirements of the performance of activity and characteristics of activities permit to ascribe these qualifications to the EQF level 3:

Familiarity with work procedures and technological standards and their proper usage, selection of appropriate technological procedures, selection of appropriate raw materials, assessment of quality of work and products, diagnostics of technological problems, recognition of possible results of applied measures and suggestion of solution, application of correct technological procedures according to various conditions and requirements.

Head of production – head chef (EQF4)

The following requirements of the performance of activity and characteristics of activities permit to ascribe these qualifications to the EQF level 4:

Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information, evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, integration of specialised knowledge in problem solving, suggestion of improvements and new procedures and products, leadership of activities of small team that applies chosen procedures according to given conditions and requirements.

2. Waiter qualifications:

Assistant waiter (EQF 2)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 2:

Familiarity with procedures and standards, selection of appropriate procedures, selection and usage of appropriate raw materials and equipment, assessment of quality of work and services, recognition of problems arising during work procedures or operating equipment, application of basic serving techniques.

Waiter of basic serving (EQF 3)

Waiter of advanced serving (EQF 3)

Restaurant industry worker (EQF 3)

Bartender (EQF 3)

Sommelier (EQF 3)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 3:

Familiarity with procedures of serving and their usage, selection of appropriate equipment, selection of appropriate raw materials, assessment of quality of products and services, finding causes of shortcomings and problem solution diagnostics of technological problems, recognition of possible results of applied measures and suggestion of solution, application of correct technological procedures according to various conditions and requirements.

3. Restaurant management qualifications:

Front of house manager (EQF 4)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 4:

Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, integration of specialised knowledge in problem solving, suggestion of improvements and new procedures and products, leadership of activities of small team that applies chosen procedures according to given conditions and requirements.

Manager of the food preparation and serving sector (EQF 5)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 5:

Familiarity with documentations, norms, regulations and procedures used in the sector, selection of appropriate procedures, methods, means, raw materials from several possibilities according to desired results and conditions, assessment of quality of products and services, determining causes of shortcomings and finding solution, recognition of possible problems when applying chosen procedures and methods, determining causes of problems and suggestion of solutions, ability to recognise context of possible social aspects when solving problems, analysis of causes of non standard behaviour and their context, analysis of common problems, occurrences and procedures. Judging the relevance of specialised information, evaluation of the results of other activities with a view to their application, application of various procedures in response to various conditions and desired outcomes including the social point of view, solving problems related to generalisation and abstract thinking, integration of specialised knowledge in problem solving, suggestion of new procedures and products, leadership of a team in complex professional activities in unpredictable conditions.

Subsector of hotels has the following qualifications:

Doorman (EQF 2)

Maid (EQF 2)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 2:

Familiarity with procedures and standards, selection of appropriate procedures, selection and usage of appropriate raw materials and equipment, assessment of quality of work and services, recognition of problems arising during work procedures or operating equipment, application of basic serving techniques.

Private accommodation manager (EQF 3)

Housekeeping manager (EQF 3)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 3:

Familiarity with work procedures and using them, selection of appropriate materials, assessment of quality of work and services, determining causes of shortcomings and finding optimal solution (procedure), diagnostics of problems, recognition of possible results of applied measures and suggestion of solution, finding causes of non standard behaviour of guests, application of chosen procedure in response to various conditions and requirements.

Concierge (EQF 4)

Management of small accommodation facilities (EQF 4)

Head of the accommodation sector (EQF 4)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 4:

Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials and equipment according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, integration of specialised knowledge in problem solving, suggestion of improvements and new procedures and products, leadership of activities of small team that applies chosen procedures according to given conditions and requirements.

Manager of hotel services (EQF 5)

The following requirements of the performance of activity and characteristics of activities permit to ascribe this qualification to the EQF level 5:

Familiarity with documentations, norms, regulations and procedures used in the sector, selection of appropriate procedures, methods, means, raw materials from several possibilities according to desired results and conditions, assessment of quality of products and services, determining causes of shortcomings and finding solution, recognition of possible problems when applying chosen procedures and methods, determining causes of problems and suggestion of solutions, ability to recognise context of possible social aspects when solving problems, analysis of causes of non standard behaviour and their context, analysis of common problems, occurrences and procedures. Judging the relevance of specialised information, evaluation of the results of other activities with a view to their application, application of various procedures in response to various conditions and desired outcomes including the social point of view, solving problems related to generalisation and abstract thinking, integration of specialised knowledge in problem solving, suggestion of new procedures and products. Leadership of a team in complex professional activities in unpredictable conditions.

Analysing the map of the qualifications in the hospitality sector of Czech Republic there can be stated that it is a low skilled sector – most of the qualifications can be attributed to the EQF levels 2, 3 and 4. Only two qualifications from the management occupations can be attributed to the EQF level 5:

Manager of the food preparation and serving sector (EQF 5)

Manager of hotel services (EQF 5)

Some wider groups of qualifications are grouped according to the specializations in the execution of concrete activities of the occupation, as, for example: *Cook for dumpling production (EQF 2)*, *Cook for preparation of fast food (EQF 2)*, *Cook - distributor (EQF 2)*, *Cook preparing the*

hot meals (EQF 3), Cook preparing the cold meals (EQF 3), Cook preparing the meals to order (EQF 3), Cook producing of desserts in restaurants (EQF3).

There also can be noted, that the criteria for the attribution of the level in some lower levels are quite high, for example, level 2 qualifications encompass assessment of quality of work and services, level 3 qualifications include diagnostics of problems, recognition of possible results of applied measures and suggestion of solution, finding causes of non standard behaviour of guests.

Map of qualifications in the hospitality sector of Ireland

Hospitality sector of Ireland consist of the following occupations and qualifications:

Sub-sector of the hotels and guesthouses

1. Cleaning of the hotel and its facilities

Qualifications:

Housemaid (cleaning and ordering of the rooms of hotel) (NFQ Level 4; EQF Level 3)

Cleaner Supervisor (cleaning and ordering of the rooms of hotel, coordination and supervision of the work of housemaids, accounting of the materials and means of cleaning) (NFQ Level 5; EQF Level 4)

2. Welcoming and reception of the guests and visitors

Qualifications:

Receptionist (meet and greet guests, check in, check out, organise bill payment) (NFQ Level 4; EQF Level 3)

Maitre d'hôtel (administrator) (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees, selling of the hotel services, work with documents) (NFQ 6; EQF Level 5)

3. Room reservation

Qualifications:

Reservations Manager (selling of the hotel services, coordination of staff, work with documents) (NFQ Levels 6 and 7; EQF Level 5 and 6)

4. Management of hotel

Qualifications:

Hotel Manager (strategic planning, organization and control of the hotel activities, reporting of the results of activities, representation of the hotel) (NFQ Level 8; EQF Level 6)

Subsector of the bars and restaurants

1. Primary preparation of the products and raw materials

Qualifications:

Kitchen Assistant (washing of dishes, primary food preparation, maintenance of hygiene in the kitchen etc) (NFQ Level 3, EQF Level 2)

2. Cooking - making of dishes and confectionary products

Qualifications:

Cook (cooking and finishing off the dishes, maintaining hygiene in the kitchen, work with documents) (NFQ Level 4; EQF Level 3)

Cook (cooking and finishing off the dishes, maintaining hygiene in the kitchen, planning and organization of the work in the kitchen, work with documents) (NFQ Level 6; EQF Level 5)

3. Servicing the guests of the restaurant and bar

Qualifications:

Bar staff (serving of guests at the bar, maintenance of the bar) (NFQ Level 4; EQF Level 3)

Bar supervisor (serving of guests at the bar, maintenance of the bar, supervising bar service operations) (NFQ Level 6; EQF Level 5)

Waiting Staff (reception of the guests, serving of meals, maintenance of the restaurant room) (NFQ Level 4, EQF Level 3)

Restaurant Supervisor (reception of the guests, serving of meals, restaurant supervision, maintenance of paperwork) (NFQ Level 6, EQF Level 5)

4. Restaurant and Bar Management

Qualifications:

Bar Manager (organization and control of the work of auxiliary staff of bar, selling of the services of bar, organization of the supplies of products and services, work with documents) (NFQ Level 7 and 8; EQF Level 6)

Restaurant Manager (organization and control of the work of auxiliary staff of restaurant, selling of the services of restaurant, organization of the supplies of products and services, work with documents) (NFQ Level 7 and 8; EQF Level 6)

The structure and contents of the hospitality sector qualifications is very similar to that of Czech Republic. Maybe the only distinguished feature is comparatively small number of qualifications in the occupations of the sector.

Map of qualifications in the hospitality sector of Lithuania

The hospitality sector of Lithuania consists of the following sub-sectors, occupations and qualifications:

Subsector of hotels

1. Cleaning of the hotel facilities and maintenance of the property and cleanness in the hotel.

Qualifications:

Cleaner, charwoman (cleaning and supervision of the property in the common facilities of the hotel - EQF2)

Housemaid (cleaning and ordering of the rooms of hotel - EQF3)

Senior housemaid (cleaning and ordering of the rooms of hotel, coordination and supervision of the work of housemaids, accounting of the materials and means of cleaning - EQF4)

2. Welcoming and reception of the guests and visitors

Qualifications:

Doorkeeper (meeting and accompanying of the hotels guests, maintenance of the order in the hotel - EQF3).

Porter (meeting and accompanying of the hotels guests, surveillance of the order in the hotel, servicing of the guests during their stay - EQF3).

Maitre d'hôtel (administrator) (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees, selling of the hotel services, work with documents - EQF5). This activity includes exercise of complex tasks in the context of work with unpredictable change

applying comprehensive, specialised, factual and theoretical knowledge and a comprehensive range of practical skills and experience in the field.

Chief maître d'hôtel (senior administrator) (management and coordination of the activities of other employees, selling of the hotel services, work with documents, meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay - EQF6). This activity includes management of complex organizational and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of principles.

Manager of the reception service (organization of the work of reception service, work with documents, servicing of the guests, control of the general order in the hotel, selling of the hotel services - EQF6).

3. Keeping the property of the hotel

Qualifications:

Steward (ensuring satisfaction and accounting of the needs of hotel property, coordination of the cleaning activities, organization and control of the work of other employees of the hotel maintenance - EQF5).

Manager of the room service (ensuring satisfaction and accounting of the needs of hotel property, coordination of the cleaning activities, organization and control of the work of other employees of the hotel maintenance, supervision of the general order in the hotel, work with documents - EQF6).

4. Organization of the conferences and events

Qualifications:

Conference attendant (preparation of the coffee brakes, lunches and fourchets, maintenance of the general order in the conference rooms - EQF3).

Technical assistant of conferences and events (preparation of the conference rooms, maintenance of the general order in the conference rooms - EQF4).

Administrator of the conference centre (coordination and regulation of the work of employees involved in the organization of conferences, informing of customers, supervision of the ordering of food, beverages and dish, control and supervision of the exploitation of the conference equipment, cooperation with the manager-coordinator of the conferences- EQF5).

Manager-coordinator of the conference centre (selling of the conference services, organization of the preparation of conference rooms - EQF5).

Chief administrator of the conference centre (coordination and regulation of the work of employees involved in the organization of conferences, coordination of the activities of conference information centre, work with documents, organization and coordination of the sales of conference services - EQF6).

Manager of the conference centre (work organization of the employees of conference centre, planning of the activities of conference centre, cooperation with the customers and suppliers - EQF6).

5. Room reservation

Qualifications:

Manager of reservations (selling of the hotel services, coordination of orders, work with documents - EQF5).

6. Management of hotel

Qualifications:

General manager of the hotel (strategic planning, organization and control of the hotel activities, reporting of the results of activities, representation of the hotel - EQF7). This activity includes management and transforming complex work contexts requiring new strategic approaches, taking the responsibility for reviewing the strategic performance of organization.

Subsector of restaurants

1. Washing of dish

Qualifications:

Dishwasher (washing of dish, cleaning and ordering of the prescribed facilities - EQF2).

2. Cleaning of the restaurant facilities

Qualifications:

Cleaner (cleaning of the restaurant room, kitchen, toilets and auxiliary facilities - EQF2).

3. Primary preparation of the products and raw materials

Qualifications:

Kitchen worker (washing of dish, assistance in maintaining the cleanness and proper ness in the kitchen, primary preparation of food products - EQF2).

4. Supply of products and materials

Qualifications:

Supplier (supply of food products and other goods - EQF3).

5. Cooking - making of dishes and confectionary products

Qualifications:

Pizza baker (baking of pizza and maintaining the cleanness in the kitchen - EQF3).

Cook (cooking and finishing of the dishes, maintaining of the cleanness in the kitchen, work with documents - EQF3).

Confectioner (making and finishing of the confectionary products, maintaining of the cleanness, work with documents - EQF3).

Cook (cooking and finishing of the dishes, planning and organization of the work in the kitchen, maintaining of the cleanness in the kitchen, work with documents - EQF4).

Confectioner (making and finishing of the confectionary products, maintaining of the cleanness, work with documents, planning and organization of work of other employees - EQF4).

Senior cook (cooking and finishing of the dishes, planning and organization of the work in the kitchen, keeping the order in the kitchen maintaining of the cleanness in the kitchen, work with documents - EQF4).

Chief of the kitchen (cooking and finishing of the dishes, planning and organization of the work in the kitchen, keeping the order in the kitchen maintaining of the cleanness in the kitchen, work with documents - EQF5).

Senior confectioner (making and finishing of the confectionary products, maintaining of the cleanness, work with documents, planning and organization of work of other employees - EQF5).

6. Servicing the guests of the restaurant

Qualifications:

Barmen (serving of the guests at the bar, maintenance of the bar, work with documents - EQF3).

Waiter (reception of the guests, serving of meals, maintenance and supervision of the restaurant room - EQF3).

Barmen (serving of the guests at the bar, preparation of drinks and light meals, maintenance of the bar, work with documents - EQF4).

Waiter (reception of the guests, serving of meals, maintenance and supervision of the restaurant room - EQF4).

Administrator of the restaurant room (reception of the guests, serving of the meals, organization, coordination and control of the work of waiters and barmen, maintenance and supervision of the restaurant room, control of acceptance and execution of advance orders, work with the documents, cashier control - EQF5).

7. Management of restaurant

Qualifications:

Manager of restaurant (organization and control of the work of auxiliary staff of restaurant, selling of the services of restaurant, organization of the supplies of products and services, work with documents - EQF6).

Food production technologist (creation of the recipes of meals and designing of menu, organization of the work of cooks and confectioners and quality control, planning of the production and technological activities of restaurant, work with documents - EQF6).

Managing director of restaurant (planning of activities and profit of restaurant, organization and control of work of staff, work with documents - EQF6).

Analysing the structure of the qualifications in the hospitality sector of Lithuania there can be noted very rich variety of qualifications in the both sub-sectors. Some qualifications are quite narrowly specialised – like pizza baker, confectioner, and conference attendant. In general there also can be noted rather big variety of the qualifications of higher levels compatible with the EQF levels 5, 6 or even 7.

