Revised Final Report - Study evaluating the Professional Qualifications Directive against recent educational reforms in EU Member States

DG Internal Market and Services

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DG Internal Market and Services

A report submitted by GHK
in association with

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Executive summary

Overview of the study

This is the final report for the study to evaluate the impact of EU educational reforms (notably the Bologna Process and the European Qualifications Framework) on the recognition of professional qualifications under Directive 2005/36/EC. The main research elements of the study were as follows:

- Desk research and initial scoping interviews with 22 stakeholders, primarily at European level.
- Interviews with education ministries and key individuals involved with education reform at national level. This involved a telephone survey of 44 interviews across 21 Member States.
- An online survey of competent authorities for a sample of 17 professions in all Member States to provide a baseline picture of the impact of education reform on the recognition of qualifications. A total of 129 valid responses were received.
- Case studies to explore in more detail the situation for eight professions in 17 countries. A total of 190 interviews were undertaken with competent authorities, responsible ministries, professional bodies and training bodies related to the sample professions at national level. The professions featured in the case studies were:
  - 1. Doctors (under the Automatic recognition system); 2. Accountants; 3. Civil engineers; 4. Physiotherapists; 5. Real estate agents; 6. Pharmaceutical technicians; 7. Biomedical/medical lab. Technicians; 8. Social workers (all under the General System).
- Research on labour market trends to identify future priority professions for easier qualification recognition. This included analysis of over 200 key research sources at European and national level, including employment forecasts, sector analysis of labour demand and supply and research on labour market mobility. Desk research was complemented by interviews with 37 labour market experts in 21 Member States.

Professional recognition under the General system of Directive 2005/36/EC

Convergence under the Bologna process and the impact on professional recognition

The Bologna process has had a significant impact on higher education systems across Europe – but this impact has been uneven with regard to professional recognition. Its overall impact to date on the recognition of professional qualifications relates to improved comparability of qualifications. This was reported by a third of competent authorities. Yet there has been little substantive impact as a result on the time it takes to recognise qualifications. Four out five competent authorities reported that the time required for the recognition procedure has remained constant over the last 2 or 3 years.

Impact of the Bologna degree cycle structure on professional recognition

The Bologna cycles support transparency by exposing fundamental differences in the structure and level of training. However, only 20% of competent authorities think that the Bologna cycles have made the recognition process quicker or easier.

Impact of ECTS on professional recognition

The European Credit Transfer and Accumulation System (ECTS) has greater potential to support improved recognition of qualifications. From a competent authority perspective, the more detailed information contained in the Diploma Supplement and ECTS transcripts more practically supports the recognition procedure by providing a consistent and comparable overview of subject content. However, the use of ECTS in applications for recognition remains relatively uncommon.

The approach to introducing credit systems, with significant autonomy for higher education institutions, has led to difficulties in developing a uniform approach at national level. Significant differences remain across countries (and within countries) in the approach to credit allocation. These differences relate to whether the calculation is based on workload as opposed to just teaching / contact hours, and whether credit is linked to learning outcomes. Slight variation in credit values between countries is much less of a concern for competent authorities than consistency in the definition of credit itself (*i.e. what is included*). Around half of interviewees for the case studies were satisfied with the notion of ECTS being allocated according to the student workload (and not only according to teaching hours), but a core of competent authorities remain uncomfortable with this approach

Impact of learning outcomes on professional recognition

At present, competent authorities have relatively little experience in using learning outcomes as part of the recognition process. Learning outcomes are the least well-known element of the Bologna reforms among recognition professionals. Very few competent authorities (13%) among those interviewed for the case studies believed that the introduction of learning outcomes has made the recognition of professional qualifications easier or quicker. This is explained not only by the rareness of its inclusion in applications, but also by the tendency for learning outcomes to be presented in generalised terms (i.e. they can lack sufficient detail to support the recognition decision) and a perceived disjuncture with the current input-based Directive 2005/36/EC requirements. However, there is an expectation that this will change over time given the ongoing development and implementation of national qualifications frameworks and the learning outcomes approach in general.

Future impact of the Bologna reforms on professional recognition

The main barrier to the Bologna process supporting recognition relates to a lack of full and consistent implementation of the reforms. While the Bologna process aids student mobility, the reforms are complex and not yet fully embedded to the point of having a significant impact on professional recognition. There is also the prospect that the Bologna reforms lead to the development of new, more flexible approaches to higher-level learning (within the context of lifelong learning). This may pose additional challenges in the future to competent authorities which are used in most cases to applying recognition on the basis of traditional models of initial professional training as the culmination of an individual's formal education at a young age.

In terms of the role the Internal Market and its policies might play in supporting the Bologna process to impact on professional recognition, there were a number of references to supporting common platforms (or something similar) as a means of harnessing the common approaches to qualifications supported by the Bologna reforms. The introduction of learning outcomes perhaps provides a new basis for such joint action.

Professions which would benefit from easier recognition

There are six sectors in Europe that employed more than 15 million workers in 2009: manufacturing; wholesale and retail trade; human health and social work activities; construction; public administration and defence; and education. Manufacturing has declined significantly in employment terms in recent years; while the public administration and defence and the wholesale and retail sectors have declined in terms of the proportion of employment they represent, but not in absolute terms. Construction, education and health and social care have remained fairly constant in the proportion of European employment they represent, with growth slightly above the European average. Overall, on the basis of current trends, these six sectors will still employ the highest proportion of workers in 2020.

There is a significant concentration of regulated professions within three of these sectors: health and social care, education and construction (e.g. construction engineering). Crucially, this includes regulated professions with a significant number of applications for professional recognition. These sectors, especially in the context of healthcare professions, are where action to support easier or even automatic recognition links most closely to likely future demand. They could provide a focal point for support to establish any new approach to common platforms proposed by the European Commission.

European level research predicts that the number of jobs in Europe is expected to grow up until 2020, with the creation of up to 20.3 million jobs[1]. When looking at the skills needs of all predicted new jobs in 2020 (growth and replacement), around 39% of these jobs will require higher-level qualifications. The higher-level skills required will not be sector specific. It is also expected that the trend of "broadening skills" in the service sector will continue. This implies significant changes to the labour market that could impact on the mobility of professionals and on the recognition of professional qualifications.

The sectors where we would expect to see the highest levels of mobility are those experiencing labour shortages and/or growth. There is, though, a complex relationship in practice between demand for

[1] Estimated in the period from 2006 to 2020 and across the EU25, although forecasts have been affected by the subsequent economic downturn and more recent forecast scenarios estimate around 7 million new jobs from 2010 to 2020 across the EU27.

labour and labour mobility. For example, the health sector has seen a large influx of non-national workers in a number of countries. However, this has declined in recent years as Member States have been increasing the number of health professionals they train. Shortages are still reported in some countries and for some professions and future shortages are anticipated for key professions, such as doctors, when the current cohort retires. There is also increased demand expected for managers, doctors, health associate professionals (opticians, radiographers), nursing and midwifery professions and social workers. The key determinant of future demand for professionals in the education sector is replacement demand.

Other methods to achieve convergence

Convergence through EU educational reform

The reform of degree structures under the Bologna process supports improved transparency between different national higher education systems, but not similarity (or convergence) in curriculum. Convergence in training content (i.e. the learning outcomes aimed at or the topics taught) is only likely as, at best, an indirect consequence of the Bologna process – as a result of improved transparency and understanding of difference which may encourage action to align content.

There is little evidence so far that convergence in training contents is on the horizon in the Bologna process, and it has never been the aim of the process. The evidence so far of the impact of the Bologna process strongly suggests that where convergence happens, it is bottom-up process led by individual universities working to common frameworks for subjects/professions. However, the view on this activity from education ministry interviews was that approaches such as the Tuning Project, while important, have not generally had a wider impact in terms of convergence in training content.

Prospects for future convergence

The majority of competent authorities (64%) responding to the online survey agreed that automatic recognition could be achieved if there were common minimum requirements in terms of qualification content. The overall position varies considerably by profession. Healthcare-related professions more strongly believe that automatic recognition could be achieved through minimum content requirements.

There is also no consensus among competent authorities on how these minimum requirements should be set (e.g. taught subjects; broadly formulated knowledge, skills and competences; detailed definitions of knowledge, skills and competences). It was also felt to be a significant challenge for most professions to set agreed and workable minimum requirements and could require a fairly elaborate process.

Convergence based on training contents or agreed definitions of learning outcomes

Competent authorities were split on the question of whether convergence of training contents or agreed definitions of learning outcomes would better facilitate the recognition of professional qualifications. Some competent authorities did not feel in a position to be able to judge, but of those that could:

- 60% thought that agreed definitions of learning outcomes (supported by transparent quality assurance arrangements) better-facilitated recognition
- 40% thought that the convergence of training contents (supported by transparent quality assurance arrangements) better-facilitated recognition.

In practice, interviewees said that either approach could facilitate recognition. Preferences were therefore fairly marginal in nature and depended on the ethos of the competent authority.

The role of quality assurance in supporting the potential use of agreed learning outcomes

For many stakeholders, the development of common or minimum approaches to quality assurance and accreditation underpin the potential use of learning outcomes in a professional recognition context. Yet only half of competent authorities thought that the fact that institution awarding the qualification is quality assured at national level is a ‘very important’ dimension in deciding on the recognition of foreign qualifications (where the profession is not regulated in the country where the qualification was awarded).

The more practical consideration for competent authorities using outcomes-based approaches was quality assurance at the level of the qualification – and specifically in the context of assessment methodologies. Through the case studies, lack of understanding of and confidence in the assessment of achieved learning outcomes was the most commonly voiced reason why an outcomes-based approach is not currently practicable. What is required is that approaches to quality assurance are aligned between countries, and also that their benefits for and impact on qualifications are better-communicated.

Sectoral approaches to achieving convergence

There are a number of examples of sectoral approaches at EU level to support professional mobility. The significant point about much of this work is that it harnesses the Bologna reforms and EQF developments to provide the basis for a common sectoral approach. This includes setting either a common framework for knowledge, skills and competence or common minimum standards for training. Sector approaches also use labels/accreditation for individuals or programmes as a direct way of supporting professional recognition. They may be led primarily by professional bodies or education institutions.

There is a significant challenge in moving these approaches from the development to the implementation phase. National-level stakeholders interviewed through the case studies put far greater store on 'organic' approaches to achieving convergence (educational exchange etc) rather than top down common European/international frameworks or standards (civil engineering and, to a lesser extent, biomedical/medical technician stakeholders were a possible exception here).

Professional recognition for doctors already benefitting from automatic recognition

The three-cycle structure and doctors

In order for the three cycle structure to provide advantages to doctors seeking professional recognition, it is important that it is widely-established at Member State level. Yet Medicine is arguably the subject area in which the Bologna cycles have the least traction in practice. Medicine is excluded from the Bologna degree cycle structure in 16 out of 27 countries, including many of the largest Member States.

In those countries that have not incorporated the Bologna cycles within medical education, education ministries, competent authorities and medical professional bodies generally expect this position to remain in the medium-term. Much of the rationale for not introducing degree cycles relates to the length of study and the integrated cycle providing the only meaningful labour market entry point. .

Calculating the duration of training for doctors

There is a relatively high degree of awareness of ECTS among doctors' stakeholders. The extent of familiarity with the system is more mixed, although nearly two-thirds of stakeholders (63%) described themselves as being at least 'quite familiar' with it. Many interviewees were much less comfortable in drilling down into specific elements of credit systems (e.g. credit allocation).

Around half of doctors' stakeholders interviewed during the case studies saw potential added value in automatic recognition based on ECTS credits rather than using teaching hours. Many of these interviewees supported the approach in principle, because they felt that the current focus on teaching hours is a limited measure – in that it says nothing about the competence of doctors. The interpretation of ECTS in this context was therefore based on having ECTS linked to learning outcomes, which is not yet always the case.

A number of respondents were sceptical about how easy it would be to build consensus on the definition of minimum standards (or training requirements) in the context of ECTS.

Although there is not widespread support for using ECTS as an *alternative* measure to duration (years / hours) in the context of automatic recognition, there is support for its inclusion as an *additional* element. Two-thirds of doctors' authorities responding to the online survey agree or strongly agree that ECTS would strengthen the existing system. There is therefore a case for considering the use of ECTS to structure the content of minimum training requirements for doctors in the future

Methods to better-guarantee automatic recognition for doctors

Competent authorities for doctors are relatively evenly split between preferring to maintain the current system and including new/additional criteria. Those preferring the current system are often adopting a pragmatic response. There are different improvements that many doctors' stakeholders could suggest, but a prevailing view among this group was that the system is functional and, more importantly, that to attempt to introduce new or additional criteria could put the basis for automatic recognition at risk. While there was a split over the perceived need to introduce new or additional criteria, it was generally felt that explicitly mentioning a minimum list of competences (based on learning outcomes) would strengthen the existing system.

A slight majority of case study interviewees relating to the doctors' profession (58%) thought that the current system of recognition based on harmonised minimum training content provided greater confidence than a system based on learning outcomes without taking duration into account.

In contrast, 30% of respondents thought that learning outcomes inspire more confidence – given that this approach is without taking duration into account. It is important to note, though, that no interviewees suggested that the recognition of doctors' qualifications should ideally take place without reference to duration. Many thought that setting harmonised content/duration against learning outcomes with no reference to duration was *'a false opposition'*.

In practice, interviewees took a more nuanced view; and many of those suggesting that a learning outcomes-based approach provided more confidence believed that the achievement of learning outcomes had to inevitably make reference to the volume of learning (e.g. through ECTS).

Interviewees who were more confident in the current system of harmonised minimum content and duration predominantly echoed the widely-held view that a measure of duration is crucial to the recognition process. Other factors were influential as well:

- There is not yet sufficient experience of the use of learning outcomes to provide a definitive view on how workable the approach is.
- Underlying scepticism that medical training across Europe was sufficiently reformed in terms of being based on learning outcomes to make this a realistic basis for minimum training requirements.
- The suggested difficulty in developing common outcomes measures for doctors that are sufficiently detailed to be useful and yet commonly agreed across Member States.
- Fears that it would dilute the theoretical underpinning of medical degrees.

Competent authorities and professional bodies for the medical profession were not particularly confident in putting forward opinions regarding whether learning outcomes, if incorporated within the recognition process, should be detailed or broadly defined. Where they could put forward a position, there was a strong preference for detailed learning outcomes.

One of the issues that medical stakeholders returned to time and again in the case study interviews was the perceived impracticality of agreeing a framework of competences and learning outcomes that could form the basis of a system of automatic recognition for doctors.

Levels of qualifications for the application of the general system

Use of the five-level system under Article 11 of the Directive

While levels are used variably, the system of levels is deemed to be an important part of the recognition process. Three quarters of competent authorities felt that it is useful to maintain a system of levels within the Directive. For some, it is *'an important reference point'* for comparing qualifications. This may be as simple as providing a kind of *'terms of engagement'* with the home country competent authority to request information.

A significant minority of competent authorities (38%) do not use the five levels contained within Article 11 to exclude qualifications from the recognition process. Some competent authorities simply prefer to examine each application in detail. In this regard, it must be noted that it is relatively rare according to competent authorities for applicants to attest more than one level out under Article 11. While over a third of respondents to the online survey (39%) reported that they had experienced this situation, the case study interviews suggest that it is an infrequent occurrence.

Furthermore, most competent authorities do not experience problems resulting from the profession being regulated at different Article 11 levels in different countries. This was identified as frequent difficulty by just over 1 in 5 competent authorities. It is clear that qualification level is more likely to lead to difficulties for those professions regulated at level d. under Article 11, where the level beneath can involve a large difference in duration of study.

In spite of this, it is clear that the assessment of levels under Article 11 serves an important purpose. It means that applicants are, in practice, generally not refused recognition on the basis of level (according to Article 11). In this sense, the requirement to recognise a qualification at the level below that required in the host country is crucial for ensuring that the basis for decisions is substantial differences in content rather than type of qualification (e.g. refusing to recognise an applicant on the basis that he or she has a bachelor degree where a master is required). This provides for a consistency of assessment, irrespective of the educational structure of the applicant's home country.

Article 11 also provides a starting point for competent authorities to gauge whether or not they would expect to see differences in content as a consequence of differences in duration. The level of the qualification does not provide the evidence that such differences exist, but it helps competent authorities to understand and interpret potential differences in content. As noted above, it also means that qualification level in itself does not become the basis for making the recognition decision (except in extreme cases where the applicant's qualification is at a much lower level than that required in the host country).

The use of the eight-level EQF

For the eight-level EQF system to be viable in the context of Directive 2005/36/EC, it assumes that NQFs linked to the EQF have been established in all Member States. This is an ongoing process in the majority of Member States. This suggests that it is too early to predict with any confidence what the impact of the eight-level system might be in practice on the recognition of professional qualifications. It is important to note that much of the current focus at national level is on ensuring frameworks are fully developed and the relationship of NQFs with the EQF is transparently presented at European level.

Given the state of progress in implementing the EQF, very few competent authorities (11%) interviewed for the case studies had dealt with applications for the recognition of professional qualifications where the EQF (or indeed an NQF level) was clearly stated. From the limited experience to date, competent authorities found that the EQF level in applications was generally the same in the 'foreign' qualification as required in the host country.

When asked directly about whether a system of levels defined in terms of inputs (as in Article 11, based on the level and duration of studies and level and type of institution where the studies take place) or a system based on levels defined in terms of knowledge, skills and competence (as with the EQF) would better facilitate recognition, there was a slight preference among competent authorities for the EQF, although competent authorities overall were quite split on this question.

The majority of respondents (68%) also said that they would not agree to recognise a foreign qualification for the same profession automatically (without any compensatory measures) if the EQF level of the qualification is the same as the EQF level of the national qualification. Many of those who said that they would recognise on the basis of EQF level, explicitly qualified this to say that it assumes a degree of convergence in subject area/curriculum.

Reasons given for not recognising automatically included:

- Insufficient information is provided by EQF qualification level.
- EQF level is not a sufficiently-detailed measure of competence applied in a professional context.
- EQF level could be used for automatic recognition (without compensatory measures) but other conditions must also be in place.
- EQF level cannot address or by-pass significant national requirements.

At the same time, as described above, competent authorities do not use Article 11 levels to recognise or reject applicants either.

There is an apparent fundamental disagreement about whether the use of outcomes-based levels makes the comparison of equivalence of qualifications easier (more relevant) or more difficult. The

problem is that, in practical terms, there is simply not sufficient evidence to state which perspective is the more accurate view. In the short- to-medium term it is likely that both opinions could be arguable depending on the specific professional context and the varying importance of 'level' as a defining consideration for recognition purposes. Ultimately, there was much more consensus on the view that input and outcome measures should be combined within the recognition process. This is a logical response given that the information is complementary. However, it is questionable whether this actually facilitates the free movement of professionals or creates additional barriers for applicants.

A system without levels

There could be an argument for removing the system of levels from Directive 2005/36/EC if there is sufficient consistency in the level at which professions are regulated for it not to be a significant issue for the recognition process. When asked whether a five, eight or no level system would better facilitate recognition, very few respondents to the online survey (7%) thought that a system without any defined levels would be preferable. The lack of appetite for having a system without any defined levels is unsurprising given that competent authorities generally appear to express preferences for more rather than less information.

When exploring with interviewees what was valuable in the information provided about level, it became apparent that its purpose – for a significant body of competent authorities – was to provide basic confidence that they were *'comparing like with like'*. Level is a proxy for academic challenge, even though duration and content is more important. While a measure of qualification level is not the only way to look at equivalence, it is the way that most competent authorities are familiar with. Some interviewees argued that well-designed learning outcomes can do the same thing – and can indirectly define level in a more useful way. However, overall familiarity with learning outcomes is not high enough among competent authorities for this approach – more sophisticated though it may be – to provide that same basic confidence. It could also be argued that if the system of levels was removed from the Directive, competent authorities may attempt to base decisions not to recognise on the basis of level and type of qualification in a way that they do not (explicitly) under the current system.

It is clear from the study that competent authorities consider the information about qualification level as an important element, even though they do not base their decisions about qualification level. It is therefore unlikely that even if the structure of levels (Article 11), as such, was removed from the Directive, that competent authorities would stop using information about level to compare qualifications. The Bologna framework cycles have become part of 'common language' about qualifications and this information would continue being used. As the EQF develops it is also likely to become such common reference

Dealing with older qualifications under the EQF

As it currently stands, there is a lack of concrete evidence that older qualifications will be mapped to NQFs linked to the EQF. The current focus of national authorities is on qualification reform and development work. There is discussion in the countries developing NQFs about the position of old qualifications. In practice, it appears possible to use a 'best fit' model to apply level to older qualifications. It is recognised that doing so may mean that eligibility and progression provisions do not necessarily apply to the older qualification. However, the presumption that provisions should be extended to holders of former qualifications is the important element – and this is already seen in the specifications for some NQFs.

1 Introduction and Study Methodology

1.1 Introduction to the study and report

1.1.1 The study

This is the final report for the study evaluating the Professional Qualifications Directive (2005/36/EC) against recent EU educational reforms. The over-riding aim of the study[2] was to:

- *'assess to what extent European policies and related national developments in the area of education and training may have an impact upon the functioning of the Directive on the recognition of professional qualifications'*, and
- *'examine whether certain aspects of these policies should be integrated into the "acquis" on professional qualifications'*.

Within the scope of the study were a number of important EU educational reforms:

- The Bologna process, as well as work undertaken as part of the 'Tuning' project; and,
- The development of the European Qualifications Framework (EQF), including National Qualification Frameworks (NQFs) and the Framework for Qualifications in the European Higher Education (FQ-EHEA).

These reforms have largely evolved in parallel (or subsequent) to the development and introduction of Directive 2005/36/EC and are not integrated or acknowledged in the provisions of the Directive. As part of the wider evaluation of the Directive, it was therefore felt to be important to consider the specific impact of these education reforms on the functioning of the Directive, particularly given that some elements, notably the Bologna process, are mature policies with over a decade of development behind them.

The study was structured in terms of eight key questions (set out in Box 1 below) addressing themes such as:

- The implications of convergence in higher education systems on the recognition of professional qualifications between countries.
- The prospects for convergence in training contents as consequence of educational reform, to support quicker – or even automatic – recognition of qualifications for professions.
- Whether approaches to the structure and design of qualifications that are contained with the reforms (such as: credit systems; common degree cycles; learning outcomes) might facilitate the recognition of qualifications and therefore justify explicit incorporation within Directive 2005/36/EC.
- The role and value of reference to qualification levels as part of the recognition process and whether, specifically, the system of eight qualification levels introduced by the EQF might facilitate recognition compared to the current five-level system in Directive 2005/36/EC.
- Priority professions for supporting quicker or easier recognition on the basis of anticipated future importance as economic sectors and as sectors with a high demand for labour mobility between EU countries.

1.1.2 The report

Section 1.2 below sets out the study context. It introduces the main educational reforms in scope of the study and places the reforms in the context of Directive 2005/36/EC. Section 1.3 provides an overview of the study methodology. Much of the research focused on a sample of regulated professions, including the situation for eight professions explored in detail through case studies. Chapter 2 sets out the context for recognition for each of the

[2] DG Market and Internal Services ITT 'Study aiming at facilitating the evaluation of Directive 2005/36/EC in the light of recent educational reforms in Member States' (22 June 2010)

case study professions. Chapters 3 to 9 of the report consider in turn each of key study questions, as set out in Box 1. Chapter 10 sets out the main conclusions and recommendations from the study.

Box 1. Key study questions

A. Bologna process

Questions related to professional qualifications which do not benefit from automatic recognition under the Professional Qualifications Directive:

a) To which extent has the convergence of higher education systems under the Bologna process (in particular the three cycle structure, ECTS and the introduction of learning outcomes) led to quicker and easier or even automatic recognition of professional qualifications for different professions the training requirement of which are currently not subject to a minimum harmonisation under the Professional Qualifications Directive of 2005? If the answer is negative, explain the reasons. Are additional mechanisms and procedures needed under the Bologna process to make quicker and easier or even automatic recognition happen in the future? Which role could the Internal Market and its policies play? If the answer is positive, explain why. *(This question is considered in Chapter 3 of this report).*

b) For which economic sectors and related regulated professions in the Internal Market would quicker and easier or even automatic recognition of professional qualifications be most beneficial by 2020 and respectively by 2030? *(Chapter 4)*

c) In the past, the European Union achieved automatic recognition of qualifications either on the basis of minimum harmonisation of the training conditions or on the basis of professional experiences. Apart from harmonisation of training at EU level, which are the other methods to achieve more convergence on the training contents which would be the most relevant and the most effective in the next years? In particular, explain which of these two methods would best facilitate the recognition of professional qualifications and why: a convergence of training contents supported by transparent quality arrangements; an agreed definition of learning outcomes supported by transparent quality arrangements? What would happen in terms of recognition of professional qualifications if in one Member State training content is defined in terms of learning outcome and in another Member State training content is defined in terms of content and duration? *(Chapter 5)*

Questions related to doctors the training of which is regulated under the Professional Qualifications Directive (on the basis of the example of a doctor)

d) To which extent the three cycle structure offers an advantage, in terms of free movement of doctors benefiting already from automatic recognition, compared to the integrated cycle? *(Chapter 6)*

e) To which extent would there be an advantage, in terms of free movement of doctors already benefiting from automatic recognition, to calculate in a harmonised training system, the duration of training in ECTS credits rather than in teaching hours? Should there be a calculation still in teaching hours? *(Chapter 7)*

f) Which of these two methods would better guarantee automatic recognition of qualifications: - Recognition based on the harmonisation of content and duration (as in the current Professional Qualification Directive system); Recognition based on learning outcomes, without taking duration into account. *(Chapter 8)*

B. Levels of qualifications for the application of the general system

g) Which of these three systems would facilitate better recognition of qualifications for competent authorities and respectively for citizens: A system based on five levels defined by duration and level of studies in article 11 of the Directive? A system of eight levels based on learning outcome? A system without any level defined? *(Chapter 9)*

h) If the reply to the previous question is that a system of 8 levels based on learning outcome is the most appropriate to facilitate recognition of qualifications, explain how to deal with qualifications awarded before 2012 and which are not related to a national qualification system/framework referenced to the EQF. *(Chapter 9)*

1.2 Study context

1.2.1 Overview of EU educational reforms

The educational reforms in scope of the study are characterised by a move away from qualifications defined by education and training inputs (length of programmes, type of awarding institution, etc.) towards qualifications defined by learning outcomes (i.e. statements of what the person is expected to know and be able to do).

Importantly, these EU education reforms are linked by the common use of concepts such as learning outcomes and credit-based definitions of qualifications. The concept of 'learning outcomes' is not new to education and training. However, its prominence has increased over the past few years in national and European policies. This has emphasised a shift to regulating education and training *standards* rather than learning *processes*.

1.2.1.1 The Bologna Process

The Bologna Declaration was signed by Higher Education Ministers of EU Member States (plus other signatory countries) in June 1999. It instigated a process towards the set up a European Higher Education Area (EHEA) by 2010, including the following objectives:

- Adoption of a system of easily readable and comparable degrees.
- Adoption of a system essentially based on two main cycles.
- Establishment of a system of credits - such as in the ECTS system – as a proper means of promoting the most widespread student mobility.
- Promotion of mobility by overcoming obstacles to the effective exercise of free movement (for students, access to study and training opportunities and to related services; for teachers, researchers and administrative staff, recognition and valorisation of periods spent in a European context researching, teaching and training, without prejudicing their statutory rights).
- Promotion of European co-operation in quality assurance with a view to developing comparable criteria and methodologies.
- Promotion of the necessary European dimensions in higher education, particularly with regards to curricular development, inter-institutional co-operation, mobility schemes and integrated programmes of study, training and research.[3]

Subsequent meetings of Higher Education Ministers agreed further elements of the process, such as inclusion of the doctoral level as the third cycle in the process (2003) and adopting the Framework of Qualifications for the European Higher Education Area (2005).

The Bologna process introduced a structure and tools in support of the agreed objectives. In the context of this study, the main Bologna elements being considered in the context of Directive 2005/36/EC are:

- **The three cycle structure:** A fundamental commitment within the Bologna process has been the introduction of a three cycle degree structure in Higher Education (bachelor-master-doctorate). The Bergen Conference of European Ministers Responsible for Higher Education in May 2005 adopted the overarching framework for qualifications in the EHEA, comprising the three cycles, generic descriptors for each cycle based on learning outcomes and competences, and credit ranges in the first and second cycles.
- **The European Credit Transfer and Accumulation System (ECTS):** ECTS is a credit system incorporated under the Bologna process that defines qualification components at a given level in terms of overall student workload, e.g. lectures, seminars, projects, practical work, self-study etc (rather than just contact hours). Credit allocation to educational components (sometimes defined as modules) is based on their weight in terms of the workload needed by students to achieving the learning aims for that component. The system in its current form requires that all components of qualifications are described using credit points. Credit points are based on the definition of learning

[3] The Bologna Declaration of 19 June 1999, Joint declaration of the European Ministers of Education

outcomes, which define the notional learning time needed to achieve those learning outcomes.

- **The Tuning Project:** The 'Tuning Project' (Tuning) is a bottom-up initiative which involves almost 150 higher education institutions, initially in nine subject area groups: chemistry, physics, mathematics, history, earth sciences, business, education sciences, nursing, and European studies. Tuning serves as a platform for developing reference points (expressed as learning outcomes and competencies) at subject area level to support the comparability, compatibility and transparency of learning programmes in these areas. Under Tuning, basic learning outcomes that are expected to be common to all qualifications in these subject area groups have been developed. This has provided basic standards and defined subject specific descriptors for higher education qualifications in these fields of study.

1.2.1.2 The European Qualifications Framework

The European Qualifications Framework (EQF) Recommendation[4] invited countries to relate their qualifications systems to the EQF initially by 2010. The EQF is designed to increase transparency and comparability of qualifications across borders. It is expected to provide a reference point and translation device for the EU's diverse education and training systems.

At its core, the EQF consists of a set of eight reference levels spanning all education and training acquired at the end of compulsory education (including non-formal and informal learning). The EQF reference levels are based on learning outcomes and provide a means of referencing, in a transparent manner, national qualification levels to the levels set out in the EQF.

Almost all EU and EEA countries are now signalling that they will introduce comprehensive, overarching national qualification frameworks (NQFs) covering all parts of their education, training and qualifications systems. As part of this, NQFs have become key instruments for meeting European objectives of promoting transparency and mutual trust; and nationally, for regulating and increasing the transparency of qualifications and their relationships to each other.

1.2.2 Directive 2005/36/EC in the context of EU educational reform

An important distinction between the Professional Qualifications Directive and the EU education reforms covered by this study relates to function. Directive 2005/36/EC sets out *legally binding* provisions for the mutual recognition of qualifications gained within the EEA with the aim of abolishing obstacles to free movement of services and labour, and a drive to a uniform, transparent and flexible regime for the recognition of qualifications.

The instruments developed as part of the EU education reforms differ from that of the Professional Qualifications Directive in that they are not tools granting rights to migrants to practise in a regulated occupation in another Member State. EU education policy – and the instruments and tools underpinning them (such as the Bologna framework and the EQF) – are the result of Member State intergovernmental process based upon *voluntary* consent and cooperation.

The Directive only applies to regulated professions[5] in host Member States. Regulated professions are those which require the applicant to have a specifically defined qualification and/or training in order to deliver a trade license or enable the person to practice. The Directive makes three provisions:

- **Sectoral professions** – doctor, nurse responsible for general care, midwife, pharmacist, veterinary surgeon, dental practitioner, and architect. These professions are regulated in all Member States and the minimum training conditions for these have been harmonised

[4] http://ec.europa.eu/education/lifelong-learning-policy/doc44_en.htm

[5] A non-exhaustive list of professions covered by Directive 2005/36/EC can be found at: http://ec.europa.eu/internal_market/qualifications/regprof/index.cfm?newlang=en

at European level. In principle, these qualifications benefit from automatic recognition in host Member States.

- **Professions in trade, industry or business** – recognition of qualifications for these professions (listed in Annex IV of the Directive) is based on professional experience. Recognition is automatic provided conditions stipulated by the Directive with regard to professional experience are fulfilled.
- **Professions covered by the general system** – this covers all other professions that are not eligible to benefit from one of the two systems above for automatic recognition of qualifications. The Directive divides professional qualifications into five levels (a, b, c, d, and e) depending on the duration and level of training to which they correspond (level 'a' being the lowest).

The key difference between the Directive and the ongoing education and training reforms results from the fact that the two rely on very different regulating principles. One is concerned with *process* while the other with *outcomes*:

- **Under the Directive a qualification is the result of a successful participation in an education and training process.** The assumption is that if the process is "good" (meaning the curriculum contains what it should) then the outcome should follow (i.e. that the person holding the qualification knows what s/he should know).
- **Under the ongoing education and training reforms, qualification achievement is measured by a set of descriptors about what a qualified person should know and be able to do.** The assumption is that people can get the same knowledge, skills and competence through different means (processes); what matters is the result (the learning outcomes) and not how this has been achieved. Processes remain important (i.e. teaching quality), but it is the descriptors that assure the quality of the learning and which should be the focus of regulation.

1.3 Study methodology

The research was undertaken from December 2010 to August 2011. The study method was divided into the following three phases of activity and key study tasks:

- Phase 1: Inception and Scoping (December 2010-February 2011):
  - Desk Research
  - Initial Interviews
  - Development of Data Collection Tools
- Phase 2: Data Collection (February 2011-August 2011):
  - Telephone survey of Ministries of Education
  - Online survey of Competent Authorities for the Recognition of Professional Qualifications
  - Professional Qualification Case Studies
  - Defining trends in the recognition of qualifications
- Phase 3: Synthesis, Analysis & Reporting (July 2011-September 2011)
  - Synthesis and Analysis
  - Reporting.

An interim report summarising Phase 1 activity and the Phase 2 survey of education ministries was produced at the end of March 2011. A headline analysis of the online survey of competent authorities was produced at the start of May 2011.

Below we outline the main study tasks in more detail. The tools used for the main research activities are presented in Annex 2 to this report.

1.3.1 Phase 1: Inception and scoping

1.3.1.1 Desk research

Desk research was undertaken during December 2010 and January 2011 to inform the development of data collection tools. A list of sources reviewed throughout the study is included in Annex 1.

1.3.1.2 Initial interviews

Initial interviews were undertaken during January and February 2011 with a sample of stakeholders providing distinct perspectives on Directive 2005/36/EC and the main EU education reforms. The primary aim here was to test initial assumptions about the nature of the relationship between the education reforms and the Directive. In total, 22 stakeholders from 18 organisations were interviewed (see Annex 3).

1.3.2 Phase 2: Data collection

1.3.2.1 Telephone survey of education ministries

The consultations with education ministries in all Member States started in early February 2011. The focus of this task was on understanding progress with and the impact of the education reforms in scope of the study. The basic approach was to contact the ministry official responsible for the Bologna process and for the EQF in each country. Members of the Bologna Follow-Up Group (BFUG) and the EQF Advisory Group were initially identified for this purpose.

In total, 44 interviews were undertaken (1-4 interviews per country) in 21 Member States. The breakdown of interviews per country is set out in Annex 4.

1.3.2.2 Online survey of competent authorities

The online survey of competent authorities covered a sample of 17 professions in all Member States (in which those professions are regulated):

- **For questions linked to automatic recognition:** Doctors; Architects
- **For questions linked to general system of recognition:** Accountants; Civil engineers; Physiotherapists; Real estate agents; Pharmaceutical technicians; Biomedical/medical laboratory technicians; Social workers; Primary school teachers; Secondary school teachers; Second level nurses; Radiographers; Psychologists; Opticians; Surveyors; Tourist guides

The aim of the survey was to generate an overview of experience of educational reform elements in the context of the recognition process. The survey was 'live' from mid-March to mid-April 2011. A total of 132 completed survey responses were received, 129 of which were valid responses. The 129 valid responses related to 178 national-level professions regulated according to the professional qualifications database, out of a total of 313 national-level professions in scope (a response rate of 57%). Annex 5 provides an overview of the sample of competent authorities and a breakdown of responses by country and profession.

1.3.2.3 Case studies

The aim of this task was to explore in more detail the situation regarding recognition and the educational reforms for eight professions in a sample of 17 Member States. The case study professions were:

- 1. Doctors (under the Automatic recognition system); 2. Accountants; 3. Civil engineers; 4. Physiotherapists; 5. Real estate agents; 6. Pharmaceutical technicians; 7. Biomedical/medical lab. Technicians; 8. Social workers (all under the General System).

The countries featured in the case studies were:

- 1. Austria; 2. Belgium; 3. Cyprus; 4. Czech Republic; 5. Denmark; 6. Germany; 7. France; 8. Hungary; 9. Ireland; 10. Italy; 11. Luxembourg; 12. Netherlands; 13. Portugal; 14. Poland; 15. Spain; 16. Sweden; 17. United Kingdom.

We looked at those of the eight selected professions that are regulated in each country. The case studies were based around at least two interviews per profession[6] in each Member State with:

- The competent authority for recognition;
- The national ministry with responsibility for the profession (assuming that the relevant ministry does not also act as competent authority for recognition) or the main professional / training body for the profession.

The case studies also included interviews with relevant EU Level bodies/associations for each profession, plus interviews related to the Tuning projects where relevant (engineers, doctors and social workers).

We agreed to exclude from the case studies interviews, professions that are regulated in host Member States but where there has been little or no mobility in practice. This has a bearing on the size and focus of individual case studies. We agreed that the *de minimis* rule applied to the case studies should be fairly conservative in nature, only excluding regulated professions where there have been fewer than 10 decisions on applications by a host country since 1997.

The case studies were comprised of 190 interviews in total, undertaken as a mixture of face-to-face and telephone interviews during April-August 2011. Additional scoping discussions were also undertaken with the national co-ordinators for the Directive to help define the sample of appropriate organisations to interview within each country. Table 1.1 below sets out the spread of interviews by country.

Table 1.1 Breakdown of case study interviews by country

Country	Number of regulated professions	Number of regulated Professions (de minimus)	Number of interviews
Austria	7	4	**11**
Belgium	6	6	**11**
Cyprus	5	3	**8**
Czech	7	6	**8**
Denmark	7	5	**12**
France	6	4	**9**
Germany	6	5	**9**
Hungary	4	2	**12**
Ireland	5	4	**9**
Italy	5	4	**12**
Luxembourg	5	4	**6**
Netherlands	4	3	**9**
Poland	7	3	**6**
Portugal	7	5	**7**
Spain	6	6	**12**
Sweden	5	4	**13**
UK	6	6	**21**
EU/International	NA	NA	**15**
Total			**190**

[6] Note that some competent authority interviewees covered multiple case study professions.

Table 1.2 below sets out the spread of interviews by profession. This does not equate to the total number of interviews undertaken, as some competent authority interviews covered multiple professions.

Table 1.2 Breakdown of case study interviews by profession

Profession	Number of interviews (competent authorities)	Number of interviews (other stakeholders)	Total number of interviews per profession
Accountants	14	8	22
Biomedical / medical laboratory technicians	13	16	29
Civil engineers	9	13	22
Doctors	16	21	37
Pharmaceutical technicians	13	16	29
Physiotherapists	14	23	37
Real estate agents	9	5	14
Social workers	12	11	23
General / other	3	3	6
Total			219

1.3.2.4 Trends in professional recognition

This task focused on addressing the study question of: *for which economic sectors and related regulated professions in the Internal Market would quicker and easier or even automatic recognition of professional qualifications be most beneficial by 2020 and respectively by 2030.* It involved both a literature and data review element and interviews with labour market experts. The research here was in three main stages:

1. Review of main EU level sources (February – March 2011) to assess the current European labour market and existing forecasts of employment growth and labour supply. In total, 74 EU level documents were reviewed in this part of the study.

2. Review of evidence at national level and relating to key sectors (May – August 2011). The EU level data was complemented by more detailed analysis of existing sector evidence compiled at Member State level. In total, 145 documents were reviewed in this task, which included information from 23 of the 27 EU Member States. More information about the approach to evidence gathering is included A10.1 of Annex 10. A full list of the documents reviewed is provided in A1.2 in Annex 1.

3. Telephone survey of professional bodies and labour market experts (June – August 2011). The desk research was supplemented by a telephone survey of professional bodies and labour market experts (national/sectoral labour observatories; industry associations; major employer associations) to reflect on and explore either the national or international position in order to: *understand the drivers for demand; contextualise (and fill in gaps in) what the evidence suggests in relation to the interplay between demand and supply; and explore the likely role of mobility in the future labour market*.

In the context of mobility, these interviews also enabled us to reflect on labour flows and access to the profession given that, certainly up to 2020, additional demand is likely to be met to a significant extent by people already within the labour market. Interviews were conducted with 37 national stakeholders in 21 Member States. The key requirement for the selection of professional bodies was that they had undertaken/supported/contributed to the identification of future professional needs, priorities, gaps or shortages. A full list of the organisations interviewed is included in Annex 7.

2 Recognition context for the eight case study professions

2.1 The case study professions in the context of Directive 2005/36/EC

2.1.1 The extent of regulation across EU Member States

There are over 800 regulated professions based on the grouping/categorisation of the different regulated professions within the Professional Qualifications Database. DG Internal Market and Services, in its public consultation on Directive 2005/36/EC, stated that of the 800 categories of profession, *'around 220 categories of profession are only regulated in a single Member State which means the added value of regulating a profession is not shared with any other Member State'*[7].

The case study professions in this study were sampled to only include professions that are regulated in a relatively large number of Member States in order that the impact of educational reforms could be more clearly seen. Some associated issues that impact on the potential interaction with education reform – such as the similarity in the scope of practice between countries – are therefore arguably magnified in our sample given the number of different countries regulating these professions.

Even within our sample of eight professions, there is a significant degree of variation in terms of the number of countries regulating each profession. Doctors, as a profession benefiting from automatic recognition, are regulated in all 27 Member States. Physiotherapists (25 Member States) are also almost universally regulated across the EU. The professions of accountants/auditors (19 Member States), biomedical/medical laboratory technicians (19 MS), pharmaceutical technicians/assistants (17 MS) and social workers (18 MS) are also very widely regulated. The professions of civil engineer (11 MS) and real estate agent (10 MS)[8] are also relatively-widely regulated in the context EU professional regulation – but less-extensively than the other selected professions.

2.1.2 Qualification level at which professions are regulated

The qualification level at which a profession is regulated may also vary by country (according to Article 11 of the Directive). In essence, the level of achievement required for accessing the profession may be different across Member States. Excluding professions regulated in only a small number of countries, there is often a degree of variation in the level at which a profession is regulated in different countries. Most typically, there is a clear majority view among regulating countries about the required qualification level, but exceptions are common.

Table 2.1 below summarises the level at which qualifications are regulated for the case study professions. Issues relating to disparity of qualification level are different for accountants and physiotherapists on one hand, which are generally regulated at the same qualification level in most countries, and real estate agents and pharmaceutical technicians on the other hand, where there is more of a mix in the level at which the professions are regulated (even in the context of the broad Article 11 levels). The case of biomedical/medical laboratory technicians highlights a further dimension to the complexity here. This profession relates to multiple professions at national level and is given a variety of names (e.g. medical scientist; medical laboratory technologist). In Italy and Luxembourg for example, the profession 'medical / biomedical laboratory technician' relates to professions which are regulated at different qualification levels under Article 11 of the Directive within the same country.

2.1.3 The volume of applications for recognition

The case study professions are atypical of regulated professions in general in that they all have a relatively high number of applications for recognition in the context of Directive 2005/36/EC. To some extent this is a function of selecting widely-regulated professions. It is

[7] Consultation Paper by DG Internal Market and Services On The Professional Qualifications Directive, 2011

[8] In accordance with the Regulated Professions Database on 03/10/2011

notable that for many of these professions (*which are ranked between #3 and #79 in terms of mobility out of the 800 or so regulated professions defined on the professional qualifications database*), on an annual basis the majority of regulating countries will only receive a handful of applications for recognition. This is important when looking at competent authority perspectives on the recognition process and understanding the impact of educational reform. Their viewpoint is filtered through their experience (or lack of experience) of recognising qualifications in recent years. The overall approach taken to the recognition assessment (e.g. the level detail in assessment) is also arguably shaped by the volume of applications that a competent authority has to process.

Table 2.1 Qualification level at which the case study professions are regulated

	Accountant / Auditor	Civil Engineer	Physiotherapist	Real Estate Agent	Pharmaceutical Technician / Assist.	Biomed/Medical Lab. Technician	Social Workers	Doctors	Total
Austria									7
Belgium									6
Cyprus									5
Czech Republic									7
Denmark									7
France									6
Germany									6
Hungary									4
Ireland									5
Italy									5
Luxembourg									5
Netherlands									4
Portugal									7
Poland									7
Spain									6
Sweden									5
UK									6
Total in sample	*15*	*8*	*17*	*8*	*10*	*13*	*10*	*17*	
Total MS regulated in	*19*	*11*	*25*	*10*	*17*	*19*	*18*	*27*	

Key:

- ATT - Attestation of competence , Art. 11 a
- SEC - Certificate attesting the completion of a secondary course , Art. 11 b
- DSE - Diploma (post-secondary education), including Annex II (ex 92/51, Annex C,D) , Art. 11 c
- PS3 - Diploma of post-secondary level (3-4 years) , Art. 11 d
- PS4 - Diploma of post-secondary level (exactly 4 years) , Art. 11 e
- PSM - Diploma from post-secondary level (more than 4 years) , Art. 11 e
- Undefined
- Not a regulated profession in the country (or data not available in DG Market database)

2.2 Context for the case study professions

The section below sets out the professional context for recognition for the eight case study professions. It provides an overview of the extent and nature of regulation across Member States and the volume of applications under the Directive. It also introduces profession-specific factors that help to explain and understand how the impact of education reform, set out in the remainder of the report, varies by profession.

Note that Annex 8 presents the number of decisions on recognition for each of the general system professions from 2007-2009 across the 17 case study countries.

2.2.1 Doctors

Doctors are one of the most mobile professions in the context of the Directive – ranked #3 in numbers of decisions on applications under the directive between 1997 and 2009 (18,358) and #1 in 2009[9]. The most popular destinations for doctors are the UK, Germany and Belgium, but mobility is relatively evenly spread across countries (the top three host countries above represent 69% of all applications).

There were around 950,000 practicing physicians or doctors in Europe in 2008[10]. However, this is likely to be an underestimate, as no figures were reported in eleven countries (Denmark, Ireland, Greece, France, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia and Sweden). Of the countries which provided estimates, Germany, the UK and Spain have the highest number of practicing physicians and doctors, and these countries represent over 60% of the reported professionals.

In around half of Member States, the Ministry of Health (or equivalent) is the competent authority (professional organisations are often involved in this decision in a consultative capacity). Professional organisations are the competent authority in a number of Member States (Austria, Cyprus, Denmark, France and Portugal). In a couple of Member States, there are separate competent authorities for those applicants that do not qualify for automatic recognition and those that do. In France, for example, the National Council for Doctors is responsible for automatic recognition and the Ministry of Health is responsible for the recognition of qualifications falling under the general regime. Another variation is that in a small number of Member States (for example, the Netherlands) there are separate competent authorities for general and specialist physicians.

In comparison to other professions reviewed, the definition of the profession and the programmes of education are fairly similar across the EU. With regard to the latter, there are two models: the classic model requires students to undertake a number of years of theory and then a number of years of practical training, whereas the integrated model (which operates in the majority of cases) requires students to undertake both of these components throughout the period of training.

One of the specific issues in relation to doctors is whether the introduction of the three Bologna cycles offers benefits in comparison with an integrated degree cycle (*i.e. where there is no separate first cycle degree*). It is important to note that while the Bologna cycles have been relatively-widely introduced across subject disciplines, Medicine is an exception in a significant number of countries (see Table 6.1).

2.2.2 Accountants and auditors

Accountants and auditors are regulated in the majority of Member States (19 out of 27) and typically at Level d. within Article 11 of the Directive. It is ranked #69 in terms of the number of decisions on applications between 1997 and 2009 (and ranked #55 in 2009 specifically)[11]. The host Member States with the highest number of decisions are Cyprus, the UK and Germany (representing 79% of all decisions on applications).

[9] Professional qualifications database – accessed 22.3.11

[10] Eurostat, Public Health Database, Health care staff data, 2011

[11] Professional qualifications database – accessed 22.3.11

The 17 case study countries represent around 98% of all decisions on applications for recognition for this profession from 2007-2009. Yet only three of these countries (UK; Czech Republic; Germany) had 10+ decisions on applications over the three-year period, according the professional qualifications database (see Annex 8).

Accountants and auditors come under the same professional category in the context of the professional qualifications database. However, in many Member States they are considered to be separate from a recognition perspective. Interviewees from a number of Member States (e.g. Netherlands, Spain) noted that, as a result, the recognition of qualifications gained in other countries sits within the purview of the EU Statutory Audit Directive (2006/43/EC).

Another significant difference is that the role of auditor is regulated in the vast majority of Member States surveyed, some of which do not regulate accountants. According to the ICJCE (one of the professional bodies which represent chartered accountants in Spain): "A*udit is the unique accounting-related profession, which is regulated in Spain. To practise other activities such as tax-advisory, bookkeeping, consultancy or even accountancy, no qualifications are required*"[12]. In Italy, formal recognition is not necessary to carry out certain accountancy tasks. It is necessary if the applicant wants to call themselves a 'Graduate Accountant' (similar to chartered accountant in other Member States).