2.2.4. Comparability of the *maps* of qualifications in the hospitality sectors of Czech Republic, Ireland and Lithuania

Comparing the structure of the qualifications in the hospitality sector of Czech Republic, Ireland and Lithuania there can be discerned the following similarities and differences:

4. With the exception of the case of Lithuania the sector of hospitality is a low skilled sector, dominated by the qualifications comparable to the EQF levels 3 and 4.
5. The content of qualifications in general is quite easily comparable between the partners' countries, especially in the lower levels of qualifications. The criteria for the definition of qualifications levels in the EQF are quite sufficient for the comparison of the qualifications in this sector in partners' countries.
6. More complicated cases of comparison are encountered when comparing the qualifications of the higher levels. Here are several examples of this case:

Compared qualification	Czech Republic	Ireland	Lithuania
Senior cook (chef)	<p><i>Head of production – head chef (EQF4)</i></p> <p>Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information, evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, etc.</p>	<p><i>Cook</i> (cooking and finishing off the dishes, maintaining hygiene in the kitchen, planning and organization of the work in the kitchen, work with documents) (NFQ Level 6; EQF Level 5)</p>	<p><i>Chief of the kitchen</i> (cooking and finishing of the dishes, planning and organization of the work in the kitchen, keeping the order in the kitchen maintaining of the cleanness in the kitchen, work with documents - EQF5).</p>
Hotel administrator	<p><i>Management of small accommodation facilities (EQF 4)</i></p> <p>Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials and</p>	<p><i>Maitre d'hôtel (administrator)</i> (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees, selling of the</p>	<p><i>Maitre d'hôtel (administrator)</i> (meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay, coordination of the activities of other employees,</p>

	<p>equipment according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, etc.</p> <p><i>Manager of hotel services (EQF 5)</i></p> <p>Judging the relevance of specialised information, evaluation of the results of other activities with a view to their application, application of various procedures in response to various conditions and desired outcomes including the social point of view, solving problems related to generalisation and abstract thinking, integration of specialised knowledge in problem solving, suggestion of new procedures and products. Leadership of a team in complex professional activities in unpredictable conditions.</p>	<p>hotel services, work with documents) (NFQ 6; EQF Level 5)</p>	<p>selling of the hotel services, work with documents - EQF5). This activity includes exercise of complex tasks in the context of work with unpredictable change applying comprehensive, specialised, factual and theoretical knowledge and a comprehensive range of practical skills and experience in the field.</p> <p><i>Chief maître d'hôtel (senior administrator)</i> (management and coordination of the activities of other employees, selling of the hotel services, work with documents, meeting and accompanying of the hotels guests, maintenance of the order in the hotel, servicing of the guests during their stay - EQF6). This activity includes management of complex organizational and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of principles.</p>
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3. The comparative analysis of the structure and contents of qualifications in terms of the units of qualifications (or similar elements) and competences

Such analysis should start from the general evaluation of the fact how the partners succeeded to analyse the contents of their selected qualifications in the sectors according to the proposed structure indicated in the following table:

Qualification:	Competences constituting the units of qualification / or qualification as a whole			Which competences are determinant for the attribution of qualification to the certain level in the sectoral framework or hierarchy of qualifications?
	Functional	Cognitive	General	

It is important to know, whether the existing internal structure of the qualifications in the sectors can be analysed using one model, or it is too different between the countries and requires different approaches of comparison. Comparing the structures of qualifications in the construction and hospitality sectors in Lithuania, Austria, Czech Republic, France and Ireland there can be noticed specific characteristics of these structures.

3.1. Analysis of the internal structures of qualifications in the partners countries

Austria

There is presented case of the qualification of construction worker - bricklayer. There are discerned two types of this qualification:

1. "Hochbauer" is a new term for "Maurer" and can be translated as bricklayer or mason. Sectoral level II b (=Facharbeiter), best fit EQF 4.

2. "Tiefbauer" can be translated as Construction worker. Similar to "Hochbauer", but more to infrastructural buildings (e.g. foundations, tunnels, roads, bridges, railroads, power plants ...). Specialised in reinforced concrete and steel constructions, advanced construction techniques. Sectoral level II a.) "Vorarbeiter, Level II b.) "Facharbeiter" best fit EQF 4.

There can be discerned two types of the work tasks:

- Work tasks requiring one type of competences – functional, cognitive or general. Usually these work tasks are very simple and belong to the preparatory stage of the work execution (to prepare the workplace, to clean, etc.).

- Work tasks requiring combining several types of competences, especially combinations of cognitive and functional competences (for example, to define the demand of materials, to prepare the concrete mix, to execute the simple bricklaying constructions, to preserve the brick constructions, to build the light walls etc.). Usually such work tasks are more complex and require more complicated combinations of the different competences.

Analysed qualification of the bricklayer includes the competences which can be adhered to the EQF qualifications levels 3 and 4.

Cognitive Competence Level 3: knowledge of facts, basics, general concepts and subjects in the field of work and learning.

Example: basic knowledge about the construction materials; basic knowledge about the storage requirements of the construction materials; knowledge about the preservation of the construction materials

Functional Competence Level 3: cognitive and practical skills needed for the execution of tasks and solving of problems, ability to choose and to apply basic methods, tools, materials and information.

Example: to be able to assist in measuring; to use the required measuring devices and auxiliary materials; to perform the adjustments with the help of scale or measuring band.

Cognitive Competence Level 4: wide range of theoretical and factual knowledge in the field of work and learning.

Example: knowledge of the types, qualities and the possibilities of application and processing of the construction materials; knowledge of their identification and description, typologies, forms and transporting qualities.

Functional Competence Level 4: cognitive and practical skills needed for the solution of the specific problems in the work and learning.

Example: to be able to use and apply the tools, equipment, construction machines and auxiliary measures; correctly store the tools and measuring equipment; to use the right exploitation materials; to be able to clean and preserve the tools and equipment ; to perform simple repair or technical servicing of the machines and equipment.

Analysing the quantitative distribution of these competences in the qualifications of the *Hochbauer* and *Tiefbauer* there can be noticed the following:

1. Cognitive competences of the level 3: 6 units in the qualification of *Hochbauer* and 18 units in the qualification of *Tiefbauer*.

2. Cognitive competences of the level 4: 24 units in the qualification of *Hochbauer* and 19 units in the qualification of *Tiefbauer*.

3. Functional competences of the level 3: 4 units in the qualification of *Hochbauer* and 1 unit in the qualification of *Tiefbauer*.

4. Functional competences of the level 4: 13 units in the qualification of *Hochbauer* and 10 units in the qualification of *Tiefbauer*.

Analysing these data there can be noticed that the qualification of the *Tiefbauer* includes almost equal volumes of the cognitive competences of the levels 3 and 4 (18:19), while in the qualification of the *Hochbauer* the cognitive competences of the level 4 clearly predominate over the competences of the level 3 (24 units against 6 units). The distribution of the functional competences of the levels 3 and 4 clearly indicates the domination of the level 4 competences in the both types of qualification. It is also noticeable that the *Tiefbauer* has more units of cognitive competences than the *Hochbauer* - 37: 30, but *Hochbauer* has more units of the functional competences than *Tiefbauer* - 17:11. We can conclude from this that the work tasks in the qualification of the *Tiefbauer* demands more developed knowledge basis (abilities to apply the theoretical and factual knowledge in the execution of the work tasks) than the work tasks in the qualification of *Hochbauer*. It can be explained by the specificity of the work contents of the *Tiefbauer* (specific work environment and conditions), which poses specific requirements related to the work safety, application of materials and equipment.

There can be noticed that the general competences are not discerned separately but they are integrated in the units of the functional and cognitive competences.

France

There can be discerned the following characteristics of the structure of qualification in the construction sector of France:

1. Competences are classified into 3 types:

- Technical core competences, corresponding to functional competences. Examples: Manipulating construction materials, tools and equipment (on the construction site), Digging and laying down the building foundations, Concrete preparation, mixing and/or homogenisation, Sketching masonry tasks to be performed and determining required materials, tools and equipment, bricklaying and grouting.
- Capacities (cognitive, social and physical), corresponding to cognitive and general competences. Examples: ability of handling loads, supporting bad weather and heat, ability to use basic maths and geometry skills to calculate, sketch and measure areas and volumes with accuracy, ability to apply knowledge about concrete setting times, methods of laying and finishing, ability to apply knowledge about different types of grouting products and materials used in bricklaying, their composition, their qualities and ways of using them, including methods and practices of quality and safety controls, ability to work methodologically and carefully (through implementing security instructions).
- Associated transferable competences, corresponding to the functional, cognitive and general competences, which can be applied in the different work contexts and workplaces. Examples: conducting machines and equipments of transportation, demolition, digging, carriage and storage, driving licence, general knowledge in welding and plumbing, familiarity with basic concepts in security, mechanics and electricity, having a driving licence.

It is difficult to define the weight of these types of competences in the qualification, especially in defining the level of qualification. It seems, that for the qualification corresponding to the levels 3 or 4, all above listed types of competences have almost equal importance for the execution of the work tasks, maybe with a little higher importance and weight of the technical core competences and associated transferable competences. Besides, the competences are not prescribed to the levels of qualification. It poses some difficulties in comparing the contents of qualification to the qualifications of the other countries.

Qualification	Competences constituting the units of qualification / or qualification as a whole			Which competences are determinant for the attribution of qualification to the certain level in the sectoral hierarchy of qualifications?
	Technical core competences	Capacities (cognitive, social and physical)	Associated transferable competences	
4. Masonry (bricklaying) (ROME: occupation/qualification code n°: 42114)	<p>T4a- Sketching masonry tasks to be performed and determining required materials, tools and equipment.</p> <p>T4b- Preparation and mixing of mortars, grouts and other bonding agents</p> <p>T4c- Measuring and cutting of required building blocks: bricks, stones, tiles, marbles, etc.</p> <p>T4d- Transportation of bricks and bonding products to assembly location by wheelbarrow or forklift.</p> <p>T4e- Measuring the size of the wall, levelling and determining the amount of spacing required between bricks, including the installation of angle iron around the base of the wall to support load of bricks using hammer drill and wedge anchors.</p> <p>T4f- Bricklaying and grouting.</p> <p>T4g- Washing bricks with acid and water removing mortar from bricks, and providing a clean finish</p> <p>T4h- quality and safety controls.</p>	<p>C4a- Ability to use basic maths and geometry skills to measure, to sketch and calculate angles, areas and volumes with accuracy.</p> <p>C4b- Ability to apply knowledge about different types of grouting products and materials used in bricklaying, their composition, their qualities and ways of using them, including methods and practices of quality and safety controls.</p> <p>C4c- Ability to work near vacuum and adaptability to team working and their frequent changes</p> <p>C4d- Physical ability of handling loads</p> <p>C4e- Ability to work methodologically and carefully (through implementing security instructions).</p>	<p>G4a- Familiarity with basic concepts in security, mechanics and electricity.</p> <p>G4b- Conducting transportation and lifting machines and equipments.</p> <p>G4c- Having a driving licence</p>	<p>Basically all core technical competences and capacities (especially T4a, T4C, T4e, T4f, T4h, C4a, C4b, C4e), including associated competences (especially G4a) for qualified (professional) bricklayer.</p>

Lithuania

There can be discerned the following characteristics of the structure of qualification in the construction sector of Lithuania:

1. Competences are classified into 3 types:

- Cognitive competences, involving the ability to use special factual knowledge in a professional activity (materials, techniques, tools and instruments, etc.), ability to use the methodical knowledge (planning and management of activity, quality standards and quality management, occupational safety requirements, environmental requirements, etc.), ability to employ in practice the multi-purpose knowledge (foreign languages, economics, law, information science etc.).
- Functional competences, which involve the ability to perform specific tasks, operations and functions of activity.
- General competences, which involve multi-purpose skills of a wide range of application, development of which is mostly based on personal qualities. General competences can be classified in the different categories: formal cognitive competences (analytical, critical, systemic thinking, creativity, learning skills etc.), formal psychomotor competences (fast reaction, good coordination of movements), personal competences (accuracy, responsibility, honesty, self-confidence, etc.), social competences (communication skills, tolerance, team working skills, leadership skills, etc.), ethical competences, as abilities to follow socially accepted norms of behaviour and communication.

2. The competences of the each type has the different weight in the different levels of qualifications:

Bricklayer qualification of the level 2:

- Functional competences are the most important for the execution of relatively simple tasks in the homogenous and simple work context. Therefore the simple functional competences define the level of qualification. For example: *to mason the simple structures (walls, etc.) ensuring the right vertical and horizontal positioning.*
- Cognitive competences are closely related to the execution of simple work tasks and work context. The content of the cognitive competences is rather narrow. For example: *to apply the knowledge about the technology of masonry work, ways of bricklaying and finishing of masonry.*
- Physical and psychomotorical qualities make the basis of general competences. For example: *good reactivity, physical strength and ability to work in height.*

Bricklayer qualification of the level 3:

- Increasing complexity and variability of activity requires more complex combinations of functional and cognitive competences. These combinations of functional and cognitive competences are defined by the technology of work.

- Cognitive competences include the application of specific and general education knowledge. The content of the cognitive competences is wider and includes introductory knowledge of technologies, calculations. For example: *to apply the knowledge on the selection and dosing of the materials preparing the grout; knowledge about the qualities of grout and the influence of the air conditions for the grout, application of the additives against freezing etc.; about the preparation of the chalk and clinker grout.*

- The functional competences remain the most important for the attribution of qualification to a certain level of hierarchy.

- Physical and psychomotorical qualities make the basis of general competences.

Bricklayer qualification of the level 4:

- Increasing complexity and variability of activity requires more complex combinations of functional and cognitive competences. Synthesis of functional and cognitive competences is crucial for the execution of tasks.

- Cognitive competences include the application of wide range special knowledge and general knowledge. The content of the cognitive competences is wider and includes technologies, calculations, general knowledge of natural sciences (chemistry, physics). For example: *to apply the knowledge about the technologies of bricklaying and masonry, different kinds of joints of bricks, finishing of masonry, masonry of chimneys and outlet channels, reinforcement and anchoring of masoned structures, decorative masonry, tolerances and allowed deviations of the masonry.*

- The general competences are widened by the social skills.

Czech Republic

There can be discerned the following characteristics of the structure of qualification in the sector of hospitality in the Czech Republic:

1. The structure of qualifications well fits into the proposed model of the classification into the functional, cognitive and general competences.

2. Most of the qualifications in the hospitality sector have rather big variety of the functional and general competences, but the volume of the cognitive competences is relatively much lower. It can be explained by the nature of the activities in this sector, dominated by comparatively low-skilled occupations.

3. Functional competences are determinant for the attribution of qualification to the certain level in the sectoral hierarchy in the analysed qualifications of the hospitality

sector. This can be also explained by the comparatively low-skilled nature of the sector activities. The general competences become more important and even determinant in the higher level qualifications, as for example in the case of the qualifications of the manager of the food preparation and serving sector, or the manager of hotel services. It is also interesting, that the general competences are levelled into 3 levels: 1 – elementary; 2 – intermediate; 3 – advanced.

4. The structure of qualifications is very clear, simple and transparent, providing the good possibilities to trace the transferability of the competences in the different qualifications and to compare the contents of the qualifications of the different levels (for example, attribution of the codes to the competences and qualifications).

Ireland

The structure of qualification in the case of Ireland is the most complicated and comprehensive of the all project partners' countries.

The descriptors of qualifications are broken down in three strands:

- knowledge (K), corresponding to the cognitive competences,
- know-how and Skills (S), corresponding to the functional competences,
- competences (C), corresponding to the general competences.

The strands are further broken down into eight sub-strands: knowledge is characterised by the breadth and kind, know –how and skill is characterised by the range and selectivity, competences are described with the categories of context, role and insight (see the table below). These categories are used for the setting of the typical learning outcomes which are associated with the qualification of the certain level.

Qualifications are divided into modules defined by specialised and general work tasks (for example, core culinary skills, breakfast cookery, contemporary-ethnic cuisine, Deli-Larder, pastry, etc.), each module consisting of the units indicating more narrow specialisation oriented towards the types of the results of activities (continental breakfast, full cooked breakfast, buffet breakfast), each unit having the range of the learning outcomes (understand and apply cookery processes such as boiling, braising, baking, roasting, grilling, steaming, stewing poaching, stir frying and micro-waving, identify the cuts and quality points of beef, bacon, pork, lamb, chicken, salmon, trout, cod, Plaice and Shellfish, recognise the quality points of a range of vegetables and potatoes, know how to prepare varied and palatable meals for vegetarians).

This structure of qualifications permits to describe the qualifications in the very comprehensive and detailed way, as well as to design the qualifications of the different contents by selecting different options of units and the learning outcomes. It is very useful for the learners enhancing their autonomy and independent decision making in constructing of their qualifications and planning their acquisition process, as well as for the providers of training and employers, providing the comprehensive information for the modelling of the provided and needed qualifications. However, it poses rather important difficulties in making the comparisons with the contents of qualifications of the other countries. The description of the learning outcomes in many cases is rather wide and comprise the combinations of the theoretical knowledge, practical skills and

general abilities, for example: *learners should be able to identify, prepare, present and serve breads, toasts, scones, pastries and preserves; juices, fruits, cereals, porridge and hot beverages; apply nutritional knowledge to menu planning, modifying recipes where appropriate to produce more nutritious menu items; comprehend and apply cost and quality control procedures as they apply to the production of pastes, breads and gateaux; identify a range of Irish and European cheeses, including quality points, and have the skills necessary to prepare and present a cheese board.* The number of the learning outcomes depends on the width and complexity of the units of qualification: the more complex and wide is the contents of the unit, the more learning outcomes belong to these units.

Table 1: Award-Type Descriptor for The Level 4 Certificate in Culinary Skills (NFQ Level 4)

Strands:		Knowledge		Know-how and Skill		Competence			
Sub-strands:		Breadth	Kind	Range	Selectivity	Context	Role	Learning to Learn	Insight
Typical Learning Outcomes:		Broad Range of Knowledge	Mainly concrete in reference and with some elements of abstraction or theory	Demonstrate a modest range of practical and cognitive skills and tools	Select from a variety of procedures and apply solutions to a variety of predictable problems	Act in familiar and unfamiliar contexts	Act with considerable amount of responsibility and autonomy	Learn to take responsibility for own learning within a supervised environment	Assume partial responsibility for consistency of self-understanding and behaviour
Level 4 Certificate in Culinary Skills	4	Plan a prepare a range of wholesome foods based on an understanding of the theory related to commodities and cooking processes (K1)	Have a theoretical knowledge required for an understanding of catering operations and systems (K2)	Demonstrate consistently the skills and understand of the relevant theory necessary for Larder/Deli work (S1a)	Demonstrate understanding, through application, of safe and hygienic practices in environmental hygiene, personal responsibilities and work (S2)	Demonstrate an understanding of the importance of customer care and good personal, interpersonal and professional communication skills (C1)	Respond appropriately to fire and first aid requirements (C2)	On completion of programme, participants will have worked in an established organisation/enterprise that has been deemed suitable to provide quality work experience. The learner will have participated in the work-related sector for a minimum period of 10 days (C3)	Students are taught to evaluate own performance and interaction with others. Personal skills include appropriate dress, adaptability, reliability, punctuality, health and safety awareness and appropriate use of initiative (C4)
				Demonstrate consistently the skills and understand of the relevant theory necessary for Pastry work (S1b)					

3.2. Comparison of the structures of qualifications in the sectors of construction and hospitality of Austria, France, Lithuania, Czech Republic and Ireland

Comparing the structures of qualifications in the sectors of construction and hospitality in the project partners countries there can be discerned the following similarities and differences which influence the comparability of the contents of qualifications from the different sectors and countries:

1. Similarities, which increase the comparability of the contents of qualifications between countries:

- The structure and contents of qualifications in the analysed countries are based on learning outcomes or competences. In France, Austria, Czech Republic and Lithuania the contents of qualifications is described using competences, Ireland – in terms of competences and learning outcomes.

- There can be noticed some similarities between the countries in terms of the applied typologies of competences. These similarities are noticed in the descriptors of qualifications of Lithuania, Czech Republic and partially Austria. In these descriptors there can be found functional, cognitive and general competences. France uses a little different typology of competences, but it can also be comparable with the proposed typology of functional, cognitive and general competences: technical core competences correspond to functional competences, capacities (cognitive, social and physical), correspond to cognitive and general competences, associated transferable competences correspond to the functional, cognitive and general competences which can be applied in the different work contexts and workplaces. The case of Ireland is more complicated and different, despite of the fact, that the descriptors of qualifications of Ireland use the strands which by contents correspond to the proposed typology of competences: knowledge corresponds to the cognitive competences, know-how and skills correspond to the functional competences, competences correspond to the general competences.

- The content of the qualifications of the similar levels is quite similar in terms of the autonomy and complexity of the tasks and required competences or learning outcomes. It is clear from the analysis of the adherence of the competences to the levels of the EQF (where the competences have the prescribed levels to the EQF) and these similarities are very clear from the comparison of the descriptors of qualifications of construction sector of Austria, Lithuania and France (similar work tasks and competences) and of the descriptors of hospitality sector of Czech Republic, Ireland and Lithuania. These similarities will be analysed and described in more thorough way in the further work-packages of the project.

2. Differences, which complicate comparison of the contents of qualifications between countries:

- Differences caused by the different specific characteristics of the system of activities and vocational training. These differences are particularly evident analysing the descriptors of Austria and Ireland. In Austrian case it is the description of the *Hochbauer*

and *Tiefbauer* qualifications, in the case of Ireland it is the flexible structure of the descriptors of qualifications based on the units, modules and learning outcomes. The specific qualifications as *Hochbauer* and *Tiefbauer* can pose the problems in finding the analogues in the other countries, while the flexible structure of the qualification like in Ireland also can make difficulties in comparison, because it permits very wide variety of the possible sets of the learning outcomes making the contents of qualification.

➤ Differences of the structures of qualifications caused by the different approaches to the structural parts of qualifications and their classification. For example, in the case of Austria competences are described in the integrated way as the units of qualification without the differentiation in the types, for example: *knowledge of the types, qualities, formats and applications of the natural and artificial stone; to install the connection structures suitable for the different types of walls; to construct the walls and masonry elements* (*Kenntnis der Arten, Eigenschaften, Formate und Verwendung natürlicher und künstlicher Steine; Einsetzen der richtigen Verbandsarten für Wände aller Art; Herstellen von Wänden und Mauerwerksteilen; Herstellen von Ausmauerungen*). In case of Ireland the qualifications are described using complex structure based on competences, units of qualifications, modules and derived learning outcomes. There are also the above mentioned differences of the typologies of competences (the case of France). These differences pose certain difficulties in comparing the qualifications of the different countries, but they do not prevent from the comparison based on the analysis of the contents of qualifications in terms of requirements of activities (autonomy, complexity, technological requirements, etc.).

3.3. Possibilities of the EQF to be the effective measure in comparing the different sectoral qualifications

Through the analysis of the observed similarities and differences of the structures of the sectors of construction and hospitality in terms of occupations and qualifications and the structures of the qualifications in these sectors, there can be discerned the following possibilities of the effective use of EQF for the comparison of these qualifications:

➤ The structure of the EQF descriptors based on the knowledge, skills and competence in the most cases was sufficient and helpful in comparing and prescribing the different sectoral qualifications to the certain EQF level despite of the specificities of the structures of the sectors in terms of occupations and qualifications and the structures of the qualifications in these sectors. Therefore the EQF can be regarded as an effective instrument for the comparison of the sectoral qualifications in the different countries.

➤ One of the potential problems in adhering the sectoral qualifications to the certain levels of the EQF is that the characteristics of the autonomy and responsibility sometimes are not sufficient for this purpose, and the characteristic of complexity of activity is not explicitly reflected in the EQF descriptors. For example, in the case of

Austria such problem can be noticed in adhering the qualifications of construction engineers and technicians, construction machinery engineers and technicians, accounting and purchasing specialists. These activities are rather specialised and require autonomous and responsible work according to the general requirements and standards, but one of the main parameters distinguishing the levels of these qualifications is the complexity of activity.

➤ Some difficulties appear in the cases when the descriptors of compared sectoral qualifications seem to have more or less different structure from the structure of the EQF descriptors. This is the case of the descriptors of qualifications in France. Here the qualifications are described basing on the typology of the technical core competences, corresponding to functional competences or skills, capacities (cognitive, social and physical), corresponding to cognitive and general competences, or knowledge and competence and associated transferable competences, corresponding to the skills, knowledge and competence which can be applied in the different work contexts and workplaces. It seems, that for the qualification corresponding to the EQF levels 3 or 4, all above listed types of competences have almost equal importance for the execution of the work tasks, maybe with a little higher importance and weight of the technical core competences and associated transferable competences.

➤ Analysing the qualifications of the construction sector and, partially, from the hotels and restaurants sector of Lithuania there can be noticed one rather distinctive and important difference between the contents of qualifications which should be adhered to the levels 3 and 4 (EQF). First of all, the work tasks and competences required for the accomplishment of these tasks in the qualifications of the 3rd level in many cases are less numerous than in the qualifications of the 4th level and the complexity of contents of these tasks and competences is also quite lower in the level 3 than 4. Level 4 qualifications in many cases involve the application of the wider range of knowledge and skills in the accomplishment of more complex work tasks often related to the wider range of options and variants of the execution and its results. For example, the bricklayer of level 3 makes simple masonry structures of several types (eg., walls), while the bricklayer of the level 4 can make wide range of different masonry structures including the sophisticated options like arches, arched ceilings etc. The further diversification of the variability of work tasks can also be noted in the level 5 but it is not so important and distinctive as between the levels 3 and 4. However, such characteristics are rather weakly represented in the EQF descriptors, i.e. these descriptors lack of the criteria for the levelling of qualifications according to the variability of tasks and their execution and complexity of the activity.

Referring to the previously discerned two dimensions of the comparability of the sectoral qualifications (the structures of the sectors of construction and hospitality in terms of qualifications and the structures of the qualifications in these sectors) the relationship between these two dimensions can be helpful for the evaluation of the comparability of sectoral qualifications and for the assessment of the potential of the EQF in the comparison of sectoral qualifications. There can be discerned the following typical cases of comparability for the each above mentioned dimension:

a. Comparability of the structures of sectors in terms of the qualifications.

1a. Smooth comparability of the structures of sectors in terms of the qualifications because of the similar occupational structure of the sectors and similar dispositions of the hierarchies of qualifications in the compared sectors (construction and hospitality sectors of Lithuania, Czech Republic, Ireland, France). This is especially valid for the areas of the lower levels of qualifications in the sectors. The possible reason of this situation is that the qualifications the sectors of these countries are grouped referring to the existing occupations in the sector.

2a. Comparison is possible, but due to the differences in the occupational structure and hierarchical structuring of qualifications caused by the different paths of development of the sectors in the compared countries it requires to apply certain methodical measures for referencing. It is the case of the Austria, where the basic reference for the grouping of qualifications is based on the levels of skills and types of the performed activities (unskilled, semi-skilled, skilled, specially skilled / auxiliary works, supervision and foreman work). Similar problems are encountered in comparing the higher level qualifications and their groups between the countries, when there can be difficult to find analogues of qualifications between the countries.

b. Comparability of the structures of qualifications in the sectors.

1b. Smooth comparability due to the similar structure and contents of qualifications, when the structure and contents of qualifications in the analysed sectors are based on learning outcomes or competences and when the applied typologies of competences are similar between the sectors in the different countries (the case of Lithuania, Czech Republic and partially Austria).

2b. Comparison requires additional efforts and methodical aids, because of the differences of the structure and contents of the descriptors of qualifications in the sectors and countries (differences of the descriptors of qualifications in France, Ireland, Lithuania and Austria). These differences are caused by the different specific characteristics of the system of activities and vocational training or by different approaches to the structural parts of qualifications and their classification.

The relationship of these dimensions creates certain sets of conditions for the comparison of sectoral qualifications and for the application of the EQF in the comparison of sectoral qualifications from the different countries (Table 2):

Possibilities of the application of the EQF in comparing the sectoral qualifications	1b. Smooth comparability of the structures of qualifications (the case of Lithuania, Czech Republic and partially Austria)	2b. Comparison of the structures of qualifications requires additional efforts and methodical aids, because of the differences of the structure and contents of the descriptors of qualifications in the sectors and countries (differences of the descriptors of qualifications in France, Ireland, Lithuania and Austria)
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1a. Smooth comparability of the structures of sectors in terms of qualifications (construction and hospitality sectors of Lithuania, Czech Republic, Ireland, France)	<p>Sectoral qualifications in the different countries can be compared relatively easy and this comparison does not require additional references and methodical aids. EQF can be used as the reference tool assuring correctness and precision of comparison.</p>	<p>The similarities of the structures of sectors in terms of qualifications permit to ignore the possibilities of the deviations of comparison related to the specificities of the sectors in the different countries. In this situation the EQF can be used as effective translation tool helping to overcome the differences of the structure and contents of the descriptors of qualifications in the sectors and countries.</p>
2a. Comparison of the structures of sectors in terms of the qualifications is possible, but due to the differences in the occupational structure and hierarchical structuring of qualifications caused by the different paths of development of the sectors in the compared countries it requires to apply certain methodical measures for referencing (case of the construction sector of Austria).	<p>In comparing the qualifications and defining the correspondence of their levels in the other countries it is important to consider the position of qualification in the hierarchical structure of the "home"sector and its possible equivalent in the sector of the compared country. The EQF becomes an important tool in defining the equivalents of the level of qualification if the direct definition of the equivalents is not possible or complicated due to the important differences in the occupational structures of sector in the different countries.</p>	<p>The most complicated case, because the differences of the occupational structure and hierarchical structuring of qualifications in the same sector between the countries and the differences of the structure and contents of the descriptors of qualifications in the sectors and countries together significantly increases the possibilities of mistakes and deviations in comparing the qualifications. In using the EQF for the comparison of qualifications it is very important to consider both the influence of the local occupational structure and hierarchical structuring of qualifications to the knowledge, skills and competence (in terms of autonomy and responsibility) of the compared qualifications, as well as to consider possible deviations in defining the equivalents of qualifications from the differing structures of their descriptors.</p>

Table 2. Relationship of the dimensions of the comparability of the sectoral qualifications and the possibilities for the application of the EQF in comparing the sectoral qualifications

Concluding remarks

Despite obvious and objective differences in the structures of the sectors of construction and hospitality in terms of occupations and qualifications and the structures of the qualifications in these sectors the main general and unifying factors are characteristics of activities and the learning outcomes defined by these characteristics. These unifying factors provide the basis for the comparison of the sectoral qualifications between the countries.