The competent authority for accountants/auditors varies between countries. If it is a government ministry, the professional organisation may be invited to be involved in the decision. For example, in Italy, the Ministry of Justice (the competent authority) asks the opinion of the National Council of the Order of Accountants and Auditors for its opinion (in this Member State, a verification commission is set up which designs any compensatory measures required).

One of the main issues for recognition of accountants' qualifications is that while superficially the accounting framework across Europe may look similar; it varies considerably in the context of tax and company law provision. Exams are a common component of the recognition procedures (e.g. Sweden, Spain and the Netherlands).

In addition, learning outcomes are already used quite widely, though not directly linked to the Bologna process. Instead, these have been developed independently (and internationally) by the sector itself. As a result, national authorities tend to trust in the diplomas certified by national bodies of other Member States – this is viewed as a strong guarantee, therefore competent authorities do not need to examine every diploma in detail.

2.2.3 Real estate agents

The profession of real estate agents is only regulated in 10 Member States, and the qualification level at which it is regulated varies considerably from country to country. The profession is ranked #72 in terms of the number of decisions on applications under the Directive between 1997 and 2009 (#77 in 2009 specifically)[13]. Decisions on applications are also highly-concentrated in Belgium (282 out of a total 380 applications according to the professional qualifications database). The next highest numbers of decisions are in Austria (50) and Sweden (19). The Labour Force Survey (LFS) estimates the number of people who work in real estate activities at 1.7 million in Europe in 2010.

The 17 case study countries represent 82% of all decisions on applications for recognition from 2007-2009. Yet only two of these countries (Belgium and Austria) received 10+ applications over the three-year period, according the professional qualifications database (see Annex 8).

In most Member States that regulate this profession, the competent authority is a delegated regulator or professional organisation. Only in Poland (Ministry of Infrastructure) and Austria

[12] Information obtained from the ICJCE available at: http://www.icjce.es/index.php?option=com_content&view=article&id=4817&Itemid=570

[13] Professional qualifications database – accessed 22.3.11

(Ministry for Economics, Family and Youth) among the case study countries is the Ministry responsible for recognition. These Member States also involve the professional organisation as a key stakeholder in their recognition processes.

The profession differs between countries in the scope of professional activities. In Sweden, the real estate agent is responsible for the whole process of a transaction, whereas in other Member States the agent is responsible only for the sale. The European Association of Estate Agents (CEPI) described the level of required competence for the profession in terms of Bologna cycles (its view was that 95% of the profession required training to bachelor level, and 5% of the profession, involved in large commercial deals for example, required training to master level). In reality, there are educational requirements which range from requiring education up to one year post secondary level through to a first cycle degree in real estate or a postgraduate qualification in real estate (if the first degree is in something other than real estate).

In some Member States (e.g. Belgium, Poland, Sweden), applicants have to display knowledge of national property law. For example, Belgian applicants have to understand the different rules which exist in Brussels and Flanders.

There are issues relating to professional recognition for real estate agents that go beyond the scope of the study – for example, the temporary provision of services is a relevant consideration where nationally-based estate agents may broker property deals for clients in their own country buying a property abroad.

2.2.4 Civil engineers

Civil engineering is one of the most complex professions in the context of the study. According to the professional qualifications database, the profession is only regulated in 11 Member States. In some other countries (e.g. Ireland) the profession is not regulated, but the engineering professional title is protected by law and the Directive is applied in these cases.

Civil engineering is ranked #35 in number of decisions on applications (1997 to 2009) and #17 in 2009 specifically. The largest number of decisions on applications is to the UK, followed by Spain and then Greece (these three countries represent 70% of all applications)[14]. The 17 case study countries represent 82% of all decisions on applications for recognition for this profession from 2007-2009. Four of these countries (UK; Czech Republic; Poland; Portugal) had 10+ decisions on applications over the three-year period, according the professional qualifications database (see Annex 8).

The Labour Force Survey (LFS) reports that there are 1.8 million civil engineers in the EU, with the largest numbers in the UK, Germany and Poland.[15] The definition of a civil engineer differs across Member States. In most Member States, there are a number of specialised job descriptions, all of which are understood as a civil engineer. In the Czech Republic for example, there is no generic category of civil engineer. Instead, all chartered engineers can specialise in one or two of a total of eleven areas (such as, land/ground construction work and geotechnology). In Spain, there are two definitions of types of engineer which would be considered to be a civil engineer (public works engineer and engineers for canals and ports). Each of these has a different professional body, but the same competent authority (a government ministry).

The competent authority for this profession is either a government ministry (for example, in Austria the competent authority is the Federal Ministry for Education and Labour while in Spain, it is the Ministry of Development), or a professional body. Member States including the UK and Cyprus follow this second model. In Cyprus, the regulator (the Cyprus Scientific and Technical Chamber) is responsible for related professions such as architects, mechanical and other types of engineering, and town planning whereas in the UK, the competent authority (Institute of Civil Engineering – ICE) is responsible only for this profession. In Cyprus, there is a separate professional organisation for civil engineers (the

[14] Professional qualifications database – accessed 22.3.11

[15] Eurostat, Labour Force Survey (LFS), 2011

Cyprus Council of Civil Engineers) whereas in the UK, the ICE fills both the role of professional body and competent authority.

However, across the engineering profession, there has been extensive work to accredit individuals and programmes as meeting set EU-wide standards. The European Federation of National Engineering Associations (FEANI) has developed a set of criteria with respect to the professional competences for the engineering profession. These criteria are compatible with the Bologna framework, ECTS and the EQF.

2.2.5 Social workers

The social work profession is regulated in 18 Member States and is the #10 ranked profession in terms of the number of decisions on applications under the Directive (#9 in 2009 specifically)[16]. Note, though, that decisions are heavily concentrated in a small number of countries. Out of a total 3,959 decisions on applications since 1997, 1,806 were made by the UK as host country, 889 were made by Ireland (and there was a significant volume of applications between these countries) and 697 were made by France. The Labour Force Survey (LFS) estimates the number of people who work in social work as around 4.8 million in 2010 (using the definition of social work activities without accommodation)[17]. The majority of these social workers are in France, the UK and Germany, which represent around 60% of the people working in social work in the EU.

The 17 case study countries represent 97% of all decisions on applications for recognition for social workers from 2007-2009. Yet only four of these countries (UK; Ireland; France; Luxembourg) made 10+ decisions on applications over the three-year period (see Annex 8).

The profession is generally regulated at the same qualification level across countries – with exceptions (in the UK and Germany where the profession is regulated at multiple levels) tending to relating to additional professions being included in the social worker definition (e.g. childcare in the UK).

In the majority of Member States, the Ministry is the competent authority. This may, however, be the Health ministry (or equivalent), the Ministry for Education (or higher education) or, in one case (Italy), the Ministry of Justice. Some Member States involve profession-specific bodies in the recognition process. In Spain, for example, the General Council for Social Work prepares an advisory report on each application which the Ministry uses to make its decision; and in Italy the National Council of the Order of Social Workers is involved in the evaluation committee, which is chaired by the Ministry of Justice.

Across the Member States that regulate this profession, the main requirements tend to be a degree (or post-secondary school) qualification in social work, which is accredited by a national body and a certain number of hours of supervised practice. A recognition challenge for the social work profession is that there are very different perspectives on social work and hugely different legal frameworks and settings across Member States - i.e. the activities of social workers vary. This can translate into quite different approaches to education and training, notably in terms of the practical / theoretical balance. In Germany, for example, social work has the status of a science, whereas in other countries it would have psychology and pedagogy components.

2.2.6 Physiotherapists

Physiotherapy is a highly-regulated profession, being regulated in 25 Member States. It is generally regulated at Level d in Article 11 of the Directive (and regulated at a lower level in the Czech Republic and Germany). There is significant mobility of physiotherapists and it is the #4 ranked profession in terms of the number of decisions on applications for recognition between 1997 and 2009 (#6 in 2009 specifically)[18]. Decisions on applications are also relatively-evenly spread between countries, with the three top countries (Germany, Austria

[16] Professional qualifications database – accessed 22.3.11

[17] Eurostat, Labour Force Survey (LFS), 2011

[18] Professional qualifications database – accessed 22.3.11

and the UK) in terms of the number of decisions on applications representing just 55% of all decisions.

The Eurostat Public Health database includes a count of the number of physiotherapists, and estimates that in 2008 there were 360,000 physiotherapists in Europe. This is likely to be an underestimate as data for six countries is missing (Denmark, Luxembourg, the Netherlands, Slovakia, Finland and Sweden). The countries with the highest number of physiotherapists were Germany, France and Italy, and these countries represented two thirds of the total reported number of physiotherapists in the EU.

The 17 case study countries represent 97% of all decisions on applications for recognition for this profession from 2007-2009. Nine of these countries made 10+ decisions on applications over the three-year period, according the professional qualifications database (see Annex 8).

There are some indications that the scope of the profession varies between countries. It ranges from the medical- (such as in France, where physiotherapists provide a number of care services which would be provided by a doctor in other Member States), through to being a sports-based profession. In between is the para-medical role where the physiotherapist works under the supervision of a doctor or other senior clinician. The level of supervision that physiotherapists work under therefore differs, and this is a key issue in relation to recognition. Physiotherapists must practice according to the disciplinary and professional rules of the host Member State. For example a migrant physiotherapist with acupuncture skills may only use them if acupuncture is within the scope of practice of the profession in the host Member State.

There are three models for recognition. In the majority of Member States, the competent authority for this profession is a ministry, in most cases the Ministry of Health, or equivalent. In some cases, such as Belgium, the ministry sets up a commission to review a request for recognition. There is also a decentralised model, such as in France, in which the Member State has set up a regional system of recognition. Finally, as in the UK and Cyprus, the regulators of the profession are responsible for recognition. The Health Professions Council (HPC) in the UK develops standards of proficiency for the profession, which provide a basis for professional recognition.

2.2.7 Pharmaceutical technicians / pharmaceutical assistants

Pharmaceutical technicians are regulated in 17 Member States. It is ranked #79 in terms of the number of decisions on applications since 1997 (and ranked #48 in 2009 specifically)[19]. The profession is regulated at quite different qualification levels in different countries – and this impacts on the recognition process.

The 17 case study countries represent 88% of all decisions on applications for recognition for this profession from 2007-2009. Only four of these countries (Germany; Belgium; Denmark; Czech Republic) made 10+ decisions on applications over the three-year period, according the professional qualifications database (see Annex 8).

The profession can be characterised as a support occupation to pharmacists. Pharmacy technicians work in many different work environments. These include:

- Community pharmacies (sometimes called retail or high street pharmacy) and hospitals. Most pharmacy technicians work in community and hospital pharmacy.
- Pharmaceutical production or sales in the pharmaceutical industry.
- Prisons, primary care organisations, education and training, the military, veterinary pharmacy and pharmacy organisations.

The ratio of pharmacists to pharmaceutical technicians is variable, depending on the structure of pharmacy regulation in the country.[20] Research has tried to identify the

[19] Professional qualifications database – accessed 22.3.11

[20] PGEU Statement, 2009, Why Pharmacies Need Fully Qualified Pharmacists

proportion of technicians to pharmacists, with a range of 0.2 technicians to each pharmacist up to over four technicians to each pharmacist.[21]

The competent authority in the majority of countries is the ministry responsible for health. In Denmark (Danish Medicines Agency), Sweden (National Board of Health and Welfare) and Hungary (Office of Health Authorisation and Administrative Procedures), the competent authority is an agency under the responsibility of the ministry responsible for health.

The majority of countries require pharmaceutical technicians to have a vocational qualification in the subject, which is a lower-level qualification than a bachelor degree. The exceptions to this are the Czech Republic, Portugal and Sweden. None of the countries reported that there were a large number of applications for recognition. The focus in Belgium and France is to train and recruit more graduates within their country, rather than looking to recruit pharmaceutical technicians from other Member States.

2.2.8 Biomedical / medical laboratory technicians

The profession is regulated in 19 Member States and at a number of different qualification levels in different countries. It is ranked #19 in terms of the number of decisions on applications under the Directive from 1997 to 2009 (and #16 in 2009 specifically)[22]. The countries with the highest number of decisions on applications are UK, Luxembourg and Ireland – but these three countries only represent 59% of all decisions on applications, which means that mobility is relatively evenly spread across countries.

The 17 case study countries represent 91% of all decisions on applications for recognition for this profession from 2007-2009. Eight of these countries made 10+ decisions on applications over the three-year period (see Annex 8).

Medical laboratory technicians work in a medical laboratory, often under the guidance or supervision of a medical technologist. They work with laboratory equipment, helping to prepare and analyse slides and specimens of human blood, tissue, or other cells. Medical laboratory technicians help to support the work of medical technologists, to help identify abnormalities in the samples such as malignancies, bacteria, parasites, or genetic abnormalities. They may also assist in blood-typing, or other routine blood tests. As noted earlier, the category of profession may relate to multiple professions at national level – and these professions may be regulated at different levels under Article 11 of the Directive.

The competent authority for biomedical / medical laboratory technicians is the ministry responsible for health. This is the situation in all Member States except for Germany, the UK and Denmark. In Denmark, the National Board of Health (Sundhedsstyrelsen), which operates under the ministry responsible for health, is the competent authority. In Germany, each Bundesländer has an individual competent authority. In the UK, a delegated agency (the Health Professions Council) is the competent authority.

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[21] Studies are: International Pharmaceutical Federation, 2009 ,2009 FIP Global Pharmacy Workforce Report; Macarthur, D. 2007 European Pharmaceutical Distribution: Key Players, Challenges and Future Strategies.

[22] Professional qualifications database – accessed 22.3.11

3 Convergence under the Bologna Process

3.1 Introduction

This chapter relates to the study question asking:

- *'to which extent has the convergence of higher education systems under the Bologna process (in particular the three cycle structure, ECTS and the introduction of learning outcomes) led to quicker and easier or even automatic recognition of professional qualifications for different professions the training requirement of which are currently not subject to a minimum level of harmonisation under the Professional Qualifications Directive of 2005?'.*

The study terms of reference go on to ask, if the Bologna reforms have not improved the recognition of professional qualifications under the general system, what the reasons are for this. The terms of reference also ask whether:

- *'additional mechanisms and procedures (are) needed under the Bologna process to make quicker and easier or even automatic recognition happen in the future? Which role could the Internal Market and its policies play?'*

3.2 The three-cycle structure

3.2.1 Implementation of the three-cycle structure

In order to understand how the Bologna cycles have supported convergence in higher education systems and the impact of this on the recognition of professional qualifications, it is possible to look at:

- How well-established the Bologna cycles are in different countries (*Are they used?)*
- Whether the use of credit ranges within the first two cycles supports convergence (*How similar are the cycles between countries?*)
- The extent to which the Bologna cycles encompasses all disciplines (*Are some subject disciplines associated with professions regulated under the general system of Directive 2005/36/EC excluded from the Bologna cycles?*)
- What the impact of the Bologna cycles has been on education systems (*Is there evidence of an impact that might support improved professional recognition?*).

In this report, we focus on convergence primarily under the first two Bologna cycles, because these have associated credit ranges and are the most relevant from the perspective of the recognition of professional qualifications.

3.2.1.1 How well established are the Bologna cycles?

In order to understand the possible impact of the three-cycle structure on the recognition of professional qualifications, it is important to quantify the scale of reform across the EU27. Before the start of the Bologna process, 16 Member States had a kind of tiered structure (i.e. a structure that differentiated between several types of qualification), while 11 Member States did not[23] (i.e. only one long cycle in place leading to a Master's degree or equivalent). The position pre-Bologna is shown in Table 3.1 below.

Where a tiered structure existed, this was not comparable across EU countries[24]. Furthermore, it did not necessarily enable transition between cycles or institutional types and the first cycle was not necessarily in line with the Bologna principles. There has therefore been extensive reform of degree structures as a result of the Bologna process.

[23] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

[24] idem

The existing literature supports the view that the introduction of the Bologna cycles has been a significant change to higher education systems:

"within just one decade the impact of the Process on European higher education has been remarkable, particularly in terms of the radical restructuring of higher education systems in many European countries to fall into line with the 3-cycle structure embodied in the EHEA qualifications framework (essentially bachelor's, master's and doctoral degrees) promoted by the 2005 ministerial summit in Bergen".[25]

Even with the Bologna cycles becoming widely established during the first ten years of the EHEA, it is important to note that this timescale still means that for a large proportion of the existing labour force (those individuals undertaking post-secondary study before Bologna cycles were established in their country), the qualifications they hold often do not fit within the Bologna cycles.

Table 3.1 Two-cycle degree structures before start of the Bologna process (1999)

Degree structure	Countries
Two-cycle degree structure existing before 1999	Bulgaria; Cyprus; Czech Republic (*two cycle stricture existed in parallel to long one-cycle structure but was not mainstreamed*); Denmark; France; Greece; Ireland; Latvia; Lithuania; Malta; Poland; Portugal (*in the polytechnic sector*); Slovakia; Slovenia; Spain (*two-cycle structure existed, but around half of students followed integrated programmes*); UK (EWMI and Scotland).
Two-cycle degree structure not existing before 1999	Austria; Belgium (FR and FL); Estonia; Finland; Germany; Hungary; Italy; Luxembourg; The Netherlands; Romania; Sweden.

Source: National Reports on the Bologna Process 2007-2009. Table adapted from The Bologna Process Independent Assessment DGEAC (2009-01)

By 2009, the vast majority of students were undertaking degrees following the two-cycle structure, as shown in Table 3.2. There remained significant exceptions in Austria, Germany and Slovenia.

Table 3.2 Percentage of students enrolled in two-cycle degree structures by 2009

Country	% students	Country	% students	Country	% of students
Belgium-FR	100%	Italy	99%	Poland	89%
Cyprus	100%	Bulgaria	98%	Slovakia	88%
Ireland	100%	Finland	98%	France	85%
Malta	100%	Denmark	96%	Luxembourg	83%
Portugal	100%	UK-Scotland	96%	Czech Republic	80%
Romania	100%	UK-EWNI	95%	Hungary	58%
Spain	100%	Estonia	94%	Germany	43%
Sweden	100%	Lithuania	94%	Austria	41%
Belgium-NL	99%	Greece	90%	Slovenia	36%
The Netherlands	99%	Latvia	90%		

Source: National Reports on the Bologna Process 2007-2009. Table adapted from The Bologna Process Independent Assessment DGEAC (2009-01)

According to our education ministry interviews, further progress has been made in some of these cases:

- In the Czech Republic, as of 2008, all new entrants were enrolled on two cycle studies with the exception of people studying Medicine, Dentistry, Veterinary Studies, Law, Pharmacy and some Engineering degrees.

[25] Qualifications recognition across borders, Johnson and Wolf (2008)

- In Slovenia, the new Bologna system was introduced from 2009/10, which was also the last year of enrolment under the old system. The two systems are currently operating in parallel and will do so until the last graduates complete the 'old' programmes in 2015/16.
- In the Netherlands, from 2010/11 academic year it is a requirement for students embarking on a master programme to have completed a bachelor, in order to make the system more effective and increase student mobility.

In Germany and Austria, the data from the 2009 national reports on the Bologna Process reflect that conversion to the two-cycle structure was ongoing. It was reported that 75%[26] of all degree programmes in Germany and 82%[27] of degree programmes in Austria had been converted to the two-cycle structure at this point. More recent data on student enrolment has not been provided, but the education ministries in both countries reported the system was largely established in 2011 – with the exception of some disciplines, as with many countries. The position in Hungary is less clear overall. The future of Bologna cycle degrees is being considered as part of the national debate regarding future higher education reform.

The establishment of a coherent degree-cycle structure is an important precondition for convergence in higher education systems, but the existing research notes two important limitations:

- A variety of three-cycle models (credit combinations) are used across countries and within countries, arguably limiting convergence in the context of the Directive (e.g. when looking at the duration of studies).
- Some fields, which are important for professional recognition, are excluded from the three-cycle structure in some countries.

3.2.1.2 Impact of the use of credit ranges within the two Bologna cycles

The first two Bologna cycles are based around credit ranges (180-240 credits under the first cycle; 60-120 credits under the second cycle). The third cycle is not expressed in terms of credit volumes. Credit and duration is directly linked in the context of the Bologna cycles, because 60 credits equals one year of full-time study. Therefore, in the context of the recognition of professional qualifications, when referring to the levels in Article 11 of the Directive, knowing that a qualification is bachelor or master may be of limited value because the duration of study associated with these types of qualification varies by country. As the Article 11 levels d and e distinguish between qualifications prepared through three-year programmes and four-year programmes, a bachelor degree can sit on both level e of the Directive (if 240 ECTS) or level d of the Directive (if 180 ECTS).

Structures of the first two cycles most commonly adopted per higher education system

180+120=300 credits (3+2 years): Austria; Czech Republic; Denmark; Estonia; Finland; France; Germany; Hungary; Italy; Poland; Portugal; Slovakia; Slovenia

240+60=300 credits (4+1 year): Bulgaria

240+90=330 credits (4+1.5 years): UK-Scotland

Various combinations: Belgium-FR; Belgium-FL; Cyprus; Greece; Ireland; Latvia; Luxembourg; Malta; The Netherlands; Romania; Spain; Sweden; UK-E/W/NI

Source: Eurydice - Table adapted from The Bologna Process Independent Assessment DGEAC (2009-10)

The box above shows the dominant model of the first two Bologna cycles by country. Many countries deploy various credit combinations within their systems. Up to 2009, 14 Member States predominantly used the 3+2 years of full-time study (300 credits – 180+120) as the

[26] Bologna Process: Germany National Report 2009

[27] Bologna Process: Austria National Report 2009

basis for bachelor and master degrees. However, *'in these systems other combinations are often legally possible'*[28].

Bulgaria (4+1 years) and Scotland (4+1.5 years) have different dominant models and 13 systems had no dominant model. This includes systems in which four years full-time study is common up to master level (The Netherlands; UK-EWNI). The Independent Assessment of the first ten years of the Bologna process noted that:

"To the extent that recognition practice is still based on length of full-time study rather than competences, these differences constitute an important issue".[29]

The interviews with education ministries provided further insight into some of the variation within countries that have a dominant model. This shows that **having an understanding of the general position regarding the duration of Bologna degrees is not necessarily sufficient for using the Bologna cycles as shorthand for duration in the context of the recognition of qualifications**.

For example:

- In the Czech Republic, while the vast majority of first-cycle programmes are three years (180 credits), there are 3.5 year (210 credits) and four year (240 credits) programmes.
- In Estonia, most bachelor-master combinations are 3+2 years, but there are some 3+1 year programmes. Some professional qualifications have also remained at four years' duration.
- In Poland, the first cycle lasts between 6 and 8 semesters (for licencjat - in most cases academic disciplines) or between 7 and 8 semesters (for inżynier - in the field of engineering), depending on the field of study. The second cycle leading to the master degree (magister) lasts for 3 or 4 semesters.
- In Slovenia, the 3+2 year model is generally used, but the 4+1 year model applies for studies in pedagogy, education and science.

Credit ranges may change over time while still being Bologna-compliant. In one country, for example, it was reported that discussions are underway with the engineering sector regarding moving from a four-year first cycle degree to a three year bachelor plus two year master.

3.2.1.3 The exclusion of subject disciplines from the three-cycle structure

The exclusion of some subject disciplines from the three-cycle structure may indicate the limits of the common Bologna cycles when applied to specific subject disciplines. The majority of exclusions are in medically-related fields linked to professions under the sectoral system within the Directive, so it might be argued that this is less consequential than when looking at the impact of the Bologna cycles under the general system.

However, research using Eurydice data from 2007 showed that the following fields were excluded from the first two cycles of the Bologna structure in the following countries:

- **Engineering:** Bulgaria; Czech Republic; Estonia; Greece; Slovakia (some programmes)
- **Teacher education:** Czech Republic; Estonia; Germany; Luxembourg
- **Psychology:** Poland
- **Accountancy:** Malta[30].

Our interviews with education ministries report limited further work to transpose disciplines to the Bologna cycles, but also where there are exceptions:

[28] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

[29] *ibid*

[30] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

- In the Czech Republic, engineering studies can now be undertaken in two cycles, the first cycle remaining at four years, but there is no intention for further restructuring here.
- In Poland, psychology remains excluded from the Bologna cycles. Psychologists in Poland can only practice if they possess a second-cycle qualification. This is the only obstacle to incorporating these studies within the Bologna cycles, but because of this reason, there are no reported plans to reform psychology studies in alignment with Bologna.
- In Estonia, teacher education and civil engineering remain excluded from the Bologna cycles. They require a five-year study and there are no reported plans to incorporate the Bologna cycles.

Even though engineering is reported as conforming to the Bologna cycles in the majority of cases, stakeholders reported that in some countries the practice remained for universities to provide an integrated programme. For example, in France, while there is ongoing work to transpose disciplines outside of the Bologna cycle, in practice, engineering remains arguably outside of the system. The Diploma takes five years to complete, is equivalent to a master qualification and it is not possible to leave with a bachelor level qualification and have it recognised in the labour market.

There is some evidence that the introduction of Bologna cycles may not be permanent in some countries for specific disciplines. In Hungary, it was reported that the government is reviewing the bachelor/master division because some academics and higher education stakeholders are against the structure within specific disciplines e.g. teacher training. This has raised fears that if this happens and the 'door is opened', then other disciplines might want to do the same.

Even where the Bologna cycles are supported by government, professional groups may lobby for reversion to the previous system. For example, in Italy, the professional body for psychologists has asked for the re-introduction of a single-cycle system, reportedly to safeguard the status of the profession. Law qualifications provide an interesting illustration of the competing demands. There was a proposal in Italy to introduce a first-cycle law qualification aimed at individuals with a business background, for whom some knowledge of law would be beneficial. The professional body reportedly objected, also to maintain the integrity of the profession. These debates appear to be quite common in many countries, although less widespread among professions regulated under the general system of Directive 2005/36/EC than the sectoral professions.

However, even where the first cycle does not exist or where there are discussions about moving away from the tiered structure, there are in general no intentions to reintroduce another new cycle/or type of qualifications (for example to break down masters degree into two qualifications – as it was the case in France prior to the Bologna reforms). The Bologna framework distinguishes between a short cycle, first cycle, second cycle and third cycle. Countries or disciplines that do not have all these cycles in place do not have alternative cycles/structures either; they simply do not use qualifications corresponding to certain cycles.

3.2.1.4 Education ministry views on the impact of the three-cycle structure on training contents

There is little evidence that the introduction of the Bologna cycles has led to wholesale adaptation of training contents in a way that *could* imply greater convergence of training contents across EU countries. Numerous countries reported changes to the duration of degrees was the most significant impact of the overall reforms, but this was largely an impact on structure rather than content.

Only a small number of interviews with education ministries reported that the Bologna cycles were a catalyst for a significant shift in learning. Where this was the case, it tended to be driven by national needs rather than a European dimension:

- In Slovakia, the introduction of bachelor degrees led to the modification of training contents. The bachelor degree has to correspond to a graduate profile which should be in principle applicable in the labour market. This was not the case in the past as bachelor

degrees did not exist. Consequently, programmes had to be restructured and redefined so as to prepare students for this profile.

- In Italy, it was argued that, as early adopters of the three cycle model (since 2001), the reforms have had a significant impact on learning. One of the drivers for reform was a desire to bring the higher education system more in line with other countries to aid (student) mobility. The previous system had what was ostensibly a 4-5 year single cycle, but only 5% of students would complete in that timescale and most degrees lasted from 6-8 years. Degrees are therefore now significantly shorter in theory, which has involved modification of content, albeit largely in the form of rationalisation of content.
- In France, in some sectors, such as art schools, the training offer was restructured entirely as a consequence of the Bologna cycles. In the sector of real estate agents, the training providers used the Bologna reforms as an opportunity to re-organise and streamline the offer of training. Training providers in the sector who did not meet the quality criteria of a bachelor degree were forced to modernise and improve the provision of training.

In the majority of cases**, the changes described by education ministries are about re-packaging existing single-cycle qualifications into the Bologna cycles, rather than overall re-design**. This is also supported by evidence from other studies and is sometimes criticised as a shortcoming of the Bologna reforms implementation[31]. Where this has happened, for example in Finland and Estonia, the changes are not reported as being particularly significant. Whether the introduction of Bologna cycles supports convergence in training contents is therefore debateable.

It may be expected that countries with long-established bachelor-master systems would be the most likely cases for convergence in training contents on the basis of the emergence of comparable degree structures across Europe. In practice, though, it seems as if there is even less of a catalyst for change in these cases. For example, in the UK, it is recognised that because there was little need for change comply with the Bologna cycles, there is less awareness of the need to look at developing degrees with learning outcomes and credits aligned to similar degrees in other countries/institutions.

The situation in terms of the impact of the Bologna cycles is evolving. One area that has been difficult in Denmark, for example, has been to make the university bachelor attractive for businesses. The reasons are that there have been enough master graduates to choose from and that it is only marginally more expensive to hire these people.

3.2.2 Use of the three cycles as part of the recognition process

3.2.2.1 Extent of use of the Bologna cycles within recognition applications

The extent to which competent authorities are familiar with the three-cycle structure varies. However, **very few competent authorities interviewed for the case studies (3%) were not aware of the Bologna cycles and over two-thirds of interviewees were 'quite' or 'very' familiar with the degree cycles**.

Just under two thirds (63%) of competent authorities had dealt with applications for recognition presented in terms of the Bologna cycles. There was a majority for all professions, except for real estate agents (where only 38% of competent authorities had seen degree cycle included in applications) and pharmaceutical technicians (38%). In the case of pharmaceutical technicians, the competent authorities sometimes covered multiple case study professions – and could not necessarily distinguish on the basis of profession – so the figure may be an over-estimation. This is because the profession is typically regulated below bachelor level.

There was a **surprising variability between competent authorities in terms of the frequency with which they see applications presented in terms of the Bologna cycles.**

[31] See for example Sursock and Smidt (2010) Trends 2010: a decade of change in European Higher Education European University Association; European Student Union (2010) Bologna at the finish line: An account of ten years of European Higher education reform

Some reported it in a handful of cases, while competent authorities in the UK, France, Cyprus, Belgium and the Czech Republic all reported it as a common (even the predominant) occurrence (around 90% of applicants according to some competent authorities). The variability depends a little on the age profile of typical applicants, but more so on the profile of professional mobility between countries. For example, one competent authority in France reported Bologna cycles as being frequently presented by applicants – but 80% of applicants came from Belgium, which had an established bachelor qualification for the profession.

The **majority (56%) of competent authorities expect that the three-cycle structure will increasingly be used by applicants in future**. The expectation here was a direct consequence of the perceived establishment and alignment of higher education studies under the Bologna cycles. It is based on the presumption that the number of graduates who studied under the Bologna cycles will increase over time, as well as evidence of its increasing use to date. Furthermore, some interviewees who either did not know or did believe that the three cycles would be increasingly used by applicants in future held this position because they perceive that Bologna cycles are already widely used by applicants. Three out of eight interviewees who did not expect increased use in future were competent authorities for the accountancy/auditing profession.

Table 3.3 Overview of the use of the Bologna cycles within the recognition process

	Number of competent authorities	% of competent authorities
How familiar are competent authorities with the three-cycle structure in the context of higher education qualifications?		
Very familiar	20	30%
Quite familiar	**26**	**39%**
Aware – but not at all familiar	19	28%
Not aware	2	3%
Total	67	100%
Have competent authorities dealt with applications for recognition that are presented in terms of the applicant having a qualification relating to the Bologna cycles (bachelor-master-doctorate)		
Yes	**42**	**63%**
No	21	31%
Don't know	4	6%
Total	67	100%
Do competent authorities anticipate that the three-cycle structure will be increasingly used by applicants for recognition to present their learning achievements in future?		
Yes	**34**	**56%**
No	8	13%
Don't know	19	31%
Total	61	100%

Source: case studies

3.2.2.2 Improving the comparability of qualifications

Table 3.4 below shows that **a significant proportion of competent authorities (42%) believe that the Bologna cycles have improved the comparability of qualifications in terms of level and duration of study**. The reasons for this were pretty straightforward – these competent authorities found that the Bologna cycles were simpler and clearer than information that was previously available. Far fewer competent authorities (18%) believe that the cycles improve the comparability of qualification content, which is an important element

for many competent authorities. These figures should be read in conjunction with around a quarter to a third of competent authorities who did not feel able to comment on Bologna cycles and comparability (usually because of a lack of experience in using the cycles).

A similar spread of views emerged from other stakeholders related to the case study professions. Around half of these interviewees (48%, 30 out of 63 interviewees) thought that the three-cycle structure has increased the comparability of qualifications (27% or 17 interviewees said that it had not; 25% or 16 respondents did not know). Professional bodies were more likely to see a positive impact in terms of comparability, while ministries did not have a clear view.

Other stakeholders were evenly split in terms of whether they felt that the use of the Bologna three cycles structure has improved the transparency of qualifications on the labour market:

- 23 stakeholder interviewees (37%) said transparency had improved
- 21 stakeholder interviewees (34%) said transparency had not improved
- 18 stakeholders (29%) did not know whether the Bologna cycles had improved the transparency of qualifications on the labour market.

Table 3.4 Competent authority views on whether the Bologna cycles have improved the comparability of qualifications (number and % of interviewees)

Have the Bologna cycles improved the comparability of qualifications...	Yes	No	Don't know	Total
...with regard to the duration of studies	**28 (42%)**	18 (27%)	20 (30%)	66 (100%)
...with regard to the level of studies	**27 (42%)**	20 (31%)	17 (27%)	64 (100%)
...with regard to the content of training courses	11 (18%)	**29 (48%)**	21 (34%)	61 (100%)

Source: case studies

Around a **quarter of competent authorities interviewed for the case studies (23%) have experienced difficulties relating to the duration of a bachelor or master degree being a different duration to that within the host country** (see Table 3.5 below). This cuts across the case study professions, but appeared to be a particular issue for some physiotherapist, biomedical/medical technician and civil engineering competent authorities. The issue is that the **Bologna cycles expose pre-existing differences in study duration**.

Half of the other stakeholders (professional bodies / ministries) interviewed as part of the case studies felt that qualifications would be more comparable if each cycle attested the same number of years of studies in all Member States. There was no particular pattern here by profession.

Just under a third of competent authorities (29%) have received applications in which professionals have undertaken a bachelor in one Member State and a master degree in another Member State. The vast majority of these competent authorities (82%) said that this does not raise any difficulties in the recognition process.

Table 3.5 Issues relating to different cycle duration in Member States

	Number of competent authorities	% of competent authorities
Have competent authorities encountered any difficulties when the duration of the bachelor or master is different from the duration of these cycles in your Member State		
Yes	14	23%
No	**34**	**55%**
Don't know	14	23%
Total	62	100%
Do other stakeholders (professional bodies, ministries that are not competent authorities, education and training bodies) related to the case study professions think that qualifications would be more comparable if each cycle attested the same number of years of studies in all Member States?		
Yes	**31**	**50%**
No	16	26%
Don't know	15	24%
Total	62	100%
Have competent authorities received applications from professionals having undertaken a bachelor in a Member State and a master in another Member State?		
Yes	17	29%
No	20	34%
Don't know	**21**	**36%**
[If yes, does this raise any difficulties in the recognition process?] *[Yes]* *[No]* *[Don't know]*	 *[2]* *[14]* *[1]*	 *[12%]* *[82%]* *[6%]*
Total	58	100%

Source: case studies

3.2.3 Impact of the three cycles on the recognition process

Only a fifth of competent authorities interviewed for the case studies believed that the three-cycle structure introduced under the Bologna Process made the recognition of professional qualifications easier or quicker (see Table 3.6 below). The illustrations below highlight that **the main benefit relates to easier or improved understanding of education systems in other countries**:

- *"Yes, it's definitely helped. It has clarified that 3- or 4-year first degrees are essentially 'worth' the same and it helps with defining levels when it's unclear whether the institution is offering Higher Education or [Vocational] Education" (physiotherapist competent authority).*
- *"The process has substantially improved compared with before, where sometimes a lot of additional research had to be performed for an application to be recognised in order to understand what degree the person had" (competent authority for multiple professions).*
- *"The cycle of study gives an indication straight away. If someone has a diploma that does not fully fit into the national system – because no such training exists here, the level is already an indication for what the qualification is likely to cover" (competent authority for multiple professions).*
- *"Yes, the applications are clearer and more specific when it comes to recognising the level of studies" (social workers competent authority).*

- *"Not directly, but an increased knowledge of education system, which is also a by-product of the Bologna process, makes recognition procedures easier" (biomedical/medical technician competent authority).*

In a small number of cases, competent authorities interviewed for the case studies said that the three-cycle structure was useful in cases of "automatic" recognition in the fields of physiotherapy and medical/biomedical technicians. However, when exploring this with competent authorities, the Bologna cycles were not decisive in recognition becoming effectively automatic. The cycles provide additional clarity where there is already a high degree of knowledge and awareness of and trust in the studies in the country of origin.

A variety of reasons were put forward by competent authorities as to why the three-cycle structure had not led to automatic recognition:

- The introduction of Bologna cycles makes comparison easier but does not change the content of qualifications significantly in practice.
- The cycles are a significant but not sufficient pre-condition for automatic recognition (it is one dimension among several that competent authorities want to consider).
- The cycles have not yet been fully implemented with the country.

Table 3.6 Impact of the Bologna cycles on the recognition process

	Number of competent authorities	% of competent authorities
Has the three-cycle structure introduced under the Bologna Process made the recognition of professional qualifications easier or quicker?		
Yes	12	20%
No	**27**	**45%**
Don't know	21	35%
Total	60	100%
Has the three-cycle structure led in any cases to the "automatic" recognition of professional qualifications?		
Yes	5	8%
No	**49**	**77%**
Don't know	9	15%
Total	63	100%

Source: case studies

3.3 European Credit Transfer and Accumulation System (ECTS)

3.3.1 Implementation of ECTS

3.3.1.1 Use of ECTS

For ECTS to lead to quicker and easier recognition of professional qualifications, it implies that the system is widely established, understood and used. Most EU countries have introduced ECTS as part of the Bologna reforms. Even where other credit systems are used, there is a read across to ECTS values. The independent assessment of the first ten years of the EHEA found that, by 2009, the goal of establishing ECTS had been:

'substantially achieved at the level of regulation, but the degree of use of ECTS in institutions and programmes needs attention'.[32]

[32] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

The potential added value of ECTS in the context of recognition is that it allows for the recognition of qualifications undertaken following different learning approaches and is a measure of / link to the competences achieved through a programme of study. In ECTS, the quantification is based on student workload. Student workload is based on an expert judgement of the time it takes to an average student to achieve the expected learning outcomes. It should take into account all the learning activities including the contact hours between the teaching staff and teachers, the time required from students to prepare at home (reading, home assignments), any practical work expected etc. In other words, it should not be only about the time students spend in contact with teachers.

In general, 1 ECTS credit is supposed to represent between 25 and 30 hours of workload. In the UK, the system most commonly used is that 1 credit (not ECTS) represents 10 hours of notional learning time (a concept that is very similar to that of workload). UK universities are recommended to use conversion rate of 2 to transfer UK credit to ECTS[33]. Other reported examples included ranges of 20-30 hours per credit. The *Survey of Master Degrees in Europe* provides further explanation of different approaches:

"Sometimes local legislation specifies the value of one credit point – usually in terms of quantitative measures of student workload, rather than by reference to calibrated learning outcomes. This is the case, for example, in Wallonia, where one ECTS point is allocated to 24 hours of study time; in Flanders, one point represents 25 to 30 hours. Sometimes ECTS operates at a fixed equivalence with a local currency, as in Sweden where ECTS 1.0 is worth 1.5 higher education points. Sometimes there is no national credit system; in these cases, ECTS stands alone."[34]

3.3.1.2 Credit allocation

An apparent limitation in the usefulness of ECTS is that credit allocation has been based on different approaches by country. The main distinction has been whether credit allocation has been based on learning outcomes or not – although this is not the only distinction. In 2009, research[35] shows that:

- In five Member States (Bulgaria; Cyprus; Greece; Slovakia; and Spain), the dominant practice for the allocation of credits was teaching / contact hours.
- Around half of Member States allocated credit on the basis of workload – but not using learning outcomes (Austria; Belgium; Czech Republic; France; Germany; Hungary; Latvia; Lithuania; Luxembourg; Malta; Portugal; Slovenia).
- Three Member State systems allocated credit on the basis of defined and written learning outcomes but without an estimation of average student workload (The Netherlands; Romania; UK – E/W/NI)
- The remaining Member State systems allocated credits to courses based on both an estimation of average student workload and defined and written learning outcomes (Denmark; Estonia; Finland; Ireland; Italy; Poland; Sweden; UK-Scotland).

Even if there was a greater awareness and understanding of ECTS outside of the education community, these differences may limit the immediate added value of ECTS for the recognition of professional qualifications. It is also not widely-known or easily verifiable on which basis credit has been allocated in relation to individual courses. This marks a serious barrier to the use of credit as part of the recognition of professional qualifications, because knowing the credit value of a course is not especially meaningful without knowing the basis for credit allocation.

[33] he UK HE Europe Unit guidance on the relationship between national arrangements for credit in HE in England and ECTS, March 2008, updated July 2009

[34] Davies H, The Survey of master Degrees in Europe, EUA, 2009

[35] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

3.3.1.3 Embedding the use of ECTS at national level

The education ministry interviews provided examples of the current position regarding credit allocation (which has not changed substantially since 2009) and how the approach to introducing credit systems has led to difficulties in developing a uniform approach at national level:

- In France, universities have had full responsibility to implement the credit system, without significant guidance from government on how to calibrate credit etc. This marks an interesting contrast with the system before 2002, in which the design of qualifications was more centrally imposed (it is estimated that universities previously had 20% room for manoeuvre). Bologna reforms in France therefore go hand-in-hand with greater autonomy to the universities and perhaps greater divergence rather than convergence in qualification design.
- In the Czech Republic, the use of ECTS is not required by legislation, but in practice all public higher education institutions use it – there may be exceptions in private institutions. The extent to which ECTS is based on learning outcomes and student workload varies, though. In fact many institutions use a combination of contact hours (teaching) and student workload, but this is evolving. The position varies from one institution to another. There are no national guidelines on this and it is not verified as part of the accreditation process.
- In Lithuania, universities have responsibility for the incorporation of ECTS. The ministry is currently undertaking a programme of support to help universities, but this at an early stage and the independence of the universities means that the government cannot influence the speed of the reforms. It is estimated that less than half of universities currently use ECTS, but the expectation is that it will be widely used in 2-3 years' time.
- In Cyprus, it is estimated that over 75% of higher education programmes are linked to ECTS. It is not a compulsory requirement to do so, because the ministry recognises it is burdensome on smaller institutions in particular and the transition to ECTS and the Diploma Supplement has required a considerable amount of work to move from contact hours to workload assessment (before even considering the use of learning outcomes). None of the higher education institutions have yet successfully achieved the ECTS label certification.
- In Slovakia, ECTS is only used in the higher education system. Post-secondary VET qualifications do not use ECTS, which is significant for several professions in the medical and paramedical field, such as nurses and assistants in the health field. In higher education, the basis for calculating credit through ECTS generally remains as contact hours.

Some experts have also questioned the value of workload as a concept for more accurately recording the size of a qualification:

"But other than class contact time, how accurate are workload estimates in general, when these include library and private study? Indeed, one might now ask how honest are workload estimates, given that placement of a national qualification in an NQF, and hence its location within the EQF, depends in part on its credit rating?"[36]

While there are clearly challenges in implementation, there was general support for the use of credit among education ministries. Professional bodies also generally shared the view that ECTS adds value in the context of Directive 2005/36/EC, for the following reasons:

- At higher levels, notional learning time is just as important as teacher contact time, so a system such as ECTS that captures this may better facilitate recognition.
- Directive 2005/36/EC states that part-time equivalent duration of courses is applicable at a given level, but it may be possible to protect the rights of the applicant better by specifying a measure of part-time equivalence, which is possible using ECTS. Where study is not undertaken on a full-time basis, the overall duration of study (from start to

[36] Wolf and Johnson (2008)

finish) is not a meaningful measure of inputs, as the Directive recognises. It is possible, though, that any *pro rata* calculation of input may not always be consistent, partly because part-time learning is sometimes associated with more flexible delivery (such as a distance-learning component). Credit accumulation under ECTS potentially makes it easier to compare qualifications delivered in flexible or in non-traditional ways by providing a more consistent measure of learning inputs/outcomes (i.e. the number of credits achieved) than using hours/years of study.

3.3.2 Use of ECTS as part of the recognition process

3.3.2.1 Familiarity with ECTS and extent of use

As shown in Table 3.7 below, **around six out of ten competent authorities interviewed as part of the case studies are either 'very familiar' or 'quite familiar' with the use of ECTS**. Fewer competent authorities describe a high-level of familiarity with ECTS compared to the three-cycle structure (19% versus 30%), but this is not surprising given that ECTS is a tool of a more technical nature. It shows that there is a significant remaining group of competent authorities that would not be confident in dealing with ECTS-based applications for recognition.

The level of awareness was marginally higher among medical- and health-related professions, but there was no clear rationale for this:

- Between two thirds and fourth fifths (67%-79%) of competent authorities for physiotherapy, medical/biomedical laboratory technicians and social workers described themselves as 'very' or 'quite' familiar with the ECTS. Awareness among competent authorities for pharmaceutical technicians/ assistants was marginally lower (62%).
- For accountants, real estate agents and civil engineers, the similar level of awareness was found in around half of competent authorities (46%-56%).

Just under half of competent authorities (47%) had dealt with applications for professional recognition where the professional's training was presented in terms of ECTS credits. Again, the proportion here is lower than that in relation to the use of Bologna cycles in recognition applications (seen by 63% of competent authorities). It is in line with what would be expected given that ECTS is:

- still becoming established at an institutional level in some countries;
- not requested by competent authorities following the Directive;
- not contained within the transcripts of more experienced professionals who trained before the establishment of the EHEA.

Table 3.7 also shows that the use of ECTS in applications for recognition remains relatively uncommon (only five interviewees said that it was very common, while over half of competent authorities that had received ECTS-based applications, said it was a rare occurrence). The home countries from which ECTS is more commonly seen in applications reflects the overall pattern of mobility in most cases, although some competent authorities reported that ECTS is more commonly seen in applications from Member States acceding in 2004 and 2006. Numerous competent authorities also reported that it was common in applications from Germany.

The breakdown in use of ECTS by profession reflected the differences in terms of awareness – with the health- and medical-related professions generally more likely to see ECTS-based applications than other professions. The exception here was pharmaceutical technicians, where only two competent authority interviewees (18% of profession respondents) said that they had seen applications for recognition based on ECTS. This reflects the lower required level of qualifications for this profession in many countries.

A majority of competent authorities interviewed for case studies (62%) anticipate ECTS being increasingly used by applicants for professional recognition in future. Very few competent authorities disagreed with this proposition (12%), while around a quarter of interviewees were unsure. The rationale behind the expectation of the majority of interviewees was that it simply reflects that way in which education institutions have

reformed, the *'steadily rising'* nature of applications seen so far, and, for some, the logic and added value of ECTS information. Those who did not envisage increased use in future tended to be projecting a view that ECTS was unnecessary or did not benefit the recognition process, therefore why would it increase in applications?

Table 3.7 Overview of the use of ECTS within the recognition process

	Number of competent authorities	% of competent authorities
How familiar are competent authorities with ECTS?		
Very familiar	13	19%
Quite familiar	**30**	**43%**
Aware – but not at all familiar	22	32%
Not aware	4	6%
Total	69	100%
Have competent authorities dealt with applications for recognition where the training followed by the professional is presented in terms of ECTS?		
Yes	**30**	**47%**
No	27	42%
Don't know	7	11%
[If yes, how common is it for applicants to present applications in ECTS?] *[Very common]* *[Quite common]* *[Uncommon/rare]*	 *[5]* *[5]* *[7]*	 *[19%]* *[19%]* *[56%]*
Total	64	100%
Do competent authorities anticipate that ECTS will be increasingly used by applicants for recognition to present their learning achievements in future?		
Yes	**37**	**62%**
No	7	12%
Don't know	16	27%
Total	60	100%

Source: case studies

3.3.2.2 The concept of 'workload' to support recognition decision-making

Around half of interviewees for the case studies were satisfied with the notion of ECTS being allocated according to the student workload and not only according to teaching hours (see Table 3.8 below). A slightly higher proportion of stakeholders that are not competent authorities[37] (56%) were satisfied with the workload concept than competent authority interviewees (45%); however this simply reflects that competent authorities were less confident in answering the question (i.e. there was a larger proportion of "don't knows" among the competent authorities than the other stakeholder group).

Figure 3.1 shows the overall breakdown of responses by profession and the high degree of satisfaction with the use of workload, in particular, for the real estate and social worker professions. For social worker interviewees, this reflected the importance placed on professional practice elements of training and the view that ECTS was a better encapsulation of this than teaching hours.

[37] i.e. professional bodies, ministries that are not competent authorities, education and training bodies

Excluding those case study interviewees who could not answer the question (don't know), **three quarters of all interviewees (74%, or 64 interviewees) were satisfied with the concept of workload while a quarter were not (26%, or 22 interviewees)**. These proportions were similar for competent authorities and other stakeholders. Figure 3.2 shows the breakdown by profession.