For this reason the European Qualifications Framework can be effective measure for the comparison of the different sectoral qualifications between the countries.

Nevertheless there still exists different possibilities for the improvement of the contents of the EQF descriptors which can increase its effectiveness in using as a tool of comparison of the sectoral qualifications: more comprehensive specification of the complexity of activity, further development of the criteria for the levelling of qualifications according to the variability of tasks and their execution and complexity of the activity, etc.

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ANNEX NO. 2

Compatibility of qualifications in the construction or hospitality sectors with the national qualifications frameworks of Lithuania, Austria, France, Czech Republic and Ireland

There can be noted that the occupational contents of the sectoral qualifications between the countries is rather different, therefore there arise differences in direct comparison of qualifications in the sectors of different countries.

Examples:

In the descriptions of qualifications in Lithuania there can be discerned the units of qualifications and the functional, cognitive and general competences which compose this unit. It permits to track the changes of the contents of qualifications going from the lower level to higher.

In the structure of sectoral qualifications of Austria there can be noted very comprehensive list of competences composing the qualification with the detailed description of the functional competences (skills) and knowledge, but without clear distinction of these elements.

In the structure of the description of construction sector qualifications in France there can be discerned three types competences structured by the tasks of activities (technical core competences, capacities - cognitive, social and physical and general associated competences).

Analyzing the impact of the types of competences to the attribution of sectoral qualifications to the certain EQF levels there can be noted that the most important competences here in cases of Lithuania, Austria, France and Czech Republic are:

- Functional competences for the levels of qualifications EQF 2, 3, 4,
- Combinations of functional and cognitive competences EQF 5, 6

Attribution of the sectoral qualifications of Lithuania to the EQF levels

Analyzing the attribution of qualifications in the sector of construction to the levels of EQF there can be noticed that factors of attribution are quite different for the levels of qualifications.

For example, the main factor for the attribution of qualifications to the level 2 in construction sector is the low autonomy and complexity of work tasks, execution of simple tasks and solving routine problems under direct supervision and using simple rules and instruments.

The main factors of the attribution of qualifications to the level 3 of the EQF is higher autonomy of work execution, wider range of work tasks, often including repair works and tasks requiring more responsibility: accomplishment of tasks and solution of problems by selecting and applying methods, tools, materials, responsibility for the completion of tasks, repair of faults.

The main factors of the attribution of qualifications to the level 4 of the EQF is the autonomous execution of tasks and solution of problems by selecting and applying methods, tools, materials, responsibility for the completion of tasks, repair of faults, supervision of the routine work of others, evaluation and improvement of work results.

Higher autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repair, supervision of the routine work of others..

The main factors of the attribution of qualifications to the EQF level 5 are the following characteristics of activities: review of performance of self, use of comprehensive, specialized, factual and theoretical knowledge in the field of work, exercise of management and supervision in the context of work with unpredictable change.

The main factors of the attribution of qualifications to the EQF level 6 are the following characteristics of activities: management of complex technical and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of principles.

Attribution of the sectoral qualifications of Austria to the EQF levels

The main criterion for the levelling of the qualifications to the EQF level 1 and EQF level 2 is the low skills and work experience: low skilled employees can be adhered to the EQF level 1 for those having until 6 months of work experience and to the EQF level 2 for those having more than 6 years of the work experience.

The qualifications of workers who already possess the knowledge and skills needed for the execution of tasks in certain occupations can be adhered to the EQF level 3.

The qualifications of workers executing the work tasks requiring both manual work and the use of different machinery and equipment can be adhered to the EQF level 4. The main criterion for the attribution of qualifications to this level or group is the acquired, assessed and recognised competences leading to the awarding of qualification.

Skilled workers of construction can acquire the qualification of the senior foremen (Poliere) after the minimal work experience of 10 years in the construction. The main criteria for the acquisition of this level of qualification - work experience in the field of occupation. This level of qualification can be adhered to the EQF level 5.

Attribution of the sectoral qualifications of France to the EQF levels

There are very similar criteria used for the attribution of the sectoral qualifications of France to the EQF levels. One of the exceptional characteristics is the correspondence of these qualifications levels to the certain levels of vocational education:

EQF level 1: Executing simple tasks requiring basic general knowledge and skills under direct supervision in structured context. Qualification requirement: end of lower-secondary school level with interest and/or experience in the field.

EQF level 2: Accomplishing tasks, requiring basic general and specific knowledge and skills, under direct supervision in structured context. Qualification requirements: CAP (Professional Aptitude Certificate) in the domain.

EQF level 3: Executing specific tasks (requiring general and factual knowledge with a range of cognitive and practical skills) in the domain with some autonomy within the framework of the guidelines of work requirements and context. Initial qualification requirements: CAP (Professional Aptitude Certificate) or BEP (Professional Studies Diploma) in the domain.

EQF level 4: Solutions to specific problems of work, autonomy of execution, ability to use technical guidelines and other information about materials, equipment etc., responsibility for the quality control and repairs, supervision of the routine work of others. Qualification requirement professional experience in different activities of concrete construction activities, and usually holding to a CAP (Professional Aptitude Certificate) or BEP (Professional Studies Diploma) in the domain.

EQF level 5: Exercising basically functional complex tasks requiring a comprehensive, specialised, factual and theoretical knowledge, including a wide range of cognitive and practical skills which are necessary for the development of creative solutions to complex and unpredictable problems. Minimum initial qualification requirement in the domain is Bac+2 or 3.

EQF level 6: Exercising, managing and supervising complex technico-economic feasibility projects, including taking the responsibility for functional decision-making in unpredictable work context. Initial formal qualifications: Bac+2 (such as BTS: High Technician Diploma) in the domain.

EQF level 7: Exercising, transforming, managing and supervising complex technico-economic and professional activities, approaches and strategies requiring highly specialised knowledge and problem-solving skills. Qualification requirements: 2nd cycle of the university level of certification (Master degree in the domain).

EQF level 8: Exercising, transforming, managing and supervising complex technico-professional activities, decision making process and strategies in unpredictable work contexts, using advanced knowledge and specialised skills and techniques (with substantial authority, innovation, autonomy and commitment to the development and implementation of new ideas and processes) in the domain. Qualification requirements: 2nd or the 3rd cycle university level of certification in architecture.

Attribution of the sectoral qualifications of Czech Republic to the EQF levels

The attribution of the qualifications of the hospitality sector in the Czech Republic to the EQF levels are mainly defined by the influence of the interrelationship between the complexity of activities and autonomy of execution to the requirements of the knowledge, skills and key skills:

EQF level 2: Familiarity (be familiar) with work procedures and technological standards, selection of appropriate procedures, selection of appropriate raw materials, assessment of quality of work and products, diagnostics of technological problems or while operating machines and equipments, application of correct technological procedures.

EQF level 3: Familiarity with work procedures and technological standards and their proper usage, selection of appropriate technological procedures, selection of appropriate raw materials, assessment of quality of work and products, diagnostics of technological problems, recognition of possible results of applied measures and suggestion of solution, application of correct technological procedures according to various conditions and requirements.

EQF level 4: Familiarity with norms, documentations, standards and legal regulations used in sector, selection of appropriate procedures, selection and usage of appropriate raw materials according to desired results, assessment of quality of products and services and finding causes of shortcomings and finding solution for further

progress. When problems arise, ability to recognise context of possible social aspects with respective problems, determination of causes of non standard behaviour and situations in own activity, judging the relevance of information, evaluation of the results of other activities with a view to their application to procedures and methods and their modification in response to various conditions and desired outcomes, integration of specialised knowledge in problem solving, suggestion of improvements and new procedures and products, leadership of activities of small team that applies chosen procedures according to given conditions and requirements.

EQF level 5: Familiarity with documentations, norms, regulations and procedures used in the sector, selection of appropriate procedures, methods, means, raw materials from several possibilities according to desired results and conditions, assessment of quality of products and services, determining causes of shortcomings and finding solution, recognition of possible problems when applying chosen procedures and methods, determining causes of problems and suggestion of solutions, ability to recognise context of possible social aspects when solving problems, analysis of causes of non standard behaviour and their context, analysis of common problems, occurrences and procedures. Judging the relevance of specialised information, evaluation of the results of other activities with a view to their application, application of various procedures in response to various conditions and desired outcomes including the social point of view, solving problems related to generalisation and abstract thinking, integration of specialised knowledge in problem solving, suggestion of new procedures and products. leadership of a team in complex professional activities in unpredictable conditions.

Attribution of the sectoral qualifications of Ireland to the EQF levels

The qualifications of the hospitality sector of Ireland can be easily attributed to the EQF levels by applying mainly the criteria indicated in the EQF levels descriptors and making references to the requirements posed by the characteristics of activities. For example:

EQF level 2: Execution of the simple and routine tasks applying of the basic factual knowledge of a field of work.

EQF level 3: Accomplishment of tasks selecting applying different basic methods, tools and information, responsibility for the completion of tasks.

EQF level 4: Executing various specific complex tasks, generation of solutions to specific problems of work, supervision of the routine work of others, taking responsibility for evaluation and improvement of work activities.

EQF level 5: Exercise of complex tasks in the context of work with unpredictable change applying comprehensive, specialised, factual and theoretical knowledge and a comprehensive range of practical skills and experience in the field.

EQF level 6: Management of complex organizational and professional activities and processes, decision making in unpredictable work contexts using advanced knowledge of a field of work including critical understanding of theory and principles.

Conclusions: What is not reflected in the descriptors of the EQF and makes problems in prescribing the sectoral qualifications to certain level of the EQF?

1. The criteria for the definition of qualifications levels in the EQF in principle can be used for the comparison of the qualifications in this sector in partners' countries. It is clear from the analysis of the referencing of the competences to the levels of the EQF (where the competences have the prescribed levels to the EQF) and these similarities are very clear from the comparison of the descriptors of qualifications of construction sector of Austria, Lithuania and France (similar work tasks and competences) and of the descriptors of hospitality sector of Czech Republic, Ireland and Lithuania.

2. Analysing the qualifications of the construction sector and, partially, from the hotels and restaurants sector there can be noticed one rather distinctive and important difference between the contents of qualifications which should be referred to the levels 3 and 4 (EQF). First of all, the works tasks and competences required for the accomplishment of these tasks in the qualifications of the 3rd level in many cases are less numerous than in the qualifications of the 4th level and the complexity of contents of these tasks and competences is also quite lower in the level 3 than 4. Level 4 qualifications in many cases involve the application of the wider range of knowledge and skills in the accomplishment of more complex work tasks often related to the wider range of options and variants of the execution and its results. For example, the bricklayer of level 3 makes simple masonry structures of several types (eg., walls), while the bricklayer of the level 4 can make wide range of different masonry structures including the sophisticated options like arches, arched ceilings etc. The further diversification of the variability of work tasks can also be noted in the level 5 but it is not as important and distinctive as between the levels 3 and 4. However, such characteristics are rather weakly represented in the EQF descriptors, i.e. these descriptors lack of the criteria for the levelling of qualifications according to the variability of tasks and their execution and complexity of the activity.

ANNEX NO. 3**COMPARISON OF THE CONTENTS OF SECTORAL QUALIFICATIONS FROM THE CONSTRUCTION AND HOSPITALITY SECTORS APPLYING THE STRUCTURE OF THE EQF DESCRIPTORS**

The aim of this research is to analyse the possibilities to apply the structure and contents of the EQF level descriptors (knowledge, skills and competence) for the comparison of the sectoral qualifications between the countries. This work-package is based on the comparison of selected qualifications from the construction and hospitality sectors which are attributed to the same level of the EQF or to the close levels of the EQF.

1. CONSTRUCTION SECTOR: FRANCE, LITHUANIA, AUSTRIA
1.1. QUALIFICATION OF THE SUPERVISOR OF BUILDING SITE OR CONSTRUCTION WORKS
(EQF LEVELS 4 AND 5)

EQF descriptor structure	Supervisor of building site preparation work operations (EQF4, FQF3) France	Supervisor of the general construction works (organization of the execution of works in the workplaces, analysis of technical documents)/ Foremen (EQF5, LNOF5) Lithuania	Supervisor of building site / foremen Bauvizepolier, Bau(haupt)polier, Bauleiter (NQF 4, 5 ?)(EQF5) Austria
Knowledge	<ul style="list-style-type: none"> ➤ To apply the knowledge about the economical and commercial mechanisms related to construction. ➤ To apply the knowledge of computer based management. ➤ To apply knowledge of other related subjects. ➤ To apply the knowledge of the basic technology and techniques of construction. ➤ To apply the external and internal contacts in the domain. 	<ul style="list-style-type: none"> ➤ To apply knowledge of work safety and environmental protection. ➤ To apply the knowledge of construction works technology (materials, products, methods, standards). ➤ To apply the knowledge of psychology of interpersonal communication. ➤ To apply the knowledge about information technologies. ➤ To apply engineering knowledge about construction drawings and building structures, about technical requirements applicable for buildings of various designations. ➤ To apply the knowledge about sequence of performance of work, productivity of labour and equipment. 	<ul style="list-style-type: none"> ➤ Know, assess the basics of HR management and present them on the basis of problematic situations. ➤ Fundamentals of communication, conflict management and moderation technique. ➤ Know legal bases, describe requirements on safety and hygiene at work (e.g. handling of loads, work at heights, pollutants safety, fire protection, personal protective gear). ➤ Know general basic of work planning on construction sites, know about work preparation measures and describe them on the given situation (e.g. schedules and execution plans, construction implementation and its tools). ➤ General understanding of rules and protective measures related to

			<p>environmental protection and health.</p> <ul style="list-style-type: none"> ➤ General knowledge of labour law fundamentals, terminology and language in construction law. Assess construction technical rules and standards. Guidelines for places of work and accommodation. ➤ Assess the fundamentals of construction technology and workflow for quality- relevant aspects, process control by using suitable procedures. ➤ Relevant knowledge of different types of construction plans, symbols, terms and symbols for materials. ➤ Take into account the fundamentals of actual and planned cost accounting in cost settlement of the building site.
Skills	<ul style="list-style-type: none"> ➤ To analyse the construction project file referring to the technical aspects (financial, commercial and security issues). ➤ To propose necessary technical and financial changes. ➤ To evaluate, distribute and manage the means of human resource, materials, taking into account costs and delivery time. 	<ul style="list-style-type: none"> ➤ To supervise compliance with work and fire safety requirements and rules on site. ➤ To control adherence to works implementation schedule. ➤ To present suggestions concerning supply of materials and equipment. ➤ To control quality of completed works. 	<ul style="list-style-type: none"> ➤ Delegate to individual employees (trainees, unskilled and skilled workers), specify assignments and implement them. ➤ Apply regulations on safety at work, health protection, hygiene at work, fire protection on the site. ➤ Prepare realistic workflow plans and schedules for staff on the basis of construction planning, coordinate