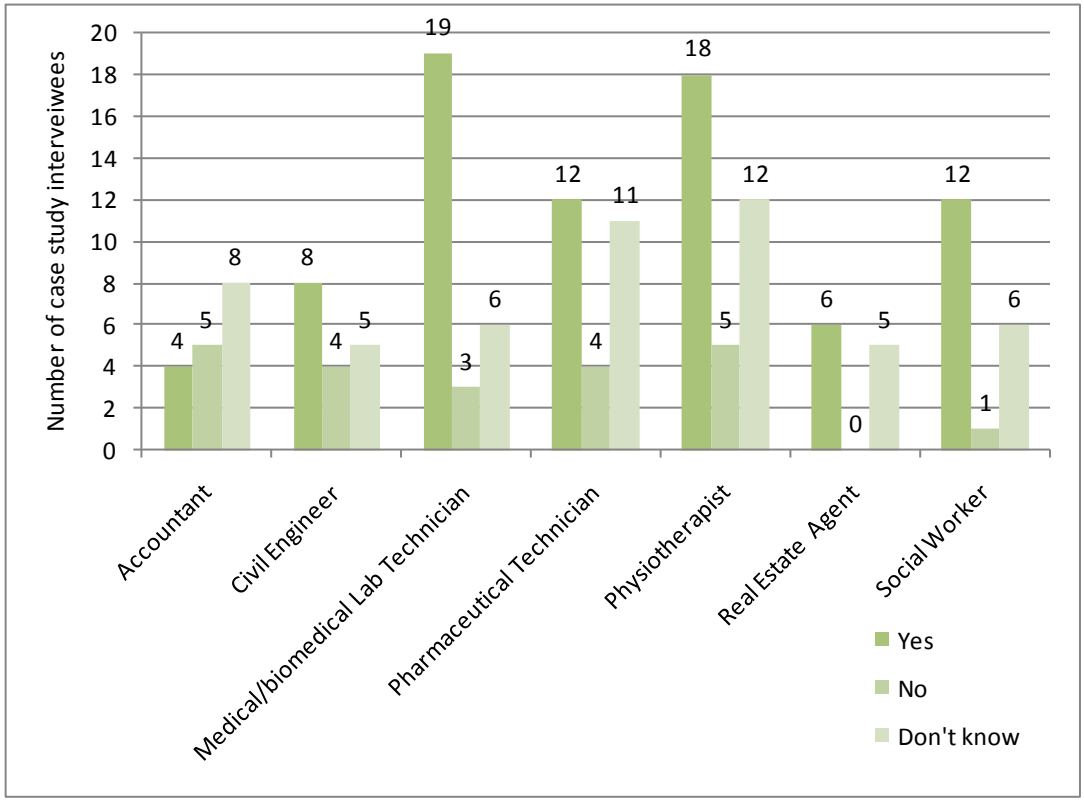
While there was satisfaction with the *concept* of workload among a clear majority of competent authorities that are familiar with it, competent authorities were less sure about whether it provides *useful evidence* for the recognition procedure (i.e. in terms of comparing qualifications and assessing possible substantial differences) – see Table 3.9 below. A third of competent authority interviewees (34%) thought that a measure of workload was useful evidence in the recognition context, while 22% of competent authorities disagreed. It is noteworthy that nearly half of competent authorities (44%) did not know whether a notion of workload was useful evidence, indicating a lack of familiarity with ECTS concepts in detail and in practice.

Table 3.8 Are competent authorities and other stakeholders satisfied with the notion of ECTS being allocated according to the student workload (and not only according to teaching hours)?

	Yes	No	Don't know	Total
Competent authorities	**30 (45%)**	10 (15%)	26 (39%)	66 (100%)
Other stakeholders	**34 (56%)**	12 (20%)	15 (25%)	61 (100%)
All	**64 (50%)**	22 (17%)	41 (32%)	127 (100%)

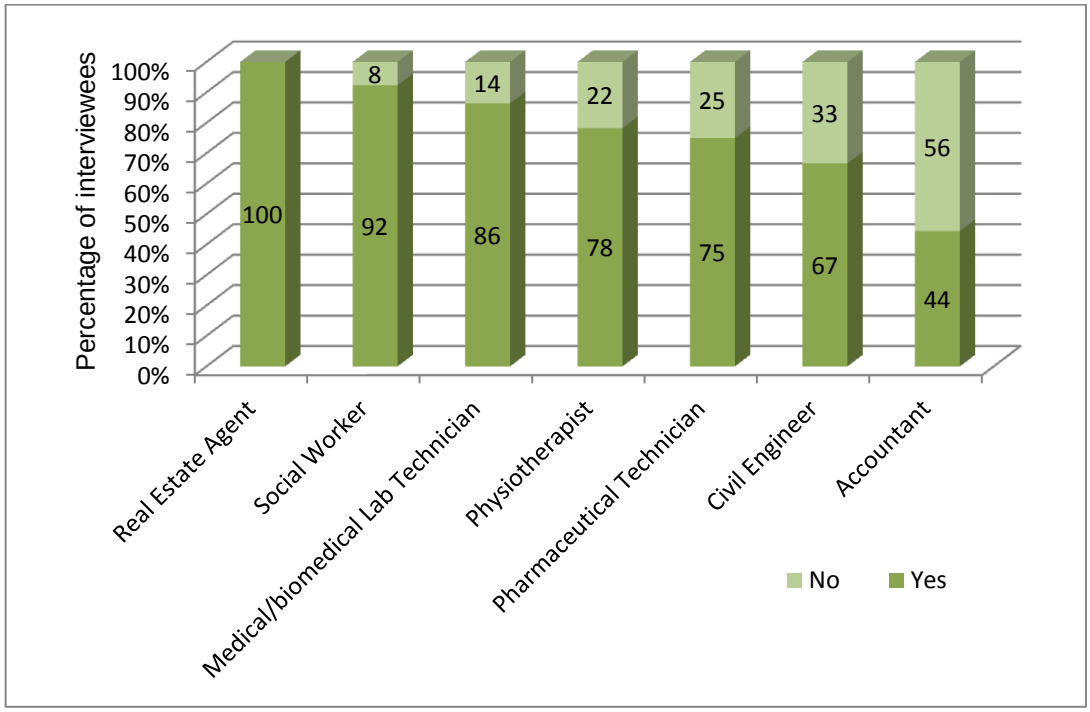
Source: case studies

Figure 3.1 Are interviewees satisfied with the notion of ECTS being allocated according to student workload – by profession (competent authorities & other stakeholders)



Source: case study interviews

Figure 3.2 Are interviewees satisfied with the notion of ECTS being allocated according to student workload - % satisfied / not satisfied by profession (excluding 'don't know')



Source: case study interviews

Table 3.9 Does the notion of student workload provide useful evidence for the recognition procedure, in particular when comparing qualifications and assessing possible substantial differences in training programmes?

	Number of competent authorities	% of competent authorities
Yes	22	34%
No	14	22%
Don't know	28	44%
Total	64	100%

Source: case studies

3.3.2.3 Confidence in ECTS allocations

Table 3.10 shows that **less than a third of competent authorities interviewed as part of the case studies (29%) are confident that ECTS points are allocated to training programmes in the different Member States in accordance with the Bologna rules (i.e. one credit stands for around 25 to 30 working hours)**. A slightly lower proportion of competent authorities (25%) lack confidence. If it is assumed that the nearly half (46%) of competent authorities who did not have enough knowledge to make a judgement are unlikely to be confident, it means that a significant majority explicitly or implicitly lack confidence in the system. Other stakeholders showed a slightly higher degree of confidence in ECTS allocations.

When looking just those competent authorities that have experience of ECTS in the context of recognition applications the split in confidence remains. Out of these competent authorities:

- Seven interviewees (28% of competent authorities with experience of ECTS in a recognition context) reported encountering a situation where different practices in the estimation of the student workload and in the allocation of ECTS were apparent. Usually this was a handful of cases, but considering that some competent authorities had limited experience in terms of the number of ECTS-based applications, it is difficult to draw conclusions here.
- Nine interviewees (36%) had not encountered this situation.
- A further nine interviewees (36%) did not know whether the ECTS allocation was outside of the Bologna rules in the context of applications they had received.

Overall, **the situation simply reflects the reality that different credit allocations are used at national level and that this has filtered through into the experience of competent authorities**. During discussions with competent authorities, this was not flagged up as a major concern. That may partly reflect that engagement with ECTS so far is variable and that knowledge of credit allocations is, unsurprisingly, not detailed among competent authorities in general. However, through discussions, it appears that subtle difference in credit values between countries is much less of a concern than consistency in the definition of credit itself (what is included).

Table 3.10 also shows that confidence would be increased if the allocation of ECTS points were checked by an external body. This is particularly the case among competent authorities that have actually received recognition applications that include ECTS.

Table 3.10 Confidence in ECTS allocation

	Yes	No	Don't know	Total
Are you confident that ECTS points are allocated to training programmes in the different Member States in accordance with the Bologna rules (one credit stands for around 25 to 30 working hours)?				
Competent authorities (all)	19 (29%)	16 (25%)	30 (46%)	65 (100%)
Competent authorities that have dealt with applications presented in terms of ECTS credits	*12 (40%)*	*14 (47%)*	*4 (13%)*	*30 (100%)*
Other stakeholders	32 (41%)	18 (23%)	28 (36%)	78 (100%)
Have you encountered situations where this is not the case (different practices in the estimation of student workload and the allocation of ECTS?				
Competent authorities that have dealt with applications presented in terms of ECTS credits	*7 (28%)*	*9 (36%)*	*9 (36%)*	*26 (100%)*
Would you be more confident if the allocation of ECTS points would be checked by an external body in the Member States?				
Competent authorities (all)	28 (44%)	10 (16%)	25 (40%)	63 (100%)
Competent authorities that have dealt with applications presented in terms of ECTS credits	*20 (69%)*	*4 (14%)*	*5 (17%)*	*29 (100%)*
Other stakeholders	34 (44%)	15 (19%)	29 (37%)	78 (100%)

Source: case studies

3.3.3 Impact of ECTS on the recognition process

3.3.3.1 Supporting quicker or easier recognition

Only a quarter of competent authorities interviewed for the case studies believe that the use of ECTS has made the recognition of professional qualifications quicker or

easier (see Table 3.11 below). Among those competent authorities that have actually received recognition applications based on ECTS, a third believes that ECTS has made recognition quicker or easier. Yet the proportion of these competent authorities holding the opposite view also increases (from 44% to 54%).

The **nature of the impact of ECTS is in supporting the recognition decision rather than providing a basis for that decision**. Competent authorities described it as giving a useful proxy for understanding more about level and content, although it is one part of the recognition jigsaw:

- *"We have ECTS to recognise qualifications when other information is not sufficient. We can probably look at it more in the future"* (*pharmaceutical technician/assistant competent authority).*
- *"Yes [ECTS supports recognition], because the training content is more specific and clear" (social worker competent authority).*
- *"The use of ECTS expressed in terms of student workload helps in the recognition process, but it is still not enough to explain what a student is able to do at completion" (competent authority for multiple professions).*
- *"It is useful in case where applicants have studied in country A for some years and then go on to study in country B. Perhaps for a master qualification or perhaps for a year abroad as part of their degree. ECTS allows applicants the flexibility to mix and match and gives us the guarantee that they have reached a certain level" (civil engineers competent authority).*

One competent authority, for social workers, explicitly drew out the point that ECTS was a *'better measure of non-teaching elements'*, which was an important consideration in the context of national professional requirements. However, this was not something that competent authorities in general picked up on.

Those competent authorities that did not believe ECTS supports quicker and easier recognition can be split into several camps:

- Competent authorities that recognised some value in having ECTS as complementary information, but which did not find that this had a concrete impact on facilitating the recognition process. According to one competent authority for physiotherapists: *'the applications have to still be analysed and to review the training contents, so the recognition process has not became easier or quicker'*.
- Competent authorities that were not interested in duration as much as learning outcomes. One competent authority for accountants said: *'our approach is to use learning outcomes. We compare the learning outcomes of qualifications achieved in Europe to our own qualifications, and then decide on recognition...[The] duration of [the] course does not come into the process'*. This response shows that the understanding of what is ECTS varies. ECTS is frequently understood as being only about workload (number of credit points) while the learning outcomes dimension is not seen as part of ECTS.
- Competent authorities that were only interested in teaching hours. As one competent authority for medical/biomedical laboratory technicians put it: '*The workload needs to be recalculated so as to include only teaching time, as this is the current basis of comparison'*.
- Only one competent authority put forward a response for lack of added value in ECTS being a lack of confidence in the way *'different universities use the points'*.

Unsurprisingly, very few competent authorities suggested that ECTS had led to cases of 'automatic recognition' (see Table 3.11 below). The common view was that this could not occur without a degree of harmonisation of curricula / training contents.

Table 3.11 Impact of ECTS on the recognition process

	Yes	No	Don't know	Total
Has the use of ECTS in context of the Bologna Process made the recognition of professional qualifications easier or quicker?				
Competent authorities (all)	15 (24%)	28 (44%)	20 (32%)	63 (100%)
Competent authorities that have dealt with applications presented in terms of ECTS credits	*10 (34%)*	*16 (55%)*	*3 (10%)*	*29 (100%)*
Has ECTS led in any cases to the "automatic" recognition of professional qualifications?				
Competent authorities (all)	2 (3%)	51 (81%)	10 (16%)	63 (100%)

Source: case studies

3.3.3.2 Improving comparability and transparency

Around half of competent authorities (48%) believe that the use of ECTS creates more transparency on the qualification obtained in another Member State. This rises to 59% of competent authorities that have experience of dealing with recognition applications in terms of ECTS (see Table 3.12 below).

Competent authorities were relatively evenly split in terms of whether they thought it is (or might be in future) easier to compare qualifications using ECTS than using years/teaching hours (see Table 3.12 below).

Among those competent authorities who thought that it provided a better/easier basis for comparing qualifications than years/hours were those that felt capturing the practical element of training was important, as well as competent authorities that already used ECTS to 'prove' equivalence in actual cases. It was also noted that ECTS, as a common framework system, provided a more straightforward analysis (*'have they achieved enough credits?'*) in cases where the applicant had followed an unconventional training route (e.g. taken a year out, studied abroad for year) wherein the calculation of total size/length of learning is not easy in terms of years' of study.

Those competent authorities that thought ECTS may be a better system in future, either thought that it was not yet well-enough established to add value in terms of transparency and comparability or were looking for additional guarantees on the basis for credit allocation (which they assumed would follow alongside greater experience of ECTS across higher education).

Competent authorities that did not agree ECTS improved the comparability of qualifications cited a lack of transparency in the definition of student workload (*'does it include only teaching hours or self-study and preparation for exams?'*). This is a reasonable question given that the evidence shows different approaches to credit allocation across Europe. There was an underlying concern here that self-study hours are increased by universities while reducing teaching time – but while maintaining the same ECTS points – even though there is no evidence that this is happening at a larger scale in practice[38].

In most countries, funding for teaching activities remains in some way related to inputs – including hours taught – credit is sometimes used as an output criterion in parallel to inputs rather than instead of inputs, hence universities have an interest in maintaining the number of taught inputs. For competent authorities interested primarily in the length of taught study, the fact that taught content would be diminishing is seen as potentially problematic.

There was also the concern that even if ECTS were externally checked or monitored, this would increase bureaucracy. One competent authority, for social workers, questioned both the veracity of information provided to it and the value of information given in practice. It

[38] For discussion of funding models in higher education in Europe, including the input and output indicators used, see Cheps, IoE and Technopolis (2010) Progress in higher education reform across Europe Funding Reform

gave the example of an applicant presenting subject title and corresponding ECTS – *'this is not very helpful, it doesn't say how the learning was delivered, which is very important'*. It also described applicants having copied the host national training standards as topics covered in the training: *'it can be difficult to assess the veracity of these statements'*. This issue is presumably addressed by tools such as the Diploma supplement, but it highlights a current level of confusion for sceptical competent authorities.

Table 3.12 Impact of ECTS on the transparency and comparability of qualifications

	Number of competent authorities	% of competent authorities
Do competent authorities consider that the use of ECTS creates more transparency on the qualification obtained in another Member State??		
Yes – all competent authorities *[Yes – those with experience of ECTS in applications for recognition]*	30 *[17]*	48% *[59%]*
No – all competent authorities *[No – those with experience of ECTS in applications for recognition]*	11 *[8]*	17% *[28%]*
Don't know – all competent authorities *[Don't know – those with experience of ECTS in applications for recognition]*	22 *[4]*	35% *[14%]*
Total	63 *[29]*	100%
According to competent authorities, is it or would it be easier to compare qualifications using ECTS than using years/teaching hours?		
Yes – now	11	17%
Yes - in future	14	22%
No	14	22%
Don't know	24	38%
Grand Total	63	100%

Source: case studies

3.4 Learning outcomes

3.4.1 Implementation of learning outcomes

In terms of overall progress in introducing learning outcomes across different Member States, **none of the education ministries interviewed for the study described learning outcomes as being fully established in their country**. Individual countries are at different points in the development and implementation of learning outcomes within higher education, reflecting different starting points for the overall education reform programmes. The current positions of Member States can be broadly categorised as follows:

- Learning outcomes are linked to all higher education programmes, but there is:
  - ongoing work to define learning outcomes at subject or programme level;
  - either limited awareness among the higher education sector or the use of learning outcomes is variable in practice by institution;
  - further work to quality assure its use.
- Learning outcomes are not linked to all programmes:
  - They are still being introduced.
  - They have not yet been introduced in higher education.

Annex 9 summarises the current position in terms of the introduction of learning outcomes on the basis of the education ministry interviews. It highlights the current priorities and concerns, as reported by the ministries. This highlight how factors such as the relative

autonomy higher education institutions plays a role in the extent to which and the way in which the use of learning outcomes becomes embedded within the education system.

3.4.2 Use of learning outcomes as part of the recognition process

3.4.2.1 Familiarity with learning outcomes and extent of use

Awareness of learning outcomes among competent authorities is mixed. From the case study interviews it is apparent that **nearly half of competent authorities (43%) are either 'not aware' or 'not at all familiar' with learning outcomes** (see Table 3.13 below). This implies a significant barrier in the potential use of learning outcomes for recognition purposes, given the need to understand and interpret their meaning as part of an application process.

Learning outcomes are also less-commonly seen in applications for recognition than either the Bologna cycles or ECTS credits. Only around a quarter of competent authorities (23%) reported having received applications for recognition presenting achieved learning outcomes – and two thirds of these said that it was an uncommon or rare occurrence. This is not wholly surprising given that, while the other elements of the Bologna reforms might be considered as complementary descriptions of the level or size/length of study, learning outcomes present a different type of information about a qualification – and it is information outside of what competent authorities may expect to require under Directive 2005/36/EC. It is also linked to the fact that the Diploma Supplement currently rarely contains sufficiently detailed information about learning outcomes[39]. It mainly contains information about subjects studied and ECTS. However, this feature of the Diploma supplement is undergoing discussions and there is willingness to introduce learning outcomes[40].

Competent authorities are less clear on whether learning outcomes will be increasingly used in future than the other Bologna-related elements considered in the study. Very few competent authorities said that they did not think learning outcomes will become more prevalent, and none of these organisations had ever received an application based on learning outcomes. Among the reasons given by the 40% of competent authorities that do anticipate increased use of learning outcomes in a recognition context in future were:

- it is the 'language of the business world';
- younger professionals are increasingly familiar with them;
- and the use of learning outcomes has increased over time, and therefore is likely to do so in future.

The point here is that **while overall awareness of learning outcomes is relatively low and they have not yet substantially percolated through to the recognition of qualifications, there is an underlying sense that they will inevitably do so in future**.

Table 3.13 Overview of the use of learning outcomes within the recognition process

	Number of competent authorities	% of competent authorities
How familiar are competent authorities with learning outcomes?		
Very familiar	13	20%
Quite familiar	**25**	**38%**
Aware – but not at all familiar	19	29%
Not aware	9	14%
Total	66	100%

[39] The recommended structure for Diploma Supplement says that learning outcomes should be included if available (in other words it is not an obligation).

[40] See for example the recommendations of the study Aelterman et al (2007) Study on the Diploma Supplement as seen by its users

Have competent authorities dealt with applications for recognition presented in terms of the applicant achieving particular learning outcomes through completion of a programme of study?		
Yes	**15**	**23%**
No	37	57%
Don't know	13	20%
[If yes, how common is it for applicants to present applications in terms of achieved learning outcomes?]		
[Very common]	*[1]*	*[7%]*
[Quite common]	*[4]*	*[29%]*
[Uncommon/rare]	*[9]*	*[64%]*
Total	66	100%
Do competent authorities anticipate that learning outcomes will be increasingly used by applicants for recognition to present their learning achievements in future?		
Yes	**23**	**40%**
No	4	7%
Don't know	31	53%
Total	58	100%

Source: case studies

3.4.3 Impact of learning outcomes on the recognition process

3.4.3.1 Supporting quicker or easier recognition

Very few competent authorities (13%) among those interviewed for the case studies believed that the introduction of learning outcomes made the recognition of professional qualifications easier or quicker (see Table 3.14 below). The lack of practical experience in using learning outcomes, the lack of current specificity of learning outcomes (i.e. their tendency to be presented in very generalised terms) and the disjuncture with current Directive 2005/36/EC requirements (*'we do not ask people to provide it, so they tend not to'*) were all outlined as reasons for the lack of impact to date.

It is important to note that **competent authorities generally highlighted the newness of the approach rather than anything fundamentally problematic with the approach as explaining the lack of impact on professional recognition**. This should also be put in context alongside other qualification information used by competent authorities. Less than two thirds (63%) of competent authorities responding to the online survey described learning outcomes as very or quite important information for deciding on the recognition of qualifications, compared to 89% for duration and 82% for content of subjects taught (see Table 9.2 in Section 9.3.2).

The competent authorities that did believe learning outcomes have supported quicker or easier recognition were concentrated in the accountant/auditor, pharmaceutical technician/assistant and physiotherapy professions. In the case of accountancy, outcomes-based standards are relatively well-established and the Bologna reforms are, in a sense, catching up with existing approaches to professional standards. As one competent authority said, *'before we would ask universities to translate their syllabus into learning outcomes. Now many are already translated'*. Among pharmaceutical technician competent authorities, it was felt that learning outcomes help to focus and simplify what can be a time-consuming recognition process because the profession is regulated at quite different Article 11 levels in different countries (e.g. from levels b to d among the case study countries). It was suggested that this variation meant that there was a more diverse qualification base among potential

applicants for recognition as pharmaceutical technicians compared to other professions[41]. In this context, it was felt that learning outcomes provide a useful entry point to understanding applicants' qualifications, especially where these are not higher education qualifications.

Table 3.14 Has the use of learning outcomes in context of the Bologna Process made the recognition of professional qualifications easier or quicker?

	Number of competent authorities	% of competent authorities
Yes	8	13%
No	24	39%
Don't know	**29**	**48%**
Total	61	100%

Source: case studies

3.4.3.2 Improving comparability and transparency

Irrespective of the lack of experience practically assessing learning outcomes as part of the recognition process, half of competent authorities (51%) interviewed for the case studies were of the view that the use of learning outcomes creates more transparency on the qualification obtained in another Member State (see Table 3.15 below). This increased transparency related to learning outcomes offering – now or in the future – an additional avenue for understanding how a qualification fits into the home country context, in terms of what applicants are expected to be able to do as a result of achieving the qualification. However, it does not follow that this additional transparency makes a sufficient difference to practically impact on the recognition decision – although, as noted above, this may be a consequence of the newness of the approach.

A surprisingly high proportion of competent authorities (44%) also felt that learning outcomes potentially make it easier to compare qualifications than qualifications described in terms of subjects studied. A quarter of competent authorities (25%) disagreed.

A similar proportion of competent authorities (44%) also believed that the use of learning outcomes facilitates the identification of substantial differences between training programmes. Only 18% of competent authorities disagreed, while a substantial minority were unsure (38%). Some interviewees acknowledged that they were making assumptions about the future use of learning outcomes. Others commented on the added value of learning outcomes over a list of subjects studied in terms bringing *'training standards closer to the professional activities that will actually be performed'*. A competent authority for medical/biomedical laboratory technicians illustrated this as follows:

"A course title "blood transfusion", does not tell you exactly what the technician is able to do - with the new training standards that will provide description in learning outcomes, that will tell you "being able to determine a blood group."

Table 3.15 Impact of learning outcomes on the transparency and comparability of qualifications

	Number of competent authorities	% of competent authorities
Do competent authorities consider that the use of learning outcomes creates more transparency on the qualification obtained in another Member State?		
Yes	32	51%
No	13	21%
Don't know	18	29%

[41] That are regulated at a more consistent level across countries according Article 11, and in particular where a higher education qualification in the context of Article 11 is more generally a requirement for recognition.

Total	63	100%
According to competent authorities, is it or would it be easier to compare qualifications described in terms of learning outcomes than qualifications described in terms of subjects studied?		
Yes	25	44%
No	14	25%
Don't know	28	32%
Total	57	100%
In particular, could the use of learning outcomes facilitate the identification of substantial differences between training programmes?		
Yes	27	44%
No	11	18%
Don't know	23	38%
Total	61	100%

Source: case studies

3.5 How the Bologna process could better support recognition

3.5.1 Overall impact of the Bologna Process on recognition

3.5.1.1 Impact on the duration of the recognition process

When looking at the overall impact of the Bologna process on recognition procedures, it is important to note that only a small minority (13%) of competent authorities report that duration of the procedure has reduced over the last two or three years (see Table 3.16). This makes it hard to argue that EU educational reform has had a significant practical effect in streamlining the recognition of professional qualifications.

Marginally more competent authorities reported that the duration of the process has decreased than reported an increase, but the **vast majority of competent authorities (80%) reported that over the last two or three years, the duration of the recognition procedure has been fairly constant**.

There is no clear pattern here by country. Competent authorities in nine different Member States reported that the process takes less time (notably Cyprus and Slovenia). Only five Member States reported an increase in time taken, and only in Germany did this encompass more than one competent authority (in Germany, five out of 15 competent authorities responding to this question, or 31%, reported an increase).

While only 8% of respondents overall reported an increase, 24% of responses relating to second level nurses (4 out of 17 responses) reported an increase in the duration of the process. There was no reported increase in the duration of the process for four professions: accountants; primary school teachers; real estate agents; and tourist guides. In general, health and social care-related professions (including second-level nurses) were more likely to report a decrease in the duration of the procedure than other professions.

Table 3.16 In the last two to three years, has the duration of the recognition procedure changed in practice? Has the time required to complete the procedure....

	Number (and %) of responses
...increased over this period	9 (8%)
...been fairly constant over this period	96 (80%)
...decreased over this period	15 (13%)
Total	120 (100%)

Source: Online survey of competent authorities

According to the survey of competent authorities, the average time taken for the recognition procedure is just over 10 weeks, although there were reported examples of the process taking over a year in Austria and Germany. There was no clear pattern in relation to the time taken to recognise qualifications by profession. Also, there does not appear to be a clear link between how advanced a country is with the implementation of educational reforms and the time required to recognise professional qualifications. This may reflect the nature of progress with education reform at national level as much as anything - in that it is variable within countries as well as between countries.

Table 3.17 shows that **three quarters of competent authorities (75%) need to contact the authority in the applicant's home Member State for further information about the content or structure of the applicant's qualification in only a minority of cases (i.e. less than 30% of cases)**. **A fifth of competent authorities never contact the foreign competent authority for this purpose**. The small number of authorities reporting a high proportion of cases requiring further information regarding the content or structure of qualifications covers a range of countries and professions.

Table 3.17 In approximately what percentage of cases are you required to contact the Competent Authority in the country where the qualification was awarded for further information about the content or structure of an applicant's qualification?

Proportion of cases	Number (and %) of responses
70-100%	6 (5%)
30-69%	23 (20%)
1%-29%	64 (55%)
Never (0%)	23 (20%)
Total	116 (100%)

Source: Online survey of competent authorities

3.5.1.2 Impact on the recognition process itself

Competent authority views on the impact of educational reforms on the recognition of professional qualifications were, unsurprisingly, fairly mixed (see Table 3.18 below). **A third of competent authorities responding to the online survey (33%) felt that the consistency and comparability of qualifications content between EU countries had improved in recent years due to educational reforms (the Bologna process, ECTS, the EQF)**. A smaller proportion of authorities (21%) felt that the reforms had not improved the consistency and comparability of qualifications. **A significant proportion of respondents (40%) did not know whether there had been an impact in this context – perhaps signifying a lack of awareness or understanding of the reforms**.

Table 3.19 shows that **only a small proportion of competent authorities (15%) reported that changes in the education systems in their countries linked to the Bologna reforms had led to a simplification or adaptation of the recognition process**:

- This included competent authorities in 14 different Member States, reflecting a geographical generality if not a depth of impact.
- It also encompassed competent authorities for a wide range of professions, though with an apparent concentration among accountant/auditor and secondary school teacher competent authorities.

A quarter of respondents (24%) did not know whether such changes had taken place and over half of respondents (61%) said that there had been no change to the recognition procedure as a consequence of the educational reforms. This is unsurprising given that the reforms are ongoing.

The small number of competent authorities reporting an impact on the recognition process was generally referring to the perceived added value of ECTS as measurement tool that enables competent authorities to act with greater clarity or more quickly. This was a point

made by individual competent authorities in a range of countries (BE, PT, IE, AT, RO, FR). The implication is that ECTS aids some competent authorities in understanding applicants' qualifications. One competent authority for accountants/auditors felt that the credit-based approach linked to learning outcomes and level descriptors offers greater potential to take account of the totality of an applicant's learning, making it easier to recognise qualifications and to offer more appropriate (better-tuned) compensation measures. While these views encompass a minority of competent authorities, the fact that they cover a range of professions and countries perhaps suggests something about the wider, future use of ECTS (and by association the Diploma Supplement) in supporting the recognition process.

In the case studies, competent authorities were able to expand on their view of the difference that the Bologna reforms have made to the recognition process. However, much of this was intangible in nature – providing some competent authorities with increased confidence through the common reference point of ECTS and the three-cycles, especially when faced with an increasingly diverse qualifications base in an enlarged Europe. The most tangible change, referred to by a small number of competent authorities, was to the length of degrees to align with the three-cycle structure. This indirectly supported recognition by promoting equivalence in length of study (although, of course, many exceptions remain).

Table 3.18 Has the consistency and comparability of qualifications content between EU countries improved in recent years due to educational reforms (Bologna, ECTS, EQF)?

	Number (and %) of responses
Yes	40 (33%)
No	26 (21%)
Don't know	49 (40%)
Not applicable	6 (5%)
Total	121 (100%)

Source: online survey of competent authorities

Table 3.19 Have any changes to qualifications or education systems in your own country (e.g. introduction of degree cycles, ECTS, learning outcomes) led you to adapt or simplify the recognition procedure?

	Number (and %) of responses
Yes	18 (15%)
No	73 (61%)
Don't know	29 (24%)
Total	120 (100%)

Source: online survey of competent authorities

3.5.1.3 Elements of the Bologna reforms that most facilitate recognition

Table 3.20 below shows which elements linked to the implementation of educational reforms facilitate the recognition procedure. This shows that, from a competent authority perspective, **it is the more detailed information relating to the content and structure of learning contained in the Diploma Supplement and ECTS transcripts that more practically supports the recognition procedure, rather than information relating to qualification level (Bologna cycles or EQF level)**. That information is still deemed to be 'useful' or 'very useful' by a little under half of all competent authorities, but three quarters of respondents found the use of the Diploma Supplement, in particular, to be 'useful' or 'very useful'.

Table 3.20 Which elements, linked to the implementation of recent educational reforms facilitate recognition procedures? To what extent?

	No Use	Limited Use	Useful	Very Useful	Don't Know	Total
Use of the Diploma Supplement presenting information about qualification content	11 (9%)	3 (3%)	25 (22%)	59 (51%)	18 (16%)	116 (100%)
Use of ECTS transcripts of record	18 (16%)	16 (14%)	22 (19%)	39 (34%)	19 (17%)	114 (100%)
Information provided by the applicant on the level of the qualification (according to the Bologna 3 levels)	18 (16%)	18 (16%)	27 (23%)	29 (25%)	24 (21%)	116 (100%)
Information provided by the applicant on the level of the qualification (according to the NQF/EQF)	20 (17%)	20 (17%)	29 (25%)	22 (19%)	24 (21%)	115 (100%)

Source: Online survey of competent authorities

3.5.2 Current barriers to the Bologna process supporting recognition

3.5.2.1 The ongoing nature of reform

The main barrier to the Bologna process supporting recognition relates to a lack of full and consistent implementation. The reforms are complex and not yet fully implemented to the point that they may have a significant impact on professional recognition. It is clear that for those elements of the Bologna reforms, there is still work within the education sector to develop understanding and capacity for using these tools, especially among universities, for curriculum design.

Research undertaken in 2008-09 for the independent assessment of the Bologna process ten years on reported that while *'most "architectural" elements of the EHEA, i.e. those involving legislation and national regulation, have been implemented in most countries'*, the achievement of key objective such as compatibility and comparability *'is still partly an open question'*[42].

Implementation varies considerably still in many Member States that have self-certified under Bologna; even though, in the most advanced countries, the implementation of the degree system and quality assurance (arguably, the most important elements to support recognition of professional qualifications and mobility) has been ongoing for five to ten years.

Bologna only 'works' if there is a reformed higher education system, which is not yet the case in all countries. There are specific issues related to whether there is an independent higher education system (centres, franchises), because it affects how countries view higher education competition.

The situation has been described as a *'European Higher Education Area of different speeds of implementation and varying levels of commitment'*[43]. In part, this reflects that countries had different starting points and faced different challenges. Yet challenges exist at national level even for countries at relatively advanced stage of Bologna implementation. The 2009 Bologna Stocktaking Report put Ireland in this advanced category; but Ireland's recent national strategy for higher education highlights ongoing challenges in the context of the credit-based, modular approach associated with the Bologna reforms:

"While semesterisation and modularisation have enabled greater flexibility and responsiveness to students needs, they have produced some new problems. Some

[42] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

[43] *ibid*

undergraduate programmes have become fragmented and now consist of a large number of small modules. For example, a one-year 60-credit course might consist of 12 separate five-credit modules. Such programmes are regarded by students as over-taught and over-assessed".[44]

The point is that the Bologna reforms are to some extent still 'work in progress' in all countries, which is likely to limit the extent to which these reforms can support the recognition of professional qualifications in 2011.

3.5.2.2 *Lifelong learning and recognition based on initial education and training*

There is also the prospect that the Bologna reforms lead to the development of new, more flexible approaches to higher learning (within the context of lifelong learning) that is increasingly divergent from traditional models of initial professional training and the achievement of professional qualifications as the culmination of an individual's formal education at a young age (particularly in terms of how this is expressed in Article 11 of Directive 2005/36/EC). EURASHE describes its vision for the European Higher Education Area in 2020 as being *'that in the entire EHEA, a system of linked and progressive cycles, which permits any qualified person to enter and exit higher education irrespective of age and educational profile is implemented*[45]*'*.

This implies a system including a substantial element of shorter, more targeted programmes to support individuals move horizontally between professional areas over the course of a career. In this direction, the European Commission 2011 Agenda for modernisation of higher education emphasises the need for Member States to encourage a greater variety of study modes (e.g. part-time, distance and modular learning, continuing education for adult returners and others already in the labour market), by adapting funding mechanisms where necessary[46]. Furthermore, it is the ambition of EURASHE to support higher education institutions to *'develop flexible and innovative higher education programs in all academic and professional fields, with appropriate methodologies, including distance-learning provisions'*[47].

Through the case studies there was little evidence of competent authorities being confronted with applications that were difficult to recognise because of the way in which the applicant had accumulated learning to achieve professional entry.

3.5.3 Additional mechanisms and procedures under Bologna to support recognition

Competent authorities interviewed for the case studies were split on the question of whether additional mechanisms and procedures are needed under the Bologna process to make quicker, easier or even automatic recognition happen in future (see Table 3.21 below). Half of competent authorities did not have a view either way. Among those interviews that did express a clear view, a majority of competent authorities for three professions thought that there was a need for additional mechanisms: medical/biomedical laboratory technicians; pharmaceutical technicians; physiotherapists.

A number of perspectives were offered:

- *"It is necessary that universities keep on improving their allocation of credits and fulfil the ECTS-requirements fully in the future" (competent authority for real estate agents).*
- *"There have to be more guarantees on how credits are calculated and allocated, and on learning outcomes - mainly on how they are tested" (competent authority for medical/biomedical laboratory technicians).*

[44] National Strategy for Higher Education to 2030 - Report of the Strategy Group, Department of Education and Skills, Ireland (January 2011)

[45] EURASHE 2010

[46] European Commission (2011) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions: Supporting growth and jobs – an agenda for the modernisation of Europe's higher education systems

[47] ibid

- *"The Europass supplement is very useful as it adds information to that which is already included in the certificate. If Europass or something similar was obligatory, then it could advance the recognition procedure further" (competent authority for multiple professions).*

In terms of the role the Internal Market and policies might play in supporting the Bologna process to impact on professional recognition, there were a number of references to supporting common platforms (or something similar) as a means of supporting alignment under the Bologna reforms. Establishing minimum or basic competences at the level of professions was thought to be a potentially useful trigger for supporting competent authorities to recognise on the basis of learning outcomes. The achievability of such an aim was questioned by some competent authorities. Other issues that were mentioned were beyond the scope of the study, but included the problem of fake/bought degrees gained by nationals abroad who return home seeking recognition. Exploring the use of continuing professional development (CPD) in a recognition context was also suggested as means of supporting free movement.

Table 3.21 Are additional mechanisms and procedures needed under the Bologna Process to make quicker, easier or even automatic recognition happen in future?

	Number of competent authorities	% of competent authorities
Yes	12	22%
No	15	28%
Don't know	27	50%
Total	54	100%

Source: case studies

4 Professions which would benefit from easier recognition

4.1 Introduction

This chapter relates to the study question asking:

- *'For which economic sectors and related regulated professions in the Internal Market would quicker and easier or even automatic recognition of professional qualifications be most beneficial by 2020 and respectively by 2030?'*

The study terms of reference required an analysis of *'labour market needs and demographic developments in numbers of active working population'*, while taking account of current and future mobility flows of professionals and *'potential growth sectors for the Internal Market, including digital and green services'*.

4.2 The analytical framework employed to identify professions that would benefit from easier recognition

In order to answer the main study question, it was important to separate out several dimensions to future demand:

- 1) The current and future level of demand for labour in sectors/professions in the EU. Specifically this required a review of:
  - The projected growth (expansion demand for labour) expected up to 2020 and 2030. This is based on European- and national-level data on growth forecasts by sector and profession, and included analysis of both trends for established professions and the emergence of new sectors (e.g. the growth of digital and green sectors)
  - The level of demand caused by changing skills needs for particular sectors/ professions, which may lead to the creation of new occupations or significant changes to existing occupations. This occurs when sectors are influenced by external market factors, such as the advent of new technologies, the opening of new markets or legislative changes. This can lead to increased labour demand for particular occupations, even if the overall size of the sectors/professions is not expected to increase.
  - The level of replacement demand for sectors/professions, which is a measure of the new entrants to a sector/profession required to maintain the existing stock of labour to offset outflows through, for example, retirements and occupational mobility. The level of replacement demand for labour is therefore closely tied to considerations such as the demography of the workforce. It also means that, even for sectors that are contracting in size, there is often a net requirement for new entrants where sectors have a relatively high current workforce age profile.
- 3) The volume and 'quality' of labour supply, measured in terms of the stocks of suitably skilled professions (including demographic considerations and future supply in the context of specific educational areas/disciplines) and the incidence of skills gaps and shortages for professions at national level.
- 4) The volume/level of labour mobility experienced by different sectors/professions as an indicator of the extent to which migration may offer part of the solution to anticipated gaps in labour supply. This dimension is the most difficult to analyse for a number of reasons.
  - First, the level of existing information relating to professions is much lower in the context of migration than it is in relation to the other dimensions of demand/supply.
  - Second, levels of mobility are arguably dependent on the wider regulatory/legal context and cannot therefore be considered independent of an analysis of current barriers to mobility (one of which may be the difficulty in recognising professional

qualifications, but which may also include other barriers raised in the Monti report[48] and elsewhere – e.g. pensions etc).

– Third, migration levels in the context of inter-EU mobility could have a further impact on skill/labour shortages at national level – crudely speaking, solving the problem in one Member State by exacerbating it in another Member State. This is not always an explicit consideration in national analyses of demand and supply, although it might be deemed significant when looking at professions across Europe (assuming, of course, a significant level of migration in future).

- 5) The regulation of the professions in the different Member States and the related needs for an easier and quicker recognition of professional qualifications. *A priori* levels of future demand for and supply of labour do not alone provide the basis for making recommendations about where improved recognition is likely to be most beneficial. We must also take account of the level and nature of national regulation of future priority professions/sectors (according to forecasts/research). For example, a major growth profession may not be highly-regulated and not therefore a profession for which improved recognition is going to be particularly beneficial.

4.3 Key sectors in the current European labour market

4.3.1 Current EU employment by sector

There are six sectors in Europe that employed more than 15 million workers in 2009 (see Table A10.1 in Annex 10):

- Manufacturing;
- Wholesale and retail trade;
- Human health and social work activities;
- Construction;
- Public administration and defence; and
- Education.

It is possible to analyse these sectors by Member State to see if they are important in all Member States. The data is presented by country in A10.3 of Annex 10. It shows that in all European countries, these six sectors are important in providing a large proportion of employment in the country. However, there are some large differences between countries.

For example, the manufacturing sector provides over 20% of employment in many countries (mainly Eastern European countries such as the Czech Republic, Slovakia and Slovenia, although Germany also has a large manufacturing sector). However, in other countries (for example the UK, Netherlands and Luxembourg), manufacturing, although still a relatively large sector, is much less important, accounting for under 10% of employment.

A similar pattern is seen in human health and social work, with the sector providing over 15% of total employment in some countries (Denmark, The Netherlands, Sweden and Finland), yet less than 5% in others (Cyprus, Latvia and Romania). Again, there is a fairly distinct pattern, with the majority of countries with larger proportions of people employed in this sector being Northern/Western and those with lower proportions being Southern/Eastern countries.

The agricultural sector is interesting regarding differences between countries. In Romania, the sector represents around 30% of total employment. It is also a very large sector in Greece, Poland and Portugal. However, in the majority of European countries (particularly Northern/Western countries) agriculture is a much smaller sector, representing less than 2% of employment in the UK and Germany. These examples highlight that, although there are a lot of commonalities in the structure of Member State economies, there are also some significant differences.

[48] Monti M, A New Strategy for the Single Market at the Service of Europe's Economy and Society (2010)

In order to relate these broad sectors to professions in the context of Directive 2005/36/EC, it is important to disaggregate them into more specific groups, using more detailed NACE rev2 codes. At EU27 level, the data is shown in Table 4.1 below[49]. This shows that the most important sub-sectors in manufacturing are the manufacture of food and the manufacture of fabricated metal products, except machinery and equipment, and that retail is the dominant sub-sector in the wholesale and retail sector.

Table 4.1 Detailed employment in specified sectors, 2009

Sector	Employment (1000)	% of sector
Manufacture		
Manufacture of food products	4398.2	12.5
Manufacture of beverages	443.2	1.3
Manufacture of tobacco products	56.4	0.2
Manufacture of textiles	782.5	2.2
Manufacture of wearing apparel	1523.0	4.3
Manufacture of leather and related products	469.4	1.3
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	1238.8	3.5
Manufacture of paper and paper products	692.9	2.0
Printing and reproduction of recorded media	1065.6	3.0
Manufacture of coke and refined petroleum products	213.5	0.6
Manufacture of chemicals and chemical products	1380.3	3.9
Manufacture of basic pharmaceutical products and pharmaceutical preparations	803.7	2.3
Manufacture of rubber and plastic products	1590.3	4.5
Manufacture of other non-metallic mineral products	1490.7	4.3
Manufacture of basic metals	1328.6	3.8
Manufacture of fabricated metal products, except machinery and equipment	3822.0	10.9
Manufacture of computer, electronic and optical products	1581.3	4.5
Manufacture of electrical equipment	1416.9	4.0
Manufacture of machinery and equipment n.e.c.	3117.4	8.9
Manufacture of motor vehicles, trailers and semi-trailers	2891.5	8.2
Manufacture of other transport equipment	1042.6	3.0

[49] Unfortunately, it is not possible to do this at a national level, due to the sampling methodology of the LFS yielding very small samples in these specific groups.

Sector	Employment (1000)	% of sector
Manufacture of furniture	1374.9	3.9
Other manufacturing	1097.9	3.1
Repair and installation of machinery and equipment	1249.6	3.6
Construction		
Construction of buildings	6130.8	35.4
Civil engineering	1843.6	10.7
Specialised construction activities	9323.8	53.9
Wholesale and retail		
Wholesale and retail trade and repair of motor vehicles and motorcycles	3984.3	12.9
Wholesale trade, except of motor vehicles and motorcycles	7581.8	24.6
Retail trade, except of motor vehicles and motorcycles	19206.5	62.4
Public administration and defence; compulsory social security	15660.4	100.0
Education	15773.8	100.0
Human health and social work		
Human health activities	12922.8	59.4
Residential care activities	4206.2	19.3
Social work activities without accommodation	4638.4	21.3

Source: Eurostat, Labour Force Survey (LFS), 2009

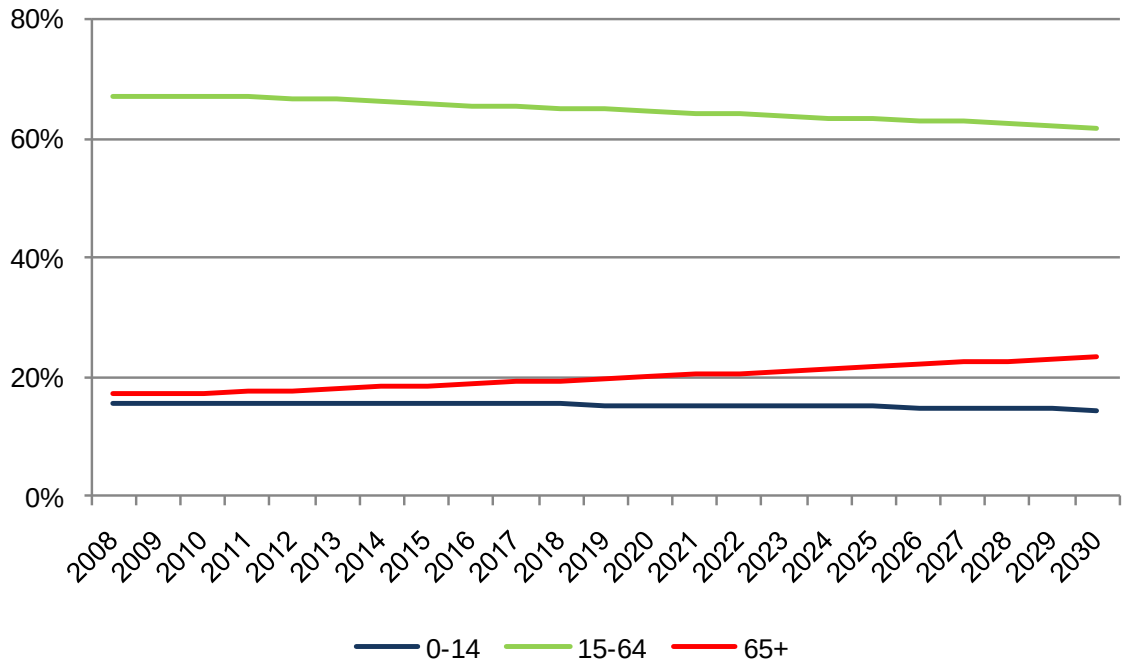
4.4 Growth sectors and the demand for labour

4.4.1 Demographic context

In order to understand and contextualise data of sector growth, it is important to place this in the context of general demographic effects that underpin the demand for labour across all sectors.

The EU has an aging population. According to projections, by 2020 there will be nearly 22% more people aged over 65 than in 2008, and by 2030 it is expected that the rise from 2008 will be 45%. Although total population is expected to grow, it is not expected to grow as quickly as the population of over 65s. This means the proportion of the population who are of working age will decline. This is shown in Figure 4.1 below.