	<ul style="list-style-type: none"> ➤ To design the installation of the construction site (positioning of materials and equipment) and to establish contacts with different involved administration services. ➤ To coordinate and control the implementation of work. ➤ To prepare the documents for the organization of work on site and to prepare the invoices. 	<ul style="list-style-type: none"> ➤ To read construction drawings. ➤ To present the suggestions for drawing of technological specifications. 	<p>plans and adapt them to changed requirements.</p> <ul style="list-style-type: none"> ➤ Adhere to and implement environmental protection standards. ➤ Identify legally relevant situations at the construction site and put rules and legal bases into practice. ➤ Conduct the necessary stocktaking and testing the bill of quantities, prepare and convey performance acceptance. ➤ Read and understand plans, scale implementation of plans into reality, combine and coordinate different levels of planning, produce sketches in special cases (e.g. measure up sketches). ➤ Prepare preliminary cost accounting, carry out cost comparisons for inexpensive procurement of material, equipment and services.
Competence	<ul style="list-style-type: none"> ➤ Ability to take the responsibility and initiative. ➤ Ability to manage the changes on the site. ➤ Ability to hierarchise the priorities. ➤ Ability to follow-up rigorously 	<ul style="list-style-type: none"> ➤ Ability to plan, analyse and diagnose. ➤ Ability to organize and plan own work and work of others. ➤ Problem solving ability. ➤ Ability to communicate in a polite manner. 	<ul style="list-style-type: none"> ➤ Take on responsibility for oneself and others. Prevent, identify, tackle and resolve conflicts, ability to work in teams, intercultural skills. ➤ Ability to work under pressure, work at heights, sensitivity for body posture and balance, safety

	<p>methods of processes.</p> <ul style="list-style-type: none"> ➤ Ability to receive and transfer the information. ➤ Ability to establish and develop contacts with the different stakeholders. ➤ Ability to ensure the compliance with the safety requirements and norms. 		<p>awareness and sense of responsibility.</p> <ul style="list-style-type: none"> ➤ Organising skills, realistic assessment of co- workers willingness to work and skills. ➤ Environmental awareness. ➤ Decision- making in the practical application of rules on the building site. ➤ Responsibility, assertiveness, negotiating skills, frustration tolerance. ➤ Handle plans independently and responsibly, spatial power of imagination (three-dimensional thinking). ➤ Economic thinking.
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Notes:

1. The knowledge in the descriptor of Austria is described in much more detailed way, comparing to other two descriptors. The description of knowledge in the descriptor of Austria stress the skillful application of the knowledge in the work process, making the underpinning knowledge the basis of the qualification and expertise of the supervisor.
2. The skills in the descriptor of France and Austria are of a bit higher cognitive level, than the skills in the descriptor of foremen of Lithuania (to design the installation of construction site...) ensuring higher autonomy and responsibility of employees. The skills description in case of Austria is more comprehensive and holistic (there can be noticed rather clear relationships between the skills and underpinning knowledge).
3. The descriptions of competence in case of France and Lithuania pay more attention to the abilities of communication and cooperation of supervisor, while the description of Austria is more concentrated on the abilities, related to effective individual performance.
4. In this case of comparison using the structure of EQF based on the distinction of knowledge, skills and competence the contents of the compared qualifications can be compared without significant obstacles and problems.

1.2. CONSTRUCTION TECHNICIANS AND MANAGERS (EQF LEVEL 6)

EQF descriptor structure	High technician of construction technical-economic engineering (EQF6, FQF3) France	General construction works manager (EQF6, LNQF6) Lithuania	General construction works manager of the site Bauleiter von Grossbaustellen (EQF 6) (NQF 6 ?) Austria
Knowledge	<ul style="list-style-type: none"> ➤ To apply the knowledge about legislation and regulations in the construction sector. ➤ To apply the knowledge about the urban constructions. ➤ To apply the knowledge in architecture and technology of construction. ➤ To apply the knowledge of the foreign languages. ➤ To apply the knowledge of quantitative techniques related to the determination of construction norms and implementation processes. 	<ul style="list-style-type: none"> ➤ To apply knowledge of work safety and hygiene requirements, high-altitude work safety, environmental requirements. ➤ To apply the knowledge of general construction work technology. ➤ To apply the knowledge of quality requirements applicable to general construction works and the knowledge about the permissible tolerances. ➤ To apply the knowledge of psychology of interpersonal communication and work organization. ➤ To apply the knowledge about the work with IT. ➤ To apply engineering knowledge about construction drawings, building structures and technical requirements. ➤ To apply the knowledge about requirements for preparation of various technical documents. ➤ To apply the knowledge about productivity of labour and capacities of equipment. 	<ul style="list-style-type: none"> ➤ General and specific technical knowledge of construction methods and practices. ➤ Know corporate culture, leadership styles, role of the executive between the management and the employees. Know leadership instruments of information, delegation, motivation, control/ feedback leadership, communication disturbances, conflict management and moderation technique. ➤ Know the relevant legal bases, national and EU standards, safety rules, regulations and laws. ➤ Know specific cycles and phases in the planning process, steps in the work process, planning instruments of cost and time planning. ➤ Know about work preparation measures, inspection and analysis of complex construction site schedules and execution plans and construction implementation.

		<ul style="list-style-type: none"> ➤ To apply the knowledge about legislative acts of Lithuania in the field of construction. 	<ul style="list-style-type: none"> ➤ Know rules and protective measures related to environmental protection and health, integrate process and workflows on environmental standards. ➤ Specific knowledge of labour law, construction legislation, technical rules and standards, tendering and contract legislation. Assess construction technical rules and standards, contract legislation concerning sub- contractors and external service providers. ➤ Process control by suitable procedures on work planning, workflows, work control, quality assurance. Knowing appropriate procedures on monitoring computation of quantities pursuant to legal bases and performance, specifications, costs, construction material and techniques, static, execution of building construction. ➤ Relevant knowledge of complex types of construction plans, knowledge of legal rules and standards and EURO- codes. ➤ Knowledge of actual and planned cost accounting in cost settlement of complex building site,
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			cost structure, cost types, cost centres and cost priorities. Know indirect costs, rates calculation procedures, construction budget and cost control. Know relevant documentation and data- processing sectoral software.
Skills	<ul style="list-style-type: none"> ➤ To conduct technical, economical and commercial studies establishing the methods of implementation and technical control. ➤ To conduct the technical-economical calculations foreseeing measures of work execution (costs calculations). ➤ To coordinate operations and to provide consulting. ➤ To design adapted technical solutions in order to optimize the output of operations. ➤ To establish the work implementation schedule. ➤ To use the IT. 	<ul style="list-style-type: none"> ➤ To provide adherence to work implementation schedule by allocating tasks and executing control. ➤ To ensure the implementation of work according to the approved budget. ➤ To organize the supply of construction materials and equipment. ➤ To execute quality control of completed work. ➤ To present proposals concerning the appointment of foremen. ➤ To complete the construction journals and other documents. ➤ To read construction drawings and to prepare technological specifications and calendar schedules. 	<ul style="list-style-type: none"> ➤ Delegate to construction work groups, third party co-operators and deliverers and follow up on work assignments taking into account performance prerequisites and individual aptitude to work, assess the results of work with regard to execution, time schedule and quality. ➤ Cooperate with owner, design teams, contractors and (government) officials. ➤ Communicate corporate information clearly, ensure motivating working conditions, hold conflict-resolution and appraisal talks. ➤ Assess the potential of employees, recommend appropriate training measures for employees and ensure they cope with specific work requirements. ➤ Apply regulations on safety at work, health protection, hygiene at work, fire protection on the site.

			<ul style="list-style-type: none"> ➤ Prepare and assess realistic workflow plans and schedules for staff on the basis of construction planning, coordinate plans and adapt them to changed requirements. ➤ Accumulate reports on planning and construction documentation and coordinate to other work. ➤ Adhere to and implement environmental protection standards. ➤ Identify and analyse deviations from standards, assess their type and gravity and decide eventual countermeasures. ➤ Prepare and convey performance acceptance, compare execution of building work with the specification, compile reports and documents for (final) accounts and prepare documents about follow-up cost accounting. ➤ Combine and coordinate different levels of planning, hold coordination talks between different stake holders on the construction site (owner, planner, consultants, builders). ➤ Handling of measurement instruments and use of sectoral software.
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Competence	<ul style="list-style-type: none"> ➤ Ability to transpose the data from drawings, descriptors, constraint requirements to technical data (calculations, cost estimations), i.e. to transform qualitative information into technical and quantitative data. ➤ Ability to comply with strict standards and regulations in the domain. ➤ Ability to establish and develop communication with different involved stakeholders. ➤ Ability to exchange and synthesise the incoming information from the work environment. ➤ Ability to transfer and distribute work tasks according to competences and specializations of workers. ➤ Ability to regularly update his/her knowledge in accordance with the changes and development of technologies. ➤ Ability to work individually and in teams. ➤ Ability to respect the deadlines and to tolerate intensive changes in the work. 	<ul style="list-style-type: none"> ➤ Ability to plan, analyse and diagnose. ➤ Ability to organise and plan own work and the work of others. ➤ Problem solving ability. ➤ Ability to communicate in a polite manner. ➤ Management abilities. ➤ Ability to create a positive micro-climate in a team (to promote employee motivation, manage conflict situations, organise the teamwork, communicate and cooperate. 	<ul style="list-style-type: none"> ➤ Stable personality. Take responsibility for oneself and others. Prevent, identify, tackle and resolve conflicts. ➤ Ability to lead teams, take over final responsibility. Assertiveness, critical awareness, judgement, intercultural skills. ➤ Independence. Safety awareness and sense of responsibility. Ability to work under pressure, stress resistance. ➤ Organising skills, teamwork, critical awareness, realistic assessment of co-workers abilities. ➤ Environmental awareness. ➤ Decision-making in the practical application of rules on the building site. ➤ Responsibility, assertiveness, negotiating skills, frustration tolerance. ➤ Ability to combine and coordinate different types of construction relevant documents and plans. ➤ Economic thinking.
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Notes:

1. The same as in the previous case.
2. The qualification of the high technician of construction technical-economical engineering (France) includes ability to learn (*ability to regularly update his/her knowledge in accordance with the changes and development of technologies*) which is not explicitly indicated in the descriptors of Austria and Lithuania.

2. HOSPITALITY SECTOR: LITHUANIA, CZECH REPUBLIC, IRELAND

2.1. QUALIFICATIONS OF THE LEVEL 3 AND 4 ACCORDING TO EQF

EQF descriptor structure	HEAD CHEF (Lithuania) level 4 EQF	HEAD OF PRODUCTION - head chef (Czech Republic) level 4 EQF	CULINARY SPECIALIST (Ireland) Level 3 EQF
Knowledge	<ul style="list-style-type: none"> ➤ Apply knowledge of work safety, fire safety, first aid and health requirements ➤ Apply knowledge of good hygiene practices ➤ Apply knowledge of initial food processing technologies ➤ Apply knowledge of food production technologies, raw material characteristics and production assortment ➤ Apply knowledge of food products storage conditions and requirements, know date of their realization ➤ Apply knowledge about matching food ➤ Be able to distinguish fresh high quality products from low quality ones according to sensual analysis indices and look 	<p><i>Calculation of amounts of raw material for planned meals</i></p> <ul style="list-style-type: none"> ➤ Calculate standard amount of raw materials for given number of portions according to chosen recipes ➤ Create calculation paper <p><i>Creating a menu and an order of dishes</i></p> <ul style="list-style-type: none"> ➤ Develop menus (meals, wine, beverage etc.) according to gastronomic rules ➤ Develop menu for special occasion ➤ Developing menu for special diets ➤ Calculating costs of meals 	<ul style="list-style-type: none"> ➤ Understand the concept of a balanced diet and special diets which reflect current dietary needs and trends ➤ Be aware of the influences of tradition, culture and trends on menu planning ➤ Identify and define different types and styles of menus, compare and contrast commercial and institutional menus ➤ Be aware of the importance of taste, smell and texture in food ➤ Understand the control cycle and the basic principles of food cost control ➤ Understanding the importance of record keeping ➤ Understanding the role of cleaning in a food environment ➤ Understand the rationale behind good personal and

	<ul style="list-style-type: none"> ➤ Apply knowledge of making technology cards ➤ Apply knowledge of specialised foreign language vocabulary ➤ Apply knowledge of technological process organisation 		<p>professional hygiene</p> <ul style="list-style-type: none"> ➤ Know how to maintain hygiene and safety in the areas of delivery, storage, preparation , holding and serving food ➤ Explain the principles of HACCP and demonstrate an ability to identify hazards at each stage in the food production process
Skills	<ul style="list-style-type: none"> ➤ Select and initially process food products and raw materials (select food products and raw materials, establish their quality and process initially (clean, wash, cut and slice by hand or with vegetable peeling and cutting machines) for semi finished products and food preparation). ➤ Make semi finished products (make semi finished products following different technologies, ensure food meets quality standards) ➤ Prepare food (make starters, main courses and desserts, refreshments and 	<p><i>Receiving of ingredients and raw materials</i></p> <ul style="list-style-type: none"> ➤ Storing raw materials according to hygienic rules and monitoring storing methods and conditions ➤ Making documents on dispatch and receipt ➤ Checking, receiving and dispatching goods, judging by senses the type, quality and freshness of raw materials and weight ➤ Keeping track of inventory, reordering goods <p><i>Preparation of hot and made to order meals</i></p> <ul style="list-style-type: none"> ➤ Preparation hot meals according to recipes 	<ul style="list-style-type: none"> ➤ Prepare a variety of foods using a range of knife skills ➤ Produce a range of basic stocks ➤ Produce sauces included bechamel, veloute, demi-glace emulsions and their derivatives ➤ Produce a range of classical soups and accompaniments including purees, breams, broths and croutons ➤ Understand and apply cookery processes such as boiling, braising, baking, roasting, grilling, steaming, stewing poaching, stir frying and micro-waving ➤ Identify the cuts and quality points of beef, bacon, pork,