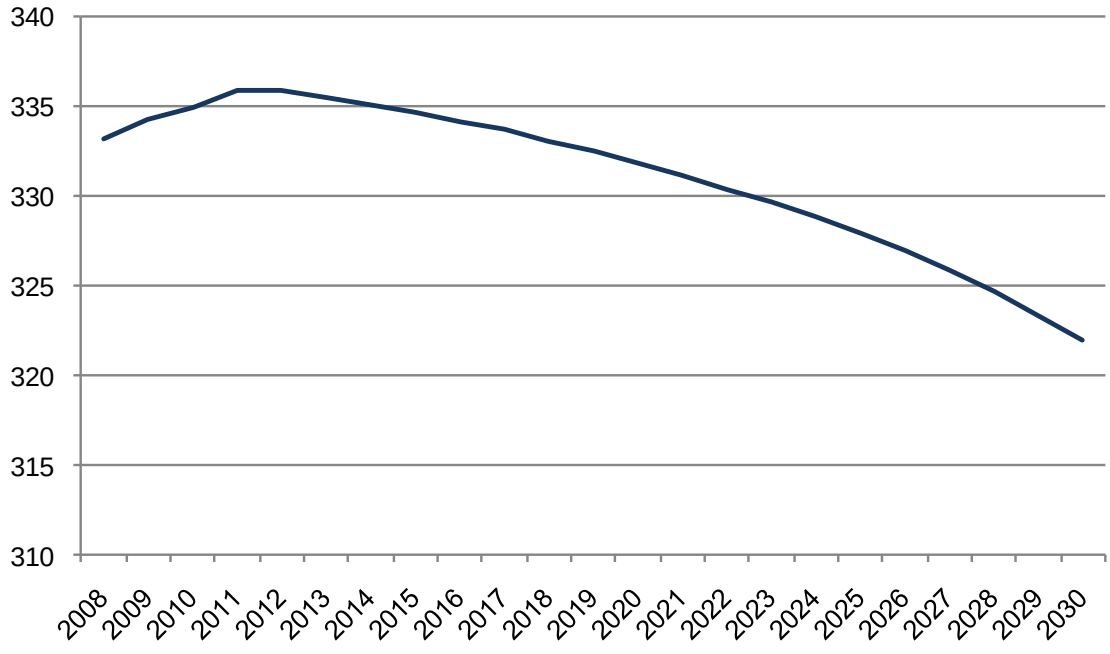
Figure 4.1 EU population projections, 2008-2030



Source: Eurostat population projections, 2009

It is expected that not only will the proportion of the population who are of working age decline, but the size of the population in absolute terms will also decline, and that by 2014, the working age population will already be smaller than it was in 2008. Following a peak in 2012, the working age population of Europe is expected to enter a period of sustained decline. This is shown in Figure 4.2.

Figure 4.2 EU Working age population in millions, 2008-2030



Source: Eurostat population projections, 2009

This declining working age population is likely to mean, assuming that employment rates remain constant, that there will be increasing competition among employers to recruit staff. This will mean that workers, particularly highly-skilled workers, will be in increased demand, which may lead to increased movement between jobs and potentially greater workforce mobility around Europe.

4.4.2 Recent trends in demand for labour

Trends are now examined for some of the broad sector groups since 1995[50]. These trends are shown in Annex 10, Table A10.8 and Table A10.9. The trends should be interpreted with caution, as the period covers several expansions of the EU, as well as the change in data groups. For example, large rises in the number of people employed in the agriculture sector in 2007 is likely to be due to the expansion of the EU and the importance of agriculture sector in the accession states, rather than growth in the sector.

However, taking these things into account, some general trends can be drawn from the data:

- Manufacturing represents the highest share of EU employment for the entire period; however, the proportion of people employed in the sector has been in decline for the whole period, dropping from 21.2% in 1995 to 16.1% in 2009.
- The wholesale and retail sector is the second largest sector over the whole period, but has also decreased slightly in size, from 15% to 14.1% in 2009. This, though, is not due to the size of the workforce in the sector (which has increased over the period, except in the period 2008-2009), but due to total European employment increasing at a faster rate. This is also the case for the proportion of people employed in public administration and defence.
- The human health and social work sector has increased slightly over the period, mainly in the first half of the period. Since 2005, the sector has consistently represented between 9.5-10% of employment.
- Employment in construction has remained fairly stable, building to a peak of 8.4% in 2008 before a sharp drop in 2009. This can probably be put down global economic conditions, rather than a terminal decline in the sector.
- The proportion of people employed in education has grown modestly over the period.
- Real estate, renting and business activities (real estate activities, professional, scientific and technical activities and administrative and support service activities combined) represents a large sector of the economy (9.4% in 2009), which has been growing over the period, although the sector declined in 2008, probably driven by global economic conditions. Growth returned to the sector in 2009.

Overall, there are no sectors which have shown consistent growth significantly above the average for the whole of Europe. Of the sectors with the highest levels of employment, manufacturing has declined significantly, public administration and defence and wholesale and retail sectors have declined in terms of the proportion they represent but not in absolute terms. Construction, education and health and social care have remained fairly constant in the proportion of European employment they represent, with growth slightly above the European average. From this data, it is difficult to predict what the fastest growing sectors will be, but if these rough trends continue, these six sectors will still employ the highest proportion of workers in 2020.

4.4.3 Sectors where there is currently a high level of recognition

Table A10.11 in Annex 10 maps by sector the professions that have received the highest number of decisions on applications for recognition under the general system over the period 1997-2009. It shows that the sectors with a high number of professional recognition decisions are:

- Construction;

[50] In 2008, the groups of industries changed from NACE rev1 to NACE rev2. Therefore, the groups have been mapped using EUROSTAT guidelines, to create groups where trends can be analysed.

- Professional, scientific and technical activities (e.g. engineers, surveyors);
- Education;
- Health and Social Work ;
- Transportation and storage.

These sectors include a range of professions where there is already a high demand for recognition. In particular the health and social care, education and construction sectors have a high number of regulated professions with significant activity in the context of Directive 2005/36/EC.

4.5 Labour Market Forecasts

4.5.1 Overview of the different methodological approaches

There are a range of employment forecasts which present scenarios for the likely future growth of sectors. This is critical evidence for understanding which regulated professions are within future growth sectors. However, the longer the time period is, the higher the degree of uncertainty around the forecasts. In this section, we will firstly examine literature covering the whole of the European economy, and follow this with information from sector-specific literature. There is an absence of literature providing projections to 2030, largely because *"forecasting rules stipulate that the forecasting period should not exceed the past time series on which the forecast is based. Past time series earlier than 1996 are not available for many Member States."*[51]

Growth projections are available at both European and Member State level. At a European level, the recent *New Skills for New Jobs* initiative identified the need for the robust identification of future demand for skills and gave Cedefop responsibility to conduct European labour market forecasts. This resulted in a series of three reports which provided medium term forecasts up to 2020:

- Skills Needs in Europe: Focus on 2020, published in 2008;
- Future Skills Supply in Europe: medium term forecast up to 2020, published in 2008: and
- Skills supply and demand in Europe: medium term forecasts up to 2020, published 2010 (which updated previous forecasts and reflected the changing economic situation in the short term).

At Member State level, there is also a significant amount of national forecast data available. Many countries have well-developed mechanisms for labour market analysis and have been conducting forecasts for many years. For example, Sweden, UK, Ireland, France, Germany, Czech Republic, the Netherlands and Italy have undertaken labour market forecasts for over 10 years[52]. However, there are some countries where labour forecast data is not available, such as Greece, Poland, Lithuania, Bulgaria, Slovakia, Portugal and Spain (although Spain and Greece are starting to develop a time series for labour market forecasts; and Bulgaria started work on a forecast in 2011).

The European Employment Observatory Autumn Review 2008 and national forecasting reports shows that a range of approaches are employed by different countries, which are summarised in A10.5 in Annex 10. In particular, it shows:

- A relatively high number (two thirds) of Member States conduct labour market forecasts. Moreover the European Employment Observatory (EEO) research and the stakeholder interviews indicate that at least two countries are currently in the process of developing a time series for labour market forecasts;
- Where labour forecasts exist, the vast majority are short to medium term forecasts (5-10 years). Only three countries provide more long term forecasts, and when these are conducted it is under the proviso that the forecasts are updated at regular intervals (generally every three years);

[51] Skills Needs in Europe, Cedefop, 2008

[52] European Employment Observatory Review: Autumn 2008, DG Employ, 2008

- There are a wide range of models employed for labour market forecasting, with many countries employing bespoke national forecasting models;
- In addition, the data used for forecast modelling varies. Most are based on employer surveys and employment trend data, but some also employ behavioural equations (which predict the influence of socio-economic factors) and vacancy data;
- There are a wide range of national institutions that are responsible for labour market forecasts. In most instances, ministries for employment, ministries for education, employment services, statistics agencies or research institutes have overall or shared responsibility. However, in some countries other parties also have responsibility for compiling labour forecasts, including ministries for finance, regional councils or representative bodies, social partners and expert groups.

In addition, the EEO review also identifies that there is likely to variances in the robustness of the data which is due to the sample size employed by different Member States and also the availability and accuracy of previous employment data. This is felt to be a particular issue in Slovenia and Romania, for example.

It can therefore be surmised that although there is a significant quantity of national forecasting information available, it is not necessarily comprehensive in terms of coverage and quality. In addition, the majority of forecasts are only available up to 2020, and there is relatively little national information on more long-term projections.

4.5.2 Information contained in national labour market forecasts

An analysis of national labour market forecasts shows that nearly all Member States provide growth forecasts by occupation level. In most instances they are based on ISCO classifications and therefore are in a consistent format.

Some national forecasts also presents information at a sector level, but the level of detail varies. For example, in Cyprus and Ireland information is broken down into 9-10 sectors, whereas in the UK it is broken down by 25 sectors. This range of approaches is likely to be due to the sample size of the employer surveys which underpin the forecasting model. Where the sample size is small, it will not be possible to extrapolate information into sufficient detail. This often leads to different groupings of occupations. Many of these can be transposed to NACE rev2 format, but there are some instances where more detailed sector information is not available for comparison between different countries.

In some instances where forecasts are provided, it is also difficult to identify information on replacement demand. This is available in some forecasts (such as the UK, France and Finland), but not in others.

In addition, most countries only provide national-level data, while some countries also provide growth projections by region. This is particularly common among larger Member States, such as France, Germany and the UK.

This shows that national forecast data is presented in a format that enables *some* comparison across different countries by occupation and sector. However, there are limitations to the level of comparison that can be done for particular sectors, as in some instances forecast information is not provided in a consistent format.

4.5.3 European sectors expected to require an increase in jobs

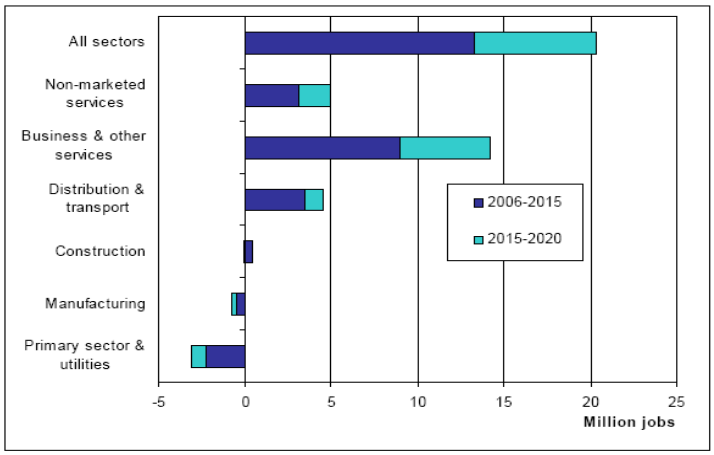
European-level research predicts that the number of jobs in Europe is expected to grow up until 2020, although more recent forecasts revised downwards earlier estimates for the scale of growth. Skills Needs in Europe, published in 2008, was widely-reported as forecasting the creation of 20.3 million jobs from 2006 to 2020 across the then EU25[53]. A more recent forecast, Skills Supply and Demand in Europe, published in 2010, reflected on the ongoing economic crisis and estimated around 7 million jobs created from 2010 to 2020 across the EU27. This is still expected to lead to an overall rise in employment rates. Skills Needs in

[53] Skills Supply and Demand in Europe, Cedefop, 2010

Europe[54] also projected employment in broad sectors up to 2020. It predicted a large shift towards the service economy (see Figure 4.3 below), with services representing nearly half of European employment by 2020.

Skills Supply and Demand in Europe[55] provides slightly more detail in its medium term forecasts of employment up to 2020, based on the E3ME macroeconomic model[56]. Overall, the model predicted employment in the EU will grow at 0.3% per annum. The areas predicted to see the strongest growth are business services (for example ICT and consultancy) and hotels and catering. Looking at the sectors which represented the largest proportions of European employment in 2008, it predicted growth of 0.6% per annum in the health and social work sector, 0.2% in education and 0.2% in construction.[57]

Figure 4.3 Employment trends by broad sector, change in millions, EU-25+



Source: Cedefop 2008

These sectoral growth forecasts are not uniform across all Member States. National labour forecasts identify sectors that expect to see considerable growth in some countries, even though across Europe the sector is expected to stay static or decrease. Below we outline the sectors which are expected to experience significant demand for labour in some Member States.

4.5.3.1 Health and social care

One of the sectors that are expected to grow significantly in nearly all countries is health and social care. This is due to changing demographics of Europe, and the increase in the elderly population. This growth is not expected to be restricted to primary health care and social work, but also home-based healthcare and self-help programmes. Further literature from the OECD supports the prediction that employment in health and social work will increase. A paper from the OECD (2007)[58] projected an increased number of people requiring long-term care up to 2030. This is due to a rise in life expectancy in Europe, which has risen by six years since 1980[59]. This increase in life expectancy is expected to lead to an increase in the number of care places provided by countries, which in turn means that there would need to be more people providing care. As pointed out by Fujisawa and Colombo (2009)[60], changes in society, with people less likely to provide informal care due to increasing levels of labour

[54] Skills Needs in Europe, Cedefop, 2008

[55] Skills Supply and Demand in Europe, Cedefop, 2010

[56] Cambridge Econometrics model

[57] There is no specific mention of the wholesale and retail sector.

[58] Trends in Severe Disability Among Elderly People, Lafortune, G. & Balestat, G. OECD Health working papers No.26, 2007

[59] Health at a Glance: Europe 2010, OECD, 2010

market participation will mean this care is more likely to be provided professionally rather than by family members.

Table 4.2 shows the labour demand for the health and social care sector where data is available. It shows that a major demand of labour is expected among all countries, which includes a significant growth in the number of new jobs created.

In addition, the health and social care sector is also expected to experience significant replacement demand up to 2020. Table A10.13 in Annex 10 shows that the health and social care sector has a high proportion of the workforce aged over 50 (nearly 30%) and, as such, many of these posts will require replacing in the short to medium term. In the UK, nearly 1.2 million posts are expected to be replaced by 2017; and in France, 600,000 posts are required to be replaced by 2015. The replacement demand far exceeds growth projections within these sectors, and therefore is a key driver to future labour demand.

Eurostat data on workforce demographics shows that, at national level, Bulgaria (39%), Estonia (37%), Finland (36%), and Cyprus (36%) have the highest proportion of workers over 50. Slovenia and Austria have the lowest proportion of workers in the sector over 50 with 20%.

Table 4.2 Labour demand in Health and social work by Member States (where sector level data is available)[60][61][62][63][64][65][66][67]

Countries	Future projected size of the sector	Labour demand
France (2015)	2,325,000	New jobs: 391,000 Replacement demand: 600,000
UK (2017)	3,684,000	New jobs: 396,000 new jobs Replacement demand: 1,478,000 jobs
Ireland (2020)	543,800	New Jobs: 224,000 (although the grouping also includes public services)
Cyprus (2020)	19,128	New jobs: 6,785
Germany (2025)	4,939,000	New Jobs: 969,000
Finland (2030)	354,000	New jobs: 54,000 Replacement demand: 137,785

The sectoral analysis of the health and social care sector, conducted for DG Employ, predicts that the growth in the sector will lead to a large increase in demand for managers, doctors, health associate professional (opticians, radiographers) nursing and midwifery professions and social workers. National data from France shows that the growth is expected to be highest among social services, nurses and midwifes[67].

[60] The Long-Term Care Workforce: Overview and Strategies to Adapt Supply to a Growing Demand, Fujisawa, R. and Colombo, F. OECD Health working papers No.44, 2009

[61] Working Futures 2007-2017, UKCES, 2009

[62] Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und – angebot bis 2020, , Bonin et al, 2007

[63] Current Trends in Occupational Employment and Forecasts for 2010 and 2020, Ireland, the Expert Group on Future Skill Needs

[64] Estimated employment in the Cyprus Economy, 2010-2020, Authority Human Resources, 2010

[65] EEO Autumn 2008 Country Report: Finland

[66] Les Métiers en 2015, Centre D'analyse Stratégique, 2007

[67] Les Métiers en 2015, Centre D'analyse Stratégique, 2007

4.5.3.2 Education

Education is another sector which is expected to experience growth up to 2020. This is due to:

- Expected changes to the structure of the European labour market (wherein the number of lower-skilled jobs is expected to decline), which may mean that more adults staying in education longer to obtain the higher-level skills required by the labour market.
- Technological developments and other market factors are also expected to require continuous professional development, which may stimulate demand for education.
- An increased demand for learning from older people, who may want to refresh their skills or look for new ways to obtain mental stimulation[68].

In addition, changes to participation rates and the duration of compulsory education in countries such as Portugal (where the number of hours students study in school is rising) and the UK (where the school participation age is expected to rise from 2015) is expected to increase the demand for teachers.

Table 4.3 shows that growth is expected among most countries where data is available, with the exception of Germany, where the sector is expected to decrease. In Germany the number of jobs is expected to decrease but the GVA of the sector is expected to increase, indicating that the loss in jobs is due to efficiency gains in the sector.

Table 4.3 Labour demand in Education by Member States (where sector level data is available) [69] [70] [71] [72] [73]

Countries	Future projected size of the sector	Labour demand
France (2015)	1,391,000	New jobs: 108,000 Replacement demand: 600,007
UK (2017)	2,553,000	New jobs: 109,000 Replacement demand: 1,056,000
Cyprus (2020)	34,316	New jobs: 8,734
Germany (2025)	2,046,000	Decrease by 250,000
Finland (2030)	133,000	New jobs: 1,000 Replacement demand: 152,000

In the UK and Sweden, expansion demand has been predicted in the number of higher secondary and tertiary education professionals[74] [75]. Sweden also noted a potential decrease in early years' teachers as their population declines.

Education is also a sector expected to experience significant replacement demand up to 2020. Table A10.13 in Annex 10 shows that over 30% of the population is over 50. Significant replacement demand is expected in the UK (1,056,000 new workers required), France (600,007) and Finland (152,000), which will be a significant factor in influencing labour demand, even where the net growth in jobs is expected to be low.

More detailed analysis of the Eurostat Labour Force Survey (2011) shows that, at a country level, the highest proportion of the workforce that are over 50 are in Italy (42%), Bulgaria

[68] Skills Supply and Demand in Europe, Cedefop, 2010

[69] Working Futures 2007-2017, UKCES, 2009

[70] Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und – angebot bis 2020, , Bonin et al, 2007

[71] Estimated Employment in the Cyprus Economy, 2010-2020, Authority Human Resources, 2010

[72] EEO Autumn 2008 Country Report: Finland

[73] Les Métiers en 2015, Centre D'analyse Stratégique, 2007

[74] Working Futures 2007-2017, UKCES, 2009

[75] EEO Autumn Review: Sweden Country Report, 2008

(38%), Lithuania (37%) and Sweden (37%). In these countries, replacement of existing professionals will stimulate significant labour demand.

4.5.3.3 Business services

Another area that is expected to experience significant growth in the next few years is professional services, which encompasses a range of sectors including ICT, business consultancy, financial services and real estate. Business and other services are expected to experience the largest growth up to 2020[76].

Analysis of data at a national level for this sector is more difficult as countries use different classifications. In France, for example, information is broken down as computing, management business and finance, while in Finland forecast data is broken down by management and expert.

However, it can be discerned through forecasts[77] that in Germany, the sector will increase by 2.5 million by 2020; and in France computing is expecting growth of over 300,000 and management business is expecting growth by just under 300,000 by 2015[78].

At EU level, the Business Services sector is classified as a reasonably young workforce, with only 25% aged over 50. However, in some countries the number of older workers is slightly higher, particularly Finland (29%), Sweden (27%), Hungary (27%) and the UK (26%). In the UK, replacement demand is expected for 300,000 jobs up to 2017.

Within this broad sector, it is understood that ICT is a particular sub sector that is expected to experience growth. In France, the Computing sector is expected to rise by 300,000 by 2015; and in the UK, 125,000 new jobs are expected to be created by 2017[79].

The Transversal Sectoral Analysis (2007)[80] undertaken at European level states that digitalisation and the use of ICT is a key factor that is influencing the changing skills needs of different sectors. Of the 19 sectors in scope of the study, 18 were expected to see skills need arise from ICT and digitalisation. Growing demand for ICT services is expected to see a growth in employment in the sector.

The Action Plan for Europe 2020, coupled with the OECD's sector outlook for ICT (2010)[81], gives detailed descriptions on the areas that are expected to grow in the future. Previously, manufacturing of ICT products was an important sector in the EU, but it is expected that the majority of manufacturing will move away from the EU and OECD countries. This will mean that the ICT sector will increasingly focus on services in the EU. However, it is predicted that there will still be jobs in research and development in ICT in OECD and EU countries, in areas such as virtualisation software, "smart" applications and cloud computing. In addition, the growing range of services provided online and electronically is expected to lead to an increase in web designers and application developers.

In addition, many OECD and EU Governments are aiming for 100% access to high-speed internet in the medium term. This will create jobs in the provision and maintenance of internet links, as well as jobs in digital industries, such as games, music and films. News, advertising and other media outlets are also switching much of their content towards the internet, which will new create jobs. The increased access to the ICT by households and businesses will create more demand for network security, a further industry which is expected to grow. Recycling and disposal of ICT products are also likely to increase, as presently disposal of ICT products is energy intensive.

[76] Skills needs in Europe 2020, Cedefop, 2008

[77] Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und – angebot bis 2020, , Bonin et al, 2007

[78] Les Métiers en 2015, Centre D'analyse Stratégique, 2007

[79] Working Futures 2007-2017, UKCES, 2009

[80] Transversal Analysis on the Evolution of Skills Needs in 19 Economic Sectors, DG Employ 2010

[81] Information Technology Outlook, OECD, 2010

Despite the growth anticipated in the ICT R&D field, the overall Science and Technology outlook from the OECD (2009) is less optimistic. This is because of funding cuts for R&D and tertiary education from Governments due to fiscal responsibility following the global financial crisis.

4.5.3.4 Green technologies

Green growth is a central feature of the EU's strategy for sustainable growth and jobs, and a European fiscal stimulus of €200m in 2008 focussed on investment in clean technologies and infrastructure. In addition, European and national legislation on reducing carbon emissions and consumer drivers for eco-products are also stimulating demand for low carbon technologies, with renewable energy and eco-construction considered to be areas which could provide job growth. [82]

The green technologies sector at its broadest definition[83] has a turnover of €270 billion in current prices (2006) and employs 2.3 million people[84]. The green technologies 'footprint' covers a wide range of sectors, including:

- Agriculture and the environment;
- Manufacturing (and is particularly pertinent to energy intensive industries, such as chemical, automotive, non-metallic materials, furniture and textiles);
- Energy and Utilities;
- Construction and the Built environment[85].

At a national level the impact of green technologies on national economies varies significantly. Many countries (such as Austria, Belgium, Czech Republic, The Netherlands, Portugal, Germany, France, Spain, Sweden and the UK) have introduced green stimulus packages which outline significant environmentally-related investment, mainly in energy efficiency in buildings; low-carbon vehicles and other forms of sustainable transport.[86] These investments are expected to lead to growth in green-collar jobs in construction, automotive manufacture and engineering.

It is difficult to identify quantitative data forecasts on the green technologies sector, as it is classified as an overarching sector that covers a range of NACE 2.0 sector classifications. Therefore the only information available on this sector is primarily from specific research on green jobs and the green economy. From this information, it is understood that countries such as the UK[87], Germany[88], Ireland[89], France[90], and Sweden[91] expect green technologies to provide new business opportunities in what is expected to become a £4 trillion global market by 2015. As a result, employment in the sector in Ireland is expected to rise by over 10,000 by 2015, with growth expected in energy efficiency products, the manufacture and maintenance of renewable energy, water and waste, and environmental consultancy services. In the UK, the low carbon and environmental goods and services industry employed over 880,000 in 2007/08. The value of thee sector is expected to grow strongly,

[82] Low Carbon and Environmental Goods and Services: an industry analysis, Innovas Solutions, Department for Business, Enterprise and Regulatory Reform, 2009

[83] OECD/Eurostat definition of all "activities which produce goods and services to measure, prevent, limit, or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems

[84] Environmental and labour force skills: Overview of the links between the skills profile of the labour force and environmental factors, ECORYS for the European Commission, 2008

[85] http://www.eurofound.europa.eu/emcc/newjobs.htm

[86] Skills for Green Jobs, CEDEFOP, 2010

[87] Enabling the Transition to a Green Economy: Government and business working together, Department for Business, Innovation and Skills

[88] The employment dimension of economy greening, European Employment Observatory, 2009

[89] Future Skills Needs of Enterprise within the Green Economy in Ireland, Expert Group on Future Skills Needs, 2010

[90] Observatoire des emplois et métiers liés à la croissance verte, rapport d'activité, Commissariat général au Développement durable, 2010

[91] Ett energieffektivare Sverige, Swedish Government, 2008

with annual growth rates of over 5% expected up to 2015. In Germany, investment is expected to lead to 500,000 jobs in environmental protection in 2020 and 800,000 by 2030 and in France 600,000 green jobs are expected to be created in 2020.[92]

In other countries, there is a lack of clarity on the potential impact of green technologies. Many of the stakeholders interviewed felt that green technologies are not likely to have a significant impact on creating new jobs, but instead will require the existing workforce to gain new skills in order to ease the transition to a competitive, greener economy[93]. However, some interviewees felt that it would lead to an increased demand for higher-level design and management skills which would result in an increase in the number of engineers, material scientists and project managers.