	<p>soups applying different technologies (boiling, baking, etc)</p> <ul style="list-style-type: none"> ➤ Decorate food and estimate its quality (estimate and ensure the quality meets standards, make decoration elements and decorate meals, change meal ingredients (e.g. topping, salads)) ➤ Check meals quality ➤ Invent and improve meals (Invent new recipes, improve old ones, make description of cooking technologies, prepare certificates for specimen meals, make technology cards) ➤ Plan menu ➤ Observe stock levels of food products and raw materials ➤ Maintain equipment of the kitchen ➤ (Maintenance, cleaning, reports about breakdowns) ➤ Tidy and clean the workplace at the end of a shift 	<ul style="list-style-type: none"> ➤ Preparation of made to orders meals according to recipes ➤ Follow technological procedure of preparation for given meal ➤ Choosing appropriate raw materials and using their appropriate quantity according to recipes ➤ Finishing and arranging dishes, monitoring quality and weight, and judging by senses the dish before expedition ➤ Using relevant technology equipment <p><i>Preparation of cold meals</i></p> <ul style="list-style-type: none"> ➤ Follow technological procedure of preparation and hygiene regulation ➤ Choosing appropriate raw materials and using their appropriate quantity according to recipes ➤ Preparing cold meals with required characteristics ➤ Finishing and arranging dishes and judging by senses the dish before expedition ➤ Using relevant technology 	<p>lamb, chicken, salmon, trout, cod, Plaice and Shellfish</p> <ul style="list-style-type: none"> ➤ Recognise the quality points of a range of vegetables and potatoes ➤ Identify, prepare, present and serve breads, toasts, scones, pastries and preserves; juices, fruits, cereals, porridge and hot beverages ➤ Produce a range of hot and cold sweets/desserts including pastries and sponges including fillings and coatings. ➤ Produce a range of modern and innovative food dishes from Ireland, the Med, China, Thailand and India ➤ Devise balanced menus containing a variety of foods ➤ Apply nutritional knowledge to menu planning, modifying recipes where appropriate to produce more nutritious menu items ➤ Apply the principles of work and food hygiene and safety ➤ Demonstrate manual and machine washing of kitchen equipments
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	<ul style="list-style-type: none"> ➤ Make orders and accept delivery of food products and raw materials, check their quality ➤ Keep kitchen tidy and clean ➤ Keep hygiene records up-to-date (Check and record refrigerators temperature modes) ➤ Mark batches of food products and raw materials and record production date (production date, time, energetic value) ➤ Keep thermal treatment register up-to-date ➤ Make shift patterns for kitchen workers according to volume of works ➤ Train new employees of the kitchen personnel ➤ Take orders for events (Plan menus for events and discuss them with customers) ➤ The ability to plan and organise personal work ➤ Organise and supervise the work of lower skills cooks (assign works, provide 	<p>equipment</p> <ul style="list-style-type: none"> ➤ Suggesting alternatives in preparation and serving cold dishes in accordance with new trends in gastronomy and using own creativity <p><i>Preparation of specialities</i></p> <ul style="list-style-type: none"> ➤ Suggesting and preparing speciality of the house in accordance with the type of restaurant and given occasion ➤ Suggesting and preparing a meal of foreign cuisine according to the assignments ➤ Suggesting and preparing a meal for people with special dietary requirements according to the assignments ➤ Suggesting and preparing a meal for catering for special occasions in special premises according to the assignments ➤ Finishing and arranging dishes and judging by senses the dish before expedition ➤ Using specialised tools and relevant technology equipment ➤ Following trends in gastronomy 	
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	<p>training, supervise)</p> <ul style="list-style-type: none"> ➤ Maintain general discipline in the kitchen 	<p>and putting them in practice</p> <p><i>Preparation, finishing and arranging of dishes for festive occasions</i></p> <ul style="list-style-type: none"> ➤ Suggesting appropriate meals and choosing appropriate raw materials for given occasion ➤ Following technological procedure of preparation ➤ Preparation of meals for festive occasions ➤ Finishing and arranging dishes and before expedition <p><i>Baking and preparation of desserts</i></p> <ul style="list-style-type: none"> ➤ Follow technological procedure of preparation and hygiene regulation ➤ Observing right selection and amount of raw materials according to recipes ➤ Preparation of dessert with required sensory characteristics ➤ Finishing and arranging desserts before expedition ➤ Using relevant technology equipment <p><i>Inventory maintenance</i></p>	
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		<ul style="list-style-type: none"> ➤ Servicing and maintaining inventory ➤ Ensuring and storing inventory after production period ➤ Keeping records of inventory movements ➤ Ensure purchases and replenishment of inventory needed for production of meals <p><i>Operating technological equipment</i></p> <ul style="list-style-type: none"> ➤ Preparation of equipment for production while observing safety regulations ➤ Using equipment safely in accordance with its purpose ➤ Servicing kitchen machines and equipment ➤ Servicing equipment for preparation of warm dishes ➤ Servicing cleaning and washing equipment ➤ Servicing cooling and freezing equipment ➤ Treating and securing kitchen equipment after production <p><i>Application of sanitation and hygiene</i></p>	
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		<p><i>principles and procedures in food operations, observance of regulations</i></p> <ul style="list-style-type: none"> ➤ Ensuring hygiene during work activities ➤ Applying and checking compliance with procedures based on HACCP (Hazard Analysis and Critical Control Points) ➤ Following sanitary rules during and after production ➤ Checking cleaning of workplace after finishing production ➤ Checking cleaning of workplace after finishing production <p><i>Monitoring</i></p> <ul style="list-style-type: none"> ➤ Monitoring quality of prepared meals ➤ Monitoring quality during preparation of meals ➤ Monitoring work of subordinates (compliance with technological procedures, regulations etc.) ➤ Conducting regular and random inspection ➤ Monitoring compliance with regulations (safety, hygiene, environmental etc.) ➤ Dealing with complaints from guests relating to meals 	
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		➤ Following trends in gastronomy and putting them in practice	
Competence	<ul style="list-style-type: none"> ➤ High standards of personal hygiene ➤ Accuracy ➤ Attention to detail ➤ Responsibility ➤ Fast respond ➤ The ability to work fast ➤ Good health ➤ The ability to work in team ➤ The ability to follow professional ethics and behaviour requirements ➤ Initiative, with professional improvement skills ➤ Work in creative manner ➤ Artistic skills ➤ Ability of leadership ➤ The ability to use IT 	<p><i>Organising and managing activities</i></p> <ul style="list-style-type: none"> ➤ Organising and managing activities during production of meals ➤ Assigning of tasks to workers according to work plans ➤ Planning of workforce, organising and monitoring of subordinates ➤ Organising of work at social gatherings with food service <p><i>Team work</i></p> <ul style="list-style-type: none"> ➤ Cooperating with co-workers from other sectors ➤ Communicating with subordinates professionally, relaying necessary information ➤ Meeting deadlines and following a schedule 	<ul style="list-style-type: none"> ➤ Demonstrate an understanding of personal responsibilities ➤ Personal skills include appropriate dress, adaptability, reliability, punctuality, health and safety awareness and appropriate use of initiative ➤ Understand the complexities of working as part of a multi-cultural team ➤ Create, edit and format documents, spreadsheets, electronic presentations and email. ➤ Be able to deal with conflict and complaint handling

Notes:

1. The description of knowledge in the descriptor of Lithuania indicates the application of certain factual knowledge, while in the descriptors of Czech Republic and Ireland it is expressed in terms of certain cognitive and intellectual operations.
2. The level of knowledge is similar in both descriptors, however the descriptors of Lithuania and Ireland provides wider and more comprehensive overview of the applied knowledge.
3. The description of skills in the all descriptors of Lithuania and Czech Republic reflect very comparable level of skills and similar relationships between the skills and knowledge. The description of skills in the descriptor of Czech Republic is more comprehensive but in general descriptors of Lithuania and Czech Republic are easily comparable and contents of descriptors clearly indicate that they are of the same level.
4. Description of the competences also differs: in the descriptor of Lithuania and Ireland competences are expressed as a wide range key skills (abilities) and personal qualities, which are applied in the activities not specifying the tasks, while in the descriptor of Czech Republic there are indicated just several general competences then in a detailed way describing their application in the different activities.
5. The level of qualification of the culinary specialist in Ireland is comparable to the EQF level 3 differently from the compared qualifications from Czech Republic and Lithuania, which are comparable to the EQF level 4. The main differences between these compared qualifications in regard to knowledge and cognitive competences is the presence of the knowledge and know-how related to food production technologies and the development of menus in the qualifications of the level 4, which lead to the higher level of autonomy and responsibility of the holders of these qualifications.
6. Qualifications of chiefs of Lithuania and Czech Republic comparable to EQF level 4 have wider range of skills than the qualification of culinary specialist from Ireland (EQF level 3). One of the distinctive features of the qualifications of chiefs in the cases of Lithuania and Czech Republic are the skills related to quality assurance and control of products and meals, while in the case of level 3 qualification of Ireland the skills of quality control are limited to the quality control of raw materials.
7. The main differences between the compared qualifications in terms of competence are the abilities of work organization, team-working and management typical for the qualifications of chiefs from Lithuania and Czech Republic.

2.2. QUALIFICATIONS OF THE LEVEL 5 ACCORDING TO EQF

EQF descriptor structure	PRODUCTION MANAGER/ EXECUTIVE CHEF (culinary shop) (Lithuania) Level 5 EQF	MANAGER OF THE FOOD PREPARATION AND SERVING SECTOR (Czech Republic) level 5 EQF	PROFESSIONAL COOK (Ireland) Level 5 EQF
Knowledge	<ul style="list-style-type: none"> ➤ Apply knowledge of work safety, fire safety, first aid and health requirements ➤ Apply knowledge of good hygiene practices ➤ Apply knowledge of food production technologies, raw material characteristics and production assortment ➤ Apply knowledge of food products storage conditions and requirements, know date of their realization ➤ Apply knowledge about matching food ➤ Be able to distinguish fresh high quality products from low quality ones according to sensual analysis indices and look ➤ Apply knowledge of specialised foreign language vocabulary ➤ Apply knowledge good hygiene practices requirements ➤ Apply knowledge of preparing 	<p><i>Marketing</i></p> <ul style="list-style-type: none"> ➤ Conducting a study of the food service industry, evaluating its results ➤ Suggesting improvements in food service sector and new ways of presentation ➤ Promoting services of food industry, offering regional specialities and specialities of the house <p><i>Dealing with correspondence</i></p> <ul style="list-style-type: none"> ➤ Preparing background material for business letter ➤ Dealing with correspondence (regular and electronic) ➤ Preparing materials for everyday tasks of food preparation and serving sector (e.g. reordering goods etc.) 	<ul style="list-style-type: none"> ➤ Identify the origin, quality and use of a variety of food products and commodities ➤ Comprehend and apply quality points in relation to the food control cycle ➤ Comprehend and apply cost and quality control procedures to Breakfast, Brunch and Lunch dishes ➤ Demonstrate knowledge and understanding in applying hygienic practices relating to: personal hygiene, environmental hygiene and work practices ➤ Have an in-depth knowledge of the different types and styles of menus and their uses ➤ Have knowledge and

	<p>food production certificates and making technology cards</p> <ul style="list-style-type: none"> ➤ Apply knowledge of technological process organisation ➤ Apply knowledge of legal instruments, regulating work relations ➤ Apply knowledge of personnel management basics 		<p>understanding of cost factors and cost control in menu planning</p>
Skills	<ul style="list-style-type: none"> ➤ Select food products and raw materials and make initial processing (Select food products and raw materials, establish their quality and initially prepares them (clean, wash, cut and slice by hand or with cutters) to semi finished products and food) ➤ Make semi finished products (make semi finished products following different technologies, ensure food meets quality standards) ➤ Prepare food (prepare starters, main courses and desserts, refreshments and soups applying different technologies (boiling, baking, etc) ➤ Decorate food and estimate its quality (Estimate and ensure the 	<p><i>Communication with clients</i></p> <ul style="list-style-type: none"> ➤ Communicating professionally including in foreign language ➤ Dealing with unusual behaviour of guests on spot, dealing with complaints relating to quality of meals or behaviour of staff ➤ Offering meals and beverages according to wishes of guests (e.g. according to the occasion, in keeping with cultural or religious restrictions etc.) ➤ Providing and finding information according to the character of the client's question <p><i>Team work</i></p> <ul style="list-style-type: none"> ➤ Cooperating with co-workers from other sectors ➤ Cooperating with various parties in 	<ul style="list-style-type: none"> ➤ Aesthetically prepare and present dishes with relevant accompaniments for buffet and plate service, incorporating a range of presentation styles ➤ Apply from a practical perspective, cookery processes using a range of commodities ➤ Demonstrate with confidence and creativity the skills required for Cookery in the hospitality industry ➤ Apply cookery techniques, skills and knowledge in a realistic work environment to the

	<p>quality meets standards, make decoration elements and decorate meals, change meal ingredients (e.g. topping, salads))</p> <ul style="list-style-type: none"> ➤ Check meals quality ➤ Invent and improve meals (invent new recipes, improve old ones, make description of cooking technologies, prepare certificates for specimen meals, make technology cards) ➤ Plan menu (plan menus of the restaurant, fourshets, banquets) ➤ Tidy and clean the workplace at the end of a shift ➤ Make orders and accept delivery of food products and raw materials, check their quality ➤ Maintain kitchen equipment (ensure that kitchen equipments are clean and work properly, arrange offers for new equipment purchase) ➤ Keep kitchen tidy and clean ➤ Plan and inspect stock levels of food and raw materials (Quality and price ratio analysis, food and raw materials stock orders control) 	<p>the course of planning and providing food services for clients</p> <ul style="list-style-type: none"> ➤ Communicating with subordinates professionally, relaying necessary information ➤ Meeting deadlines and following a schedule ➤ Observing safety rules, fire safety, protecting environment and health 	<p>production of breakfast/brunch, lunch and dinner, in an aesthetic manner incorporating a range of presentation styles.</p> <ul style="list-style-type: none"> ➤ Produce appropriate dishes in a volume cookery situation ➤ Understand the concept of a balanced diet and special diets, produce a range of dishes, which creatively reflect dietary needs and current trends ➤ Be able to use appropriate computer software for menu planning, stock control and nutritional analysis <p><i>Teamwork</i></p> <ul style="list-style-type: none"> ➤ Understand the importance of group and teamwork ➤ Demonstrate a positive attitude and strong interpersonal skills when working with customers and staff
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	<ul style="list-style-type: none"> ➤ Keep hygiene records up-to-date ➤ Mark batches of food products and raw materials and record production date ➤ Keep thermal treatment register up-to-date ➤ Issue invoices ➤ Make reports (work organisation, quantity of production, prices, etc.) ➤ Prepare specimen meals production certificates and make technology cards (gross and net calculation, energetic value calculation, description of technological process) ➤ Organise and supervise the work of lower skills cooks (assign works, provide training, supervise; ensure friendly work atmosphere in the team, motivate employees) ➤ Maintain general discipline in the kitchen ➤ Make shift patterns for kitchen workers ➤ Take part in personnel selection process ➤ Take orders for events 		
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Competence	<ul style="list-style-type: none"> ➤ High standards of personal hygiene ➤ Accuracy ➤ Attention to detail ➤ Responsibility ➤ Fast respond ➤ The ability to work fast ➤ Good health ➤ The ability to work in team ➤ The ability to follow professional ethics and behaviour requirements ➤ The ability to plan and organise personal work ➤ Initiative, with professional improvement skills ➤ Work in creative manner ➤ Artistic skills ➤ The ability of leadership ➤ The ability to use IT ➤ The ability to plan and organise teamwork ➤ Good communication skills (able to communicate with people) ➤ The ability to create friendly atmosphere in the team 	<p><i>Organising and managing activities</i></p> <ul style="list-style-type: none"> ➤ Organising and managing activities of food service section ➤ Fulfilling tasks of business policy (of market plan) ➤ Providing food services to the highest standards ➤ Analysing resource management and drawing conclusions ➤ Suggesting prices of products and services ➤ Following trends in gastronomy and putting them into practice <p><i>Planning</i></p> <ul style="list-style-type: none"> ➤ Setting short term and long term goals in company's management and development ➤ Setting methods for achievement of planned goals ➤ Planning of human resources <p><i>Monitoring</i></p> <ul style="list-style-type: none"> ➤ Monitoring honesty of staff ➤ Checking and countersigning accounts ➤ Monitoring work of subordinates (compliance with technological procedures, regulations etc.) 	<ul style="list-style-type: none"> ➤ Carry out supervisory functions ➤ Be able to perform appropriate first aid ➤ Understand and be able to apply fire safety and prevention techniques ➤ Demonstrate knowledge of the authorities responsible for food safety and the role they can play in the industry ➤ Explore issues of staff development and demonstrate effective teamwork skills ➤ Solve issues and problems that may arise in various practical situations ➤ Comprehend and apply basic business principles, including marketing, quality and cost control ➤ Understand and calculate relevant operational statistics included return on
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		<ul style="list-style-type: none"> ➤ Conducting regular and random inspection ➤ Monitoring compliance with regulations (safety, hygiene, environmental etc.) ➤ Dealing with complaints in accordance with current legislative 	<p>investment, gross profit and VAT</p> <ul style="list-style-type: none"> ➤ Calculate salaries and labour costs including pensions, state contributions, holiday, sickness and maternity entitlement ➤ Demonstrate both personal and professional hygiene practices in accordance with FSAI training standards ➤ Apply the control cycle to food and beverage operations ➤ Demonstrate an integration of knowledge, understanding and skills gained in science, culinary arts and business ➤ Understand the socio-economic impact of the tourism industry nationally and internationally
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Notes:

1. Knowledge in the descriptor of Lithuania is more comprehensive, encompassing different levels and oriented to the technical contents and technological issues of the work, while the descriptors of Czech Republic and Ireland qualifications are more focused on the commercial, marketing and managerial aspects of work.
2. The same can be noticed in the description of skills: while in the descriptors of the manager of the food preparation and serving sector qualification in Czech Republic there clearly dominates managerial skills, in the description of the production manager/executive chief qualification in Lithuania and professional cook in Ireland the managerial skills are defined much less extensively with the clear domination of the practical skills which are needed in the production process. It creates the problems in comparing these qualifications, because the skills described in the Czech descriptor only partially corresponds to the skills of the production manager/executive chief from Lithuania and professional cook from Ireland.
3. Description of the competences also differs: in the descriptor of Lithuania competences are expressed as a wide range key skills (abilities) and personal qualities, which are applied in the activities not specifying the tasks, while in the descriptor of Czech Republic and Ireland there are indicated general competences in a detailed way describing their application in the different activities. The competence descriptors of manager of the food preparation and serving qualification in Czech Republic and professional cook of Ireland include wider range of management, organization and marketing skills, than the descriptor of executive chief qualification of Lithuania.

General conclusion

The structure of the EQF descriptors (knowledge, skills, competence) in principle can be applied for the comparison of the sectoral qualifications of different levels. The main difficulties and problems in using this structure arise in comparing the levels of knowledge and competence. EQF descriptors indicate the factual and theoretical knowledge, but the descriptors of sectoral qualifications of the countries very often integrate the knowledge with the cognitive skills and stress the abilities to apply knowledge in the different work situations and environments. Dissecting the knowledge from the cognitive skills and the conditions of their application in the process of comparison can distort the understanding of the level of this knowledge. Similar problems are encountered in comparing the general skills and abilities related to competence in terms of responsibility and autonomy. Autonomy and responsibility depends not only on the general skills and abilities but also on the knowledge and skills levels. Therefore it is very complicated and risky to dissect the general skills and abilities from the knowledge and functional (practical) skills in comparing qualifications.

ANNEX NO.4

Reports of the analysis of compatibility of the national qualifications frameworks of Ireland, France, Lithuania, Czech Republic and Austria with the EQF

Analysis of the compatibility of the proposed national qualifications framework of Lithuania with the EQF

Vidmantas Tūtlys, Vytautas Magnus University

Setting of vocational qualifications levels of the Lithuanian National Qualifications Framework is based on a comparison with the European Qualifications Framework and current vocational education levels adopted in Lithuania.

It is important that the setting of the Lithuanian vocational qualifications levels does not "devalue" qualifications acquired in Lithuania in respect of the European Qualifications Framework.

EQF reference levels	Proposed Lithuanian NQF levels
<i>Level I:</i> to acquire a qualification, elementary general knowledge and capability to carry out simple tasks in a directly managed structural environment is required. Formation of learning skills requires comprehensive support. These qualifications are not profession related; they are oft en sought by individuals without any qualifications.	<i>Level I:</i> a qualification is recognized upon attaining any general education and entitles to perform basic, simple works in very wide activity areas.
<i>Level II:</i> to acquire a qualification, a limited scope of knowledge, skills and wider abilities, usually of specific or general nature, is required. Skills are used under direction of another worker in a controlled environment. Learners assume limited responsibility for their learning. Some of the qualifications are profession-related, however, most are related to the general preparedness to work and learn.	<i>Level II:</i> a qualification is related to one or more narrow competences enabling to perform simple specialised activities.
<i>Level III:</i> to acquire a qualification, broad general knowledge, certain practical and elementary theoretical	<i>Level III:</i> A qualification consists of functional competences enabling the individual to work with uncomplicated

knowledge of the field and ability to work under direction of another worker are required. Learners assume responsibility for their learning and have limited working experience or partial studies experience.	devices/equipment and to perform specialised tasks. The qualification allows performing relatively simple work not requiring independent decisions with the help of a qualified worker. General education attainment: basic education, maybe incomplete secondary education.
Level IV: to acquire a qualification, significant practical and theoretical knowledge and skills in a certain field are required. Capability to use special knowledge, skills and capabilities, to independently resolve problems and direct others. Learners demonstrate independence and have practical working or learning experience both in ordinary and extraordinary situations.	Level IV: A worker must be capable of performing operations at several different workplaces or in different environments using different methods of performing the activity. The independence of activity characteristic to these qualifications requires that the worker independently puts into practice vocational and general education knowledge obtained at formal educational establishments and through supplementary independent learning. The level should be further divided into sublevels depending on blue-collar workers' qualification categories.
Level V: to acquire a qualification, broad theoretical knowledge and practical capabilities are required as well as knowledge relevant to a certain study/professional area. The qualifications require the ability to use knowledge and skills in searching for strategic solutions for clearly defined specific problems. Learning skills form a basis for independent learning, while qualifications are based on working or learning activities including people and project management.	Level V: The activity consists of a complicated specialised actions and operations performed at different workplaces. Qualification consists of quite universal competences exceeding the limits of a single workplace and enabling to understand, effectively organise and manage the activity performed at a number of workplaces. Qualifications of this level are acquired at secondary vocational training and adults vocational training institutions as well as upon completion of a short two-year study programme at a college.
Level VI: to acquire a qualification, detailed theoretical and practical knowledge, skills and capabilities related to the field of science or work are required; part of the knowledge should be latest knowledge in the field. Such qualifications also require application of knowledge in formulating or supporting arguments, resolving problems and	Level VI: Qualifications of this level consist of special knowledge in the professional area of activities, capabilities to manage business processes and to work in a team, creativity and capability to manage methods and means in a constantly changing specialised professional environment. Qualifications of this level are acquired at higher educational establishments (basic studies -

adopting decisions related to social and ethical issues. Workers with these qualifications achieve results based on professional attitudes to an activity under complicated circumstances.	first-tier consecutive university and non-university studies) or through non-formal or informal learning with the recognition of relevant qualifications acquired at workplace. Qualifications are recognised by awarding a bachelor's degree in a certain profession or a bachelor's qualification degree and a diploma. Sectoral and professional bodies may propose that studies of this level are recognised in working environment.
Level VII: to acquire a qualification, self-oriented theoretical and practical learning is required; latest advanced knowledge in the field forming a basis for the generation and/or implementation of original ideas, often in research context, forms part of such learning. These qualifications comprise the capability to integrate knowledge and formulate responsible decisions taking account of social and ethical issues and reflect the experience in change management in a complicated environment.	Level VII: qualifications of this level are acquired through formal education (second-tier or consecutive university studies) or in a non-formal and/or informal manner, with the recognition of competences acquired at workplace. The qualifications are recognized by awarding master's degree and a diploma.
Level VIII: to acquire a qualification, systematic mastering of a highly specialized field and the capability to critically analyse, evaluate and synthesise new sophisticated ideas are required. The qualifications comprise the capability to invent, formulate, implement and adapt significant research processes. The qualifications also embrace managerial experience in developing new creative models that extend or reformulate existing knowledge or professional practices.	Level VIII: qualifications are acquired through university studies or non-formal and/or informal education, with the recognition of competences acquired at workplace. The level of qualifications is certified by a doctoral degree and a diploma of a doctor of sciences.

Specific typical functional, cognitive and general competences should be identified in the table of qualification level descriptions, while the descriptions should show how these competences change (become more complicated) during transition from a lower level to a higher one. However, it is accepted that certain competences can remain stable in all qualifications levels.

While developing the Lithuanian Qualifications Framework and setting the number of qualifications' levels, the situation in the system of the activity (demand for

qualifications, etc.) and the existent educational system (types of institutions, number of 5 levels in vocational education, etc.) have been analyzed and the documents of EU Education Policy (documents of *The Bologna Process*, *The Copenhagen Declaration*, etc.) have been examined. Moreover, the methodology of creating European Qualifications Framework and the descriptions of the levels of qualifications have also been discussed. Although the methodology for creating Lithuanian National framework of qualifications and the descriptions of qualifications differ from EQF, The Lithuanian Qualifications Framework also distinguishes eight levels of qualifications.

Levels of qualifications in the European Qualifications Framework are described according to learning outcomes. The learning outcomes are divided into three groups: knowledge, skills and competencies. In the descriptions of the levels of qualifications in the Lithuanian Qualifications Framework learning outcomes are equated to competencies*. There are three kinds of competencies dominating in the descriptions, i.e. cognitive, functional, and general.

Analysis of the compatibility of the National Qualifications Framework of Ireland with the EQF

Carmel Kelly, National Qualifications Authority Ireland

Background to the Irish NFQ and EQF

The National Qualifications Framework (NFQ) was introduced in 2003 as the key element in a broad reform of the system of qualifications in Ireland, arising out of the 1999 Qualifications (Education and Training) Act. It is the single structure through which Irish qualifications can be defined and compared.

The European Qualifications Framework (EQF) is a common European reference framework, which links countries' qualifications systems together, acting as a translation device to make qualifications more readable and understandable across different countries and systems in Europe. It has two principal aims: to promote citizens' mobility between countries and to facilitate their lifelong learning. EQF was introduced in a Recommendation which formally entered into force in April 2008.

Referencing the Irish NFQ to the EQF

The National Qualifications Authority of Ireland has been designated the Irish National Coordination Point by the Department of Education and Science and is responsible for overseeing the referencing of the Irish NFQ to the EQF. The NQAI has put in place a National Steering Committee to oversee the process of referencing the NFQ to the EQF. The first meeting of the National Steering Committee took place in January 2009. The Criteria and Procedures which have been developed by the EQF Advisory Group for referencing frameworks to the EQF will form the basis of the NFQ referencing work. The National Steering Committee determined and set out in a report, Ireland's response to each of the 10 referencing criteria and procedures. A first draft report was prepared in March 2009 and sent out for feedback amongst national stakeholders in education and training in Ireland. The referencing exercise has been finalised by summer 2009.

General Comparison of NFQ and EQF

Both the NFQ and EQF are 'qualifications frameworks', structures designed to enable users to compare and contrast aspects of learning. Both frameworks share core concepts:

they are based on the approach of identifying learning outcomes, described in terms of knowledge, skill and competence. There are also fundamental differences in the purposes for which these frameworks were designed: NFQ is primarily a definitive structure while

the EQF is a translation device.

Approach Adopted

The approach adopted in referencing to the EQF will be as follows:

- General comparison of the NFQ and EQF
- Comparison of the ways in which learning outcomes are described in each framework

- Relevant evidence from comparisons already undertaken – EHEA referencing the CEFR referencing processes.
- Direct comparison of the text in the NFQ level indicators and in the EQF level descriptors
- Where additional evidence is required, other information about levels in either framework may be proposed.

Significant evidence of correspondence between the NFQ qualification levels and the EQF level descriptors can be sourced from two comparison exercises undertaken since the NFQ was introduced:

- The verification of Compatibility of the Irish National Framework of Qualifications with the Framework for Qualifications of the European Higher Education Area, and
- A study to establish the relationship between the Common European Framework of Reference for Languages and the National Framework of Qualifications.

The Verification of Compatibility with the EHEA has been formally adopted by the relevant authorities. The EQF referencing Criteria and Procedures set out explicitly a recommendation that EHEA referencing processes already completed should be taken into account for referencing to the EQF.

“A country which has completed the referencing process within the context of the EHEA has the choice of not repeating it for the relevant levels of the EQF. Aiming for one national referencing process covering both the EQF and the EHEA would not only help to avoid double work but also – most importantly – avoid confusion among individuals and employers – the main users of qualifications.”

On this basis, a correspondence between NFQ levels and EHEA cycles can be indicated, with a further correspondence to EQF levels implied from the EQF/EHEA compatibility note set out in the EQF Recommendations. These correspondences can be summarised as follows:

Levels of Irish NQF	EHEA cycles	EQF levels
Level 6	Short Cycle	Level 5
Level 7/8	First Cycle	Level 6
Level 9	Second Cycle	Level 7
Level 10	Third Cycle	Level 8

Tentative mapping exercise, undertaken prior to development of EQF Referencing Criteria and Procedures

Prior to the Recommendations for referencing to the EQF becoming available, the NQAI undertook an exercise to map the NFQ levels to the EQF. This was a draft exercise, comparing the Irish award descriptors with the EQF level descriptors in a broad manner. This exercise resulted in the mapping indicated in the table below. The referencing described below is tentative and may change as a result of the more in depth work which

will take place as part of the official referencing exercise.