4.5.3.5 Construction

Construction is expected to experience slow growth among most countries where data is available. Where significant growth is expected, it is largely due to significant state investment in infrastructure development. Some stakeholders explained that projected growth was due to national initiatives to increase the stock of schools or the renovation or national or local government building stock. In the UK, for example, a commitment to increase the stock of affordable housing is expected to lead to growth in the sector. Furthermore, one stakeholder explained that the need to reduce domestic carbon emissions is also resulting in programmes of retrofitting the existing housing stock.

Table 4.4 shows the labour demand in the sector. It shows that although growth is expected in most countries, where data is available, it is relatively small across the sector.

Construction also has a relatively small proportion of the workforce (24%) over 50, which is shown in Table A10.13. Eurostat Labour Force Survey (2011) data shows that, at Member State level, the highest proportion of workers over 50 are in Finland (31%), Sweden (29%) and the UK (27%). In France, replacement demand is expected to lead to 413,000 jobs needing to be replaced and in the UK 707,000 jobs that need to be replaced.

In France, the greatest demand for professions is in construction technicians and construction machinery operatives. In the UK, the largest growth is expected in management processions and skilled trade occupations.

Table 4.4 Labour demand in Construction by Member States (where sector level data is available) [94][95][96][97][98][99]

Countries	Future projected size of the sector	Labour demand
France (2015)	1,627,000	New jobs: 32,000 Replacement demand: 413,000
UK (2017)	2,187,000	New jobs: 175,000 Replacement demand: 707,000
Ireland (2020)	286,700	New jobs: 20,000
Cyprus (2020)	52,572	New jobs:16,797
Germany (2025)	2,223,000	New jobs: 49,000

[92] Skills for Green Jobs, CEDEFOP, 2010

[93] The employment dimension of economy greening, European Employment Observatory, 2009

[94] Working Futures 2007-2017, UKCES, 2009

[95] Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und – angebot bis 2020, , Bonin et al, 2007

[96] Current Trends in Occupational Employment and Forecasts fro 2010 and 2020, Ireland, the Expert Group on Future Skill Needs

[97] Estimated Employment in the Cyprus Economy, 2010-2020, Authority Human Resources, 2010

[98] EEO Autumn 2008 Country Report: Finland

[99] Les Métiers en 2015, Centre D'analyse Stratégique, 2007

Finland (2030)	153,000	New jobs: 14,000 jobs Replacement demand: 60,000

4.5.4 Projected changes in skills needs

Looking across sectors, it is possible to identify a range of common drivers that are expected to result in changing skills needs of the labour workforce. These include:

- competition from emerging economies;
- off shoring and outsourcing;
- climate change and environmentalism;
- the impact of the ageing workforce;
- ICT and digitalisation;
- R&D;
- national government and European policy drivers; and
- rising energy prices[100].

The impact of these factors on specific sectors varies, but the DG Employ report on Transversal analysis on the evolution of skills needs in 19 economic sectors (2010) found that all sectors were influenced by some of these factors:

- In the automotive sector for example, expected regulations to reduce emissions and demand for less polluting vehicles, coupled with opportunities and threats as a result of globalisation is likely to require a growth in engineering, electrical mechanics, management and business and marketing professionals and a reduction in low-skilled labour[101].
- The computer, electronic and optical products sector is generally influenced by strong global competition and a comparatively strong emphasis on R&D. With technological innovation driving much of the industry's production, it requires a high proportion of engineers, engineering technicians, software developers and other technical workers to carry out R&D.
- In the hotel and catering sector, the widespread use of ICT and the Internet, as well as changes in consumer demand to provide more specialist services (such as spa facilities and tour guiding), is expected to require changes to the hotel and catering workforce[102]. Traditionally with a high proportion of low-paid occupations, most scenarios for growth see the hotel and catering sector requiring enhanced skills in the use of ICT, foreign language and the development of niche skills (such as alternative therapy).
- In the health and social work sector, there is likely to be a number of changes to the sector in terms of skills required and job roles. As stated in the European Commission's Green Paper on the European Workforce for Health, a relatively new focus on workplace-related heath (an important determinant of public health) as a result of changes in the working environment (e.g. greater mobility, technology, achieving work-life balance), will create a demand for health workers with more specialised workplace skills, affecting roles such as occupational health physicians, nurses and health and safety inspectors. New technologies such as telemedicine are also expected to lead to changes the composition of the sector. For example, there are areas in the EU where telemedicine enables distant diagnostic services, and the distant diagnosis of mammography screening results help to improve access and services to patients. This and other technologies may allow shifting the bulk of care away from hospitals into community and primary care settings and even into patients' homes. This will require a creation of new roles and also a growth in the associate professional role (such as radiographers, social workers). In addition, risk factors to health are changing – causing changes to the skills and job roles required in the future. For instance, the Green Paper

[100] Transversal analysis on the evolution of skills needs in 19 economic sectors, DG Employ, 2010

[101] Comprehensive analysis of the evolution of the automotive sector in Europe, DG Employ, 2008

[102] Comprehensive sectoral analysis of emerging competencies and economic activities in the European Union Hotels and restaurants, DG Employ, 2009

highlights the threat of new infectious diseases, disasters and climate change is likely to create a new set of challenges for biologists, chemists and other lesser-known public health roles (e.g. epidemiologists). The OECD Health at a Glance report highlights that as tobacco and alcohol consumption reduces, the requirement for skills for the promotion of public health care (as opposed to 'sick care') is likely to increase. However, there are more specialists than generalists (e.g. GPs) across Europe, which raises concerns about access to primary care. Work leading up to the development of the Green Paper also highlighted the fact that EU citizens are increasingly more active in issues concerning their health and will increasing need assistance and advice from professionals to help them make choices on future care and treatment arrangements (including alternative therapies) that best meet their needs. Therefore integrating conventional and therapeutic medical systems will be an important factor for the future.

- The green agenda is likely to influence changes to the skills requirement of energy intensive industries to reduce carbon emissions, which will require the implementation of low-carbon manufacturing processes and transport and logistics[103]. Stakeholders felt that this will increase the number of technical design and management roles within the manufacturing sector, such as lab technicians, technical analysis roles around R&D, environmental safety and awareness and Intellectual Property Rights.
- Globalisation and the opening of foreign markets are also expected to impact on the composition of the manufacturing sector. For shipbuilding, for example, it is expected that growth in this sector is likely to lead to an increase of jobs in marketing, R&D and design in production. This is in order to meet global competition and also to sell services internationally[104].
- In some manufacturing industries (such as electromechanical engineering), changes in production methods such as the implementation of agile and lean processes and simultaneous engineering[105] will also require a change to the skills of technical engineering and design job professions[106].

Other sectors largely share the same general trends of a reduction in low skilled jobs and a need for high level skills, particularly in advanced technical occupations (such as engineering, business and finance professions and managers).

4.6 Labour supply

Labour supply refers to the availability of high quality labour to meet demand from employers. There are a range of factors which lead to shortages in labour supply in European countries, which include:

- A small labour reserve, with high employment and favourable demographic conditions. This is where there is a shortage of local workers to fill posts in local labour markets.
- Economic, social and institutional conditions, such as a high cost of living in particular regions can make it difficult to fill vacancies.
- Skills mismatch, where there is a lack of suitably-skilled labour to fill vacancies. This can often coexist with high unemployment, and can be exacerbated by changes in the skills profile of particular professions.

A major challenge for the future European labour market is to meet an increased demand for labour at a time when the working age population is declining. This means that the employment rate will have to rise from 69% to 75% by 2020[107] in order to ensure there are

[103] Future Skills Needs of Enterprise within the Green Economy in Ireland, Expert Group on Future Skills Needs, 2010

[104] Comprehensive sectoral analysis of emerging competences and economic activities in the European Union: Building and Repairing of Ships and Boats sector, DG Employment, Inclusion and Social Affairs, 2009

[105] Enabling the design and product prototyping phases of product development to be carried out in parallel with the development of the equipment to produce them

[106] Comprehensive sectoral analysis of emerging competences and economic activities, DG Employ, 2009

[107] Europe 2020, European Commission, 2008

workers available to meet demand[108]. This means that coupled with strategies around labour force skills, strategies to increase participation in the labour market are also required.[109]

4.6.1 Overview of the evidence available

European research on projected labour shortages is contained in the Cedefop report on Skills Supply and Demand in Europe (2009) and also in New Skills New Jobs (2008). In these reports, projected skills mismatches to 2020 are identified at a macro level by skill level. The implications of these skills mismatches are explored in more detail in The Skills Matching Challenge (2010). Sector specific research on future labour shortages is conducted through the transversal analysis on the evolution of skills needs for 19 sectors (DG Employ, 2009) and information is also contained within the sector outlook series (OECD, 2008). In addition, there is also European research conducted on the skills needs of the emerging green technologies sector (for example, Skills for Green Jobs, Cedefop, 2010, and Environmental and Labour Force Skills, DG Environment, 2008).

At national level, there is a large body of qualitative information collected from employers to understand current and future labour shortages. This is primarily through quarterly or yearly employer surveys or analysis of vacancy matching data from the national employment service; and also through qualitative research with social partners and national stakeholders. For some countries, this research is conducted at a sector level, for example in the UK national data is analysed alongside sector consultation to identify skills needs. This is conducted through the UK's network of sector skills councils. In France, national observatories are in place to identify skills needs in a broad range of sectors. In other countries, bespoke research is conducted on labour shortages for particular sectors, but more detailed research is not done for all major sectors.

The majority of information available at a national level was primarily focused on identifying current labour shortages, with growth projections used to estimate the extent to which this situation will change in the future.

4.6.2 Sectors and professions experiencing labour shortages

The current research on skills shortages is limited due to a lack of detailed data from Member States. However, research shows that information technology and the metal industry have traditionally experienced skills shortages across Europe. There are also a range of sectors that experience skills shortages in particular countries, including business administrators, chemists, educational staff, health care professionals, hotel and catering professionals, mathematicians and scientists, skilled workers in construction and technicians and supervisors in the electric/electronic industry[110].

At an EU level, New Skills for New Jobs (2008)[111] acknowledged the need to anticipate skills needs, and current skills gaps across Europe. It forecasts an increase in the *level* of skills, competencies and qualifications required, as the economy moves more towards a knowledge and service base. The increased need for higher-level skills will not be sector-specific. The report predicts that the proportion of jobs which require higher level education will rise from around a quarter in 2006, to just under a third in 2020, with a decline in the proportion of jobs requiring low skills. It is also expected that the trend of "broadening skills" in the service sector will continue. This implies significant changes to the labour market that could impact on the mobility of professionals and on the recognition of professional qualifications. The future labour market described under this scenario is one where there is greater emphasis on career mobility (between sectors) and on professionals having certain, generic competences.

[108] Note that much of the research in this area predates the current economic crisis, making it difficult to have confidence in the quantification of future labour needs (in the short- to medium-term), even though the trends and drivers set out in research remain valid.

[109] New Skills for New Jobs, European Commission, 2008

[110] Transversal Analysis on the Evolution of Skills Needs in 19 Economic Sectors, DG Employ 2010

[111] New Skills for New Jobs, European Commission, 2008

Cedefop published Skills Needs in Europe (2008)[112] in the same year as New Skills for New Jobs, and shares some of the same data and analysis. It predicts that demand for high and medium skilled workers (management, professional work and technical jobs) will grow until 2020. It also predicts a smaller amount of growth in elementary occupations to support these jobs (for example security staff), but, as a proportion of employment, low-skilled jobs are predicted to fall. When looking at the skills needs of all predicted jobs in 2020 (new and replacement), around 39% of these jobs will require higher-level qualifications.

The Skills Supply and Demand report (2010)[113] provides more recent projections on the required supply of skills in 2020 in the EU, and takes into account the effect of the recession on the projection of future employment. There is predicted to be a substantial increase in the number of people qualified at the highest level, with a marginal increase in the number of people qualified at the medium level. Despite this, the medium-level group will still represent half of the European workforce. The number of people with low level qualifications is expected to fall. This pattern is true for nearly all countries.

This increase in the supply of highly-qualified workers is expected to be matched and even outstripped by an increase in the demand for highly- and medium-skilled workers, with jobs requiring highly-qualified workers expected to represent 35% of all jobs in 2020, with a further 50% of jobs requiring medium-level skills. This research also predicts an increase in elementary occupations to support the growth of highly-skilled jobs, as well as an increase in distribution and retail jobs, but an overall decrease in the number of jobs for low-skilled workers.

Many of the stakeholders interviewed for this study identified labour shortages despite, in some instances, high unemployment and general slow growth as a result of the recession. This was largely due to skills mismatches, where employers were unable to recruit workers with the required quality. In particular:

- Many of the stakeholders identified **labour shortages in ICT in their country, and these were expected to continue in the future as the sector is expected to grow up to 2020**. These shortages were primarily reported to be in technical positions, such as software engineers, IT and telecoms management, client information clerks, systems developers or web designers. These are largely due to insufficient new entrants to the sector with the appropriate skills. The shortages were more significant in some of the medium-sized countries in Europe (Austria, Czech Republic, Ireland and Hungary) than the larger economies in Europe (Germany, France and the UK), which indicates that shortages may also be exacerbated by a small labour reserve.
- In addition, most stakeholders interviewed are also experiencing (and expect to experience in future) **shortages in health and social care professions**. This includes shortages in professions that benefit from automatic recognition and also psychologists, speech counsellors, social workers, dental assistants and care nurses. Where shortages existed, they were generally found to be more severe in rural areas where social conditions made it more difficult for employers to recruit staff. These shortages are expected to increase significantly in the future as the growth of the sector in nearly all European countries, coupled with a reduction in the European workforce, will significantly increase demand.
- Nearly all countries where data or research on skills shortages and gaps is available identified **engineering as an area where there were significant shortages in labour**. This included electronic, chemical and civil engineering. These shortages are due to:
  - Universities not providing adequately skilled individuals that meet the needs of employers.
  - Pay and conditions in the sector are low compared to other professions, which has resulted in less interest from young people to enter the sector.

[112] Skills Needs in Europe, Cedefop, 2008

[113] Skills Supply and Demand in Europe, Cedefop, 2010

Many countries expect this situation to continue or worsen, as these structural issues are not expected to be resolved in the near future.

- Some national stakeholders identified a national shortage in **hi-tech manufacturing professions**. For example, research in Austria has identified shortages in metal workers and machine operatives in the automotive sector, while in Hungary there are shortages in electrical equipment and precision installation mechanics. These shortages generally relate to hi tech manufacturing requiring a high-level of technical competence. Some countries believed theses shortages were due to employers facing difficulties in attracting new entrants into the profession given that it many instances greater remuneration can be achieved in other sectors.
- In **green technologies a few countries are also experiencing labour shortages**. These are particularly apparent in design (e.g. engineering, planning, spatial planning), technical (e.g. solar panels, solar hot water) and managerial professions. In particular [114]:
  - The UK is experiencing skills shortages in the supply of environmental specialists, designers, engineers and electricians.
  - Employers in Spain are having difficulties in filling positions for industrial engineers and management positions in plant construction, installation and manufacturing.
  - In other countries, there are skills shortages (and gaps) in sales staff in the retail sector and in project managers specialising in delivering a range of mitigation and adaptation solutions.

  At present, it is difficult to assess whether these skills shortages will continue in the future. It is clear that there will be a significant demand for labour as a result of expansion demand and the need to re-skill existing practitioners; however some countries, such as France, have experienced significant demand from young people to qualify in environmental disciplines, which at present outstrips supply. It is therefore unclear if and how the supply of labour will grow to meet demand.
- A **few countries also reported shortages is some teaching disciplines**, most notably Mathematics and preschool teachers. These shortages were more severe in rural areas where it was difficult to recruit and retain appropriately-skilled staff. However, most stakeholders did not acknowledge any significant labour shortages, and did not expect this situation to change in the future as demand for labour was expected to increase slowly.

4.7 Labour mobility

4.7.1 Overall mobility between EU countries

There is a large amount of research and literature on the migration of workers, but much of this is primarily for migration from outside Europe. For migration between EU countries, data was produced in 2008 is presented below:

Table 4.5 Immigration from EU 27 countries, 2008

Country	Immigration of EU citizens
Germany	444,245
United Kingdom	282,800
Italy	251,025
Spain	227,110
France	127,952
Netherlands	95,573

[114] Environmental and Labour Force Skills, ECORYS, European Commission, 2008

Country	Immigration of EU citizens
Belgium[115]	94,508
Austria	70,634
Ireland	49,999
Sweden	48,242
Denmark	39,821
Poland	38,951
Greece	25,689
Hungary	19,638
Czech Republic	19,308
Finland	16,554
Luxembourg	14,863
Portugal	13,668
Slovakia	9,873
Cyprus	7,581
Lithuania	6,713
Malta	5,677
Slovenia	4,701
Estonia	2,733
Latvia	2,532
Bulgaria	1,149
Romania	:

Source: Eurostat migration statistics, 2011

The data in the table is not surprising. Germany receives the most immigrants from other EU countries, followed by the UK, Italy and Spain. Where data is available broken down by age, it shows that the majority of immigration from other EU Member States is by those of working age (see Table 4.6 below).

Although trends are not available in every country, where this data is available, it shows the number of migrants from other EU countries is generally increasing (see Table A10.10 in Annex 10). This suggests that mobility within Europe is increasing. If this trend was to continue, we would expect to see more movement between EU Member States up to 2020 and 2030.

The study *Geographical and Labour Market Mobility*[116] included a survey of individuals at working age to identify perceptions to working abroad. It found that a relatively high proportion (17%) of individuals in Europe would consider working abroad in future. The most popular European destinations were the UK, Spain, Germany and France.

What is interesting is that the proportion of individuals that envisage working abroad varies significantly by country. In Denmark, the majority of individuals see themselves working

[115] The data for Belgium is from 2007

[116] Geographical and Labour Market Mobility, Eurobarometer, 2010

abroad (51%). There are also a high proportion of individuals who see themselves working abroad from Estonia (38%), Sweden (37%), Latvia (36%) and Lithuania and Finland (35%). Conversely only 4% of Italians and 8% of Austrians and Greeks see themselves as working abroad in future.

The types of individuals most likely to work aboard are students (42%), followed by managers (19%), the self-employed (14%), manual workers (14%) and other white collar workers (13%).

A higher proportion of employed individuals surveyed felt their chances of finding a new job outside their country was better than inside their country (34% compared to 21%). This figure was fairly consistent across all types of respondents (managers, other white collar jobs and manual workers).

Table 4.6 Working age immigration, 2008

Country	Immigration of working age population	% of total EU immigration
Cyprus	7,318	96.5
Greece	23,521	91.6
Czech Republic	17,689	91.6
Poland	33,674	86.5
Italy[117]	314,908	85.7
Ireland[118]	57,622	83.0
Denmark	32,792	82.3
Estonia	2,244	82.1
Portugal	9,985	73.1
Slovenia	3,423	72.8

Source: Eurostat migration statistics, 2011

4.7.2 Mobility in relation to sectors and professions

The sectors where we would expect to see the highest levels of mobility are those experiencing labour shortages and/or growth. There is, though, a complex relationship in practice between demand for labour and labour mobility. For example, the health sector has seen a large influx of non-national workers in a number of countries. However, this has declined in recent years as Member States have been increasing the number of health professionals they train. Shortages are still reported in some countries and for some professions (e.g. nursing in Italy) and future shortages are anticipated for key professions, such as doctors, when the current cohort retires.[119]

In the UK, there has been a decline in the number of migrant health care professionals from outside of the EU employed due to the tightening of migration laws[120]. One consequence of this may be an increased demand for EU-national health professionals. It remains the country with the second largest number of foreign health professionals, behind the USA[121].

[117] The data for Italy is from 2007

[118] The data for Ireland is from 2007

[119] Mismatches in the Formal Sector, Expansion of the Informal Sector: Immigration of Health Professionals to Italy", Chaloff, J. OECD Health Working Papers, No. 34, 2008

[120] Migration of Health Workers: The UK Perspective to 2006, Buchan, J., Baldwin, S. and Munro, M. OECD Health Working Papers, No. 38, 2008

[121] Policy Brief, International Migration of Health Workers, OECD, 2010

Despite the decline in migration of health workers to the UK, it is expected that the increasing demand for long-term care will also lead to an increase in demand that may be met through migrant workers.[122] OECD research predicts that although OECD countries (including EU Member States) already compete for highly skilled professionals, the shortage of relatively low-skilled carers will create a second migration stream in the sector, which current migration policies do not account for.

DG Internal Market published data[123] in 2010 on the proportion of recognition decisions per sector in the context of Directive 2005/36/EC. It showed that two thirds of workers (66%) applying for recognition did so outside of the professions benefiting from automatic recognition and that, overall, the education and health sectors represent a significant proportion of mobility (see Figure 4.4 below).

There are also indications that, outside of some major professions, the volumes of EU mobility are low. For example, the Pharmaceutical Group of the European Union (PGEU) referred to a 2009 survey undertaken by the French Council of Pharmacists, which found that there were 926 foreign pharmacists working in France (out of a total workforce of 55,523) and that of this, only 181 professionals came from other EU Member States.

Pharmacists are, however, among the more mobile regulated professions in Europe. The professional qualifications database provides data on the number of recognition decisions taken for the purpose of permanent establishment within the EU Member States since 1997. This only captures mobility where a profession is regulated at national level, but it provides a measure of indicative volumes over time.

In addition, the qualitative interviews with stakeholders also indicated that mobility between European countries was particularly low for high-skilled professions. Many of the countries that experienced recent growth (the UK, Ireland, Germany, Sweden and Czech Republic) found that where migration took place, over half of workers moved into the construction trade/crafts, hospitality and the retail.

Table 4.7 below shows the total number of applications for recognition for a sample of 15 professions[124] currently regulated under the general system of the Directive. It provides an indication of mobility levels for these professions – both over the period 1999-2009 and for 2009 specifically. In addition to the number of applicants for recognition, the table shows each profession's 'rank' in terms of the overall number of recognition decisions for all professions. This shows the way in which applications for recognition are concentrated in health and education professions. By way of a comparison, the number of applicants for the professions in which minimum training conditions have been harmonised is also shown.

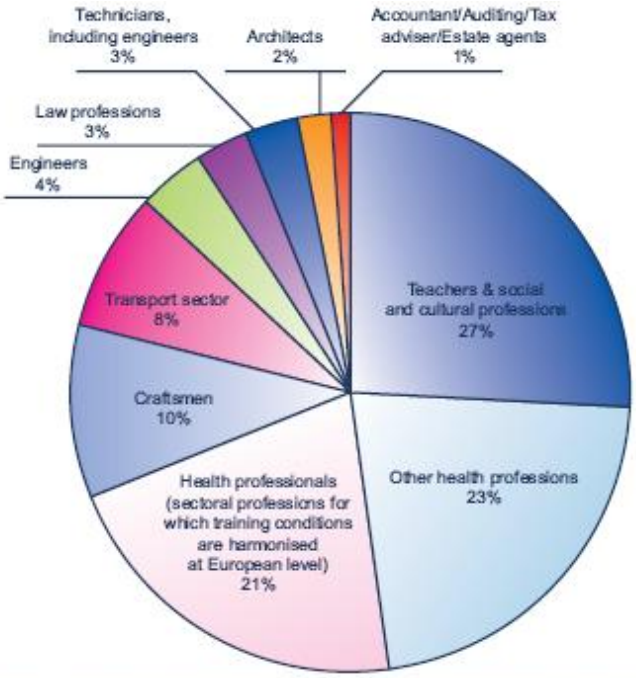
The table shows, for each profession, the host countries that received the highest number of applications for professional recognition over the 1997-2009 period. It also shows the top three Member States as a percentage of all applications, which indicates the extent that recognition activity for each profession is concentrated in a small number of countries (e.g. for surveyors; tourist guides; real estate agents). To some extent, this is a simple reflection of country size. However, the table actually shows that the top host countries are variable on a profession-by-profession basis.

[122] The Long-Term Care Workforce: Overview and Strategies to Adapt Supply to a Growing Demand, Fujisawa, R. and Colombo, F. OECD Health working papers No.44, 2009

[123] Scoreboard 21, European Commission (DG