Levels of Irish NQF	EQF levels
Level 1	Level 1
Level 2	Level 2
Level 3	
Level 4	Level 3
Level 5	Level 4
Level 6	Level 5
Level 7	Level 6
Level 8	
Level 9	Level 7
Level 10	Level 8

Analysis of the compatibility of the proposed National Qualifications Framework of Czech Republic with the EQF

Miroslav Kadlec, Milada Stalker, NUOV

NQF levels	Level descriptor	Levels of education (according to the School Act)	Educational category according to KKV	EQF levels
Z		Elementary education	C	
1	To distinguish occupational tools, raw materials, etc. Carry out work according to assigned simple constant procedures.	Secondary education	D	1
2	To be well versed in supporting documents containing work assignment. To choose from various alternatives occupational tools, raw materials, etc. for a certain procedure, method. To assess the quality of own products (services) When applying particular procedures and methods, problems and their origin are to be identified. To apply particular procedures in standard conditions with minimum possible changes.	Secondary education completed by an apprenticeship certificate	E	2
3	To be well versed in documentation, standards usually applied in a particular field. To choose from various alternatives, work procedures, methods, means, raw materials, etc. according to conditions and requirements for the results. To assess the quality of own products (services) and	Secondary education completed by an apprenticeship certificate	H	3

	<p>determine the reasons for possible shortcomings and consequences for further progress.</p> <p>When applying particular procedures and methods, problems and their origin are to be identified as well as the reasons and consequences for further progress are to be determined.</p> <p>To determine the reasons for non-standard functions, behaviour and situations occurring at work objects.</p> <p>To apply chosen procedures depending on various conditions and requirements for the result as well as take into account social viewpoints.</p>			
4	<p>To be well versed in documentation, standards and legal regulation usually applied in a particular field.</p> <p>To choose from various alternatives work procedures, methods, means, raw materials, etc. according to the conditions and requirements for the results.</p> <p>To assess the quality of own products (services) and determine the reasons for possible shortcomings and consequences for further progress.</p> <p>When applying particular procedures and methods, problems and their origin are to be identified as well as the reasons as well as consequences for further progress are to be</p>	<p>Secondary education completed by the Maturita examination</p>	K,L,M	4

	<p>determined.</p> <p>When problems occur, the links of social aspects to problems are to be identified.</p> <p>To determine the reasons for non-standard functions, behaviour and situations occurring at work objects.</p> <p>To assess the relevancy of professional information.</p> <p>To assess the results of other work from the viewpoint of their usage in procedures and methods.</p> <p>To apply and modify the chosen procedures depending on various conditions and requirements for results as well as take into account social viewpoints.</p> <p>To integrate professional information from various sources into problem solving.</p> <p>To propose the ways of result improvement.</p> <p>To propose less complicated, analogical procedures and products.</p> <p>To work out proposed procedures and products.</p> <p>To manage smaller teams working on the application of chosen procedures depending on various conditions and requirements for the results.</p>			
5	<p>To be well versed in documentation, standards and legal regulation usually applied in the particular filed.</p> <p>To choose from various alternatives work</p>	Tertiary vocational education	N	5

	<p>procedures, methods, means, raw materials, etc. according to conditions and requirements for the results.</p> <p>To assess the quality of own products (services) and determine the reasons for possible shortcomings and consequences for further progress.</p> <p>When applying particular procedures and methods problems and their origin are to be identified as well as the reasons and consequences for further progress are to be determined.</p> <p>When problems occur, the links of social aspects to problems in question are to be identified.</p> <p>To determine the reasons for non-standard functions, behaviour and situations occurring at work objects.</p> <p>To analyse less complicated systems, phenomena and processes.</p> <p>To assess relevancy of professional information.</p> <p>To assess the results gained in other projects from the viewpoint of their usage in procedures and methods.</p> <p>To apply and modify the chosen procedures depending on various conditions and requirements for the results as well as take into account social viewpoints.</p> <p>To solve more complicated tasks, for which procedures</p>			
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	<p>and methods have not yet been developed.</p> <p>To solve problems linked with the necessity of generalization.</p> <p>To integrate professional information from various sources into the problem solving.</p> <p>To integrate more solutions into a complex solution.</p> <p>To propose system improvements.</p> <p>To propose new and more complicated procedures and products.</p> <p>To manage teams when addressing complicated professional activities under unpredictable conditions.</p>			
6	<p>To be well versed in documentation, standards and legal regulation applied to a particular field.</p> <p>To choose work procedures, methods, means, raw materials, etc. from various alternatives according to the conditions and requirements of the task.</p> <p>To assess the quality of his or her own products (services) and determine the reasons for possible shortcomings and their consequences for further progress.</p> <p>When applying particular procedures and methods, the origin of the problem must be identified and the reasons and consequences for further progress are necessary to be determined</p> <p>When problems occur the</p>	Bachelor Programmes of Higher Education	R	6

	<p>links of social aspects to problems in question are to be identified</p> <p>To analyse the reasons for nonstandard functions, behaviour and situations occurring at work objects as well as their context.</p> <p>To analyse complicated systems, phenomena and processes.</p> <p>To assess the relevance of professional information from other scientific fields.</p>			
7	<p>To assess the results of other complicated projects from the viewpoint of their further application in procedures and methods.</p> <p>To apply and modify the chosen procedures in dependence on various conditions and requirements for the results as well as take into account social viewpoints.</p> <p>To complete more complicated tasks, for which procedures and methods have yet to be developed.</p> <p>To cope with the problems which are to be generalised.</p> <p>To integrate into problem solution professional information from various sources and knowledge from various scientific fields.</p> <p>To integrate more solution into a complex solution.</p> <p>To propose fundamental system changes.</p> <p>To propose and implement complicated new procedures and products.</p> <p>To cope with problems linked</p>	Master Programmes of Higher Education		7

	<p>with the application of extensive theoretical and highly specialised knowledge.</p> <p>To manage and plan complicated and extensive processes in unpredictable conditions including a conceptual and strategic decision-making.</p>			
8	<p>See level 7 plus</p> <p>To complete tasks linked with innovations that are significant for the whole field. To contribute to discovering new scientific knowledge.</p> <p>To manage extensive research and development projects.</p>	Doctor Programmes of Higher Education	V	8

Analysis of the compatibility of the National Qualifications Framework of France with the EQF

M'Hamed Dif, BETA Céreq Alsace

Table of correspondence between the qualification/certification levels within the French NQF and those of the EQF

NQF of France			EQF	
Levels (according to the current 1969 nomenclature*)	Description of Educational and training attainment in terms of qualifications and certifications	Description of occupational related knowledge, skills and competences (in connection of the required level of autonomy and responsibility in exercising the related activity in the domain)	Corresponding certification levels	Comments
5	<p>It concerns:</p> <ul style="list-style-type: none"> - Individuals holding jobs that do not require educational qualification beyond the compulsory schooling (Level 6 in 1967 nomenclature), - Individuals holding jobs involving specialized training for a maximum of one year beyond the first cycle of secondary education or the level of vocational training certificate (Level 5a in 1967 nomenclature); - Individuals holding jobs which normally require a level of VET qualifications equivalent to the vocational aptitude certificate (CAP) or the vocational studies diploma (BEP) (two years of vocational schooling beyond the first cycle of secondary education). 	<p>This level corresponds to a full qualification and competence for exercising a clearly defined activity with ability to use specifically related tools and techniques. The activity consists mainly of executing a set of related tasks with autonomy within the limits of related use of techniques and tools and/or under the responsibility of a qualified team leader in the domain.</p>	3	<p>EQF-level 1 and 2 corresponds to level 6 and 5a in 1967 nomenclature.</p> <p>EQF-level 3 corresponds to levels 5 in certification-based 1969 nomenclature within the French NQF.</p>

4	Team leader, technicians and highly skilled workers possessing a technological or a vocational baccalaureate (BTn or Bac.Pro.), a Technician Diploma (BTn) or a Vocational Education Diploma (BEP).	The qualification level (IV) requires more theoretical knowledge than the previous one (V). The activity is mainly a technical work. It can be executed with autonomy and / or supervisory and coordination responsibilities.	4	
3	High technicians and supervisors with a qualification level corresponding to the baccalaureate plus a two-year higher education level at the university. This includes the holders of the two-year University Diploma in Technology (DUT) and the High Technician Diploma (BTS) : 120 ECTS	The qualification Level (III) corresponds to a higher level of knowledge capacities which does not include mastering the scientific foundations of the concerned domains. But, the required skills and knowledge at this level has to allow for undertaking related autonomous conception, supervisory and management responsibilities.	5	
2	Personnel (usually with middle management and expertise) possessing a qualification level through education and training equal to Bachelor's degree ("Licence": L3= 180 ECTS)	At this level, the professional activity undertaken by an employee or self-employed individual is base on mastering the basic scientific foundations of the profession in the concerned domain, leading generally to autonomy and responsibility in carrying out this activity.	6	EQF-level 6 corresponds to "Licence (L3)" (The three-year French Bachelor' degree)
1	Personnel (executives, engineers, researchers, managers, experts ...), possessing a qualification level higher than the 1st year of master's degree. This includes: - Master degree (two-year of Master's degree:	In addition to a confirmed knowledge of the scientific basis of a professional activity, this qualification Level requires mastering the conceptual or research process in the concerned	7 (M)	EQF-level 7 corresponds to M2 (the two-Master's

	M2=300 ECTS - Doctorate (480 ECTS).	domain of activity.	8 (Dr)	degree certificate) within the French NQF. EQF-level 8 corresponds to Doctorate level within the French NQF.
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*This nomenclature of educational, training and certification levels was approved by a decision of the Permanent Group for Vocational Education and Training and Social promotion on the 21st of March 1969. This nomenclature connects the qualification levels with basically exercised levels of responsibility and autonomy at occupational level. It was established on the basis of the nomenclature defining the levels of educational and training qualification/certification attainments in terms of their duration) as approved by the inter-ministerial circular n° 11-67 of 11 July 1967 (published in the Official Bulletin of 20 July 1967). Moreover, the descriptions concerning the levels 1, 2 and 3 with French NQF take into consideration the recently implemented reform of higher education in connection with the generalized implementation of the LMD [Licence (Bachelor)/Master-Doctorate] system within all French universities by the academic year 2005/2006.

Important N.B.: This correspondence between the certification levels of learning outcomes within the French NQF and those of the EQF is the outcome of a pragmatic research process based investigating the existing effective practices and related action research. It aims at contributing to the enrichment of the ongoing process of reflection and debate which ultimately leads in the very near future (hopefully by the middle of this year 2009) to formally specifying and institutionalising the exact equivalence of certification levels between the French NQF and those of EQF.

So, it is important to underline that although the French NQF with its five-certification levels exists since 1969 (in accordance with the certification-based nomenclature of 1969), the exact institutionalised equivalence between the certification levels of learning outcomes within the French NQF and those of the EQF, has not yet been formally established.

Analysis of the compatibility of the currently designed National Qualifications Framework of Austria with the EQF

Austria currently is in the process of the designing of the NQF. It is intended to design the NQF of 8 levels. It seems that the experts in Austria will refer to the example of EQF in designing of their NQF – at least the current discussions in the sectors of activities permit to draw such conclusion.

Analysing the debates on the NQF and its correspondence to the EQF there can be noticed the following:

1. Presently there is no mutual understanding on the coordination of vocational training levels to NQF level 5-8. University-sector claims levels 6 (BAC) – 7 (MAS) – 8 (PhD) exclusively, whereas the vocational sector prefers the principle of “equivalency not homogeneousness”. Also undecided is permeability between vocational and university sectors. Representatives of VET strongly advice to follow the example of Germany to open all the NQF levels (also 6,7,8) to vocational education an training.
2. As it is indicated by the sectoral experts in the discussions of the NQF project, there is no common understanding and concept of the learning outcomes in Austria, which would lead to the operationalization of this concept. Therefore there are no guidelines how the learning outcomes should be defined and formed and what is their place in the descriptors of qualifications.
3. The participants of discussions indicated, that the generalised descriptors of the EQF and NQF will not always correspond to the contents of sectoral qualifications. There are and will be cases, when some leveling and referencing criteria of the NQF or EQF can be applied for referencing of sectoral qualifications, while other criteria can not be applied. For example, the criteria of the competence in the EQF level 4 as “supervision of routine work of others” can not be applied to the corresponding qualification of the electrotechnic sector in Austria, because in this sector the supervision of the work of others requires more work experience, especially in the workplaces with high voltage equipment.
4. There are still disputes about the referencing of some qualifications to the currently designed NQF and the EQF. For example, there are controversies and disputes referencing the qualification of the engineers provided by the higher technical schools (HTL- Ingenieur). Specifics with the Austrian degree of “Ingenieur” presents very illustrative case about the depth of the specificity of the sectoral qualifications and the challenges arising in referencing these qualifications to the NQF and to the EQF. The title of engineer (“Ingenieur”) is awarded to a graduate from HTL (Higher Vocational College) after a minimum 3-year continuing training and experience on the job – but without a further thesis, examination or else. This professional title is awarded by the Federal Ministry of Economy, Family and Youth. The representatives of the higher schools of construction argue for the referencing of this qualification to level 6, stressing the weight of competences gained during the 3 year practical training. The University sector does not agree with this argument, stating that there is a lack of credible assessment of competences acquired in the practice. The similar case is with referencing of the higher vocational college leavers qualifications (HTL-Abschluss) and the engineer qualification in the electric industry sector. The representatives of the higher vocational colleges (HTL Elektrotechnik) suggest to classify the qualifications of the HTL graduates to the NQF- level 5 and the engineer qualification to level 6 like the BAC-degree. They refer to the fact, that these qualifications in the labour market are considered by employers as almost equivalents. The universities contradict this proposal stating, that the knowledge-base of electric technology studies has significantly expanded and the HTL are not able to provide such theoretical

background which is required for the engineers, therefore the HTL schools leavers should complete the bachelor or master studies at the university to receive engineer qualification. Now in the current NQF- discussion it is proposed to put HTL-graduates on NQF- level 5 and qualification of engineer provided by the higher vocational college "HTL- Ingenieur" on level 6. Misunderstanding to non-Austrians occurs, because there still exists the title of diploma engineer ("Diplom- Ingenieur"). This used to be the academic title to graduates of Technical Universities long time ago. Since few years the Austrian Technical Universities also adopted the bachelor (level 6)/ master (level 7)/ doctoral (level 8) degree system. So the old Dipl.Ing is more or less equivalent to masters degree and the old Dr.tech. corresponds to doctoral degree nowadays. To make the things even more complicated there are also qualifications like architect (Architekt), civil engineer (Zivilingenieur), engineer experts (Ingenieurkonsulent) which are awarded by the Federal Chamber of Architects and Engineers and are referred to NQF 8.

Summarising the discussed case there can be listed the following references between sectoral qualifications in construction sector and the proposed NQF levels in Austria:

Higher Education:

Leaver of higher vocational college (HTL- Abschluss) = proposed NQF level 5

Engineer graduated from the higher vocational college (HTL- Ingenieur) = proposed NQF level 6

University degree:

Engineer (Diplomingenieur TU, FH) = old, equivalent to master degree (level 7)

Independent work:

Civil Engineer = Member of Chamber of Architects and Engineers (level 8).

5. Discussions of the sectoral stakeholders in Austria show, that there is strong support for the designing of the NQF which will treat vocational qualifications on an equal basis with academic qualifications and higher education degrees. For example, experts from the construction sector strongly support the proposal to reference the qualification of the civil engineer to level 8 (the same level as PhD) due to the fact, that this qualification is achieved by university graduates only after the long practice and difficult examinations and in comparison to the PhD graduate, the civil engineer will have more highly developed skills and competence, while the PhD degree holder will have a more highly developed knowledge dimension. The stakeholders of the sector stress that the NQF should treat the learning outcomes acquired in the work experience and formal training on an equal basis. They stress that the criteria of professional activity in the sector are of equal weight and importance for the referencing of qualifications to the levels of the NQF as the criteria of formal education and training. Such approach is very favorable for the approaching of the criteria and logic of structuring of qualifications in the sectors and the criteria of leveling of qualifications in the NQFs. However it also creates several challenges: (1) how to integrate the different approaches of the sectors in structuring of qualifications and valuing the knowledge and practical experience in setting of the levels of NQF, and (2) how to ensure the comparability of referencing of qualifications to the r NQF's of the other countries which do not take such approach of equivalency between academic and vocational qualifications and reserve the top levels of the NQF for the academic qualifications and degrees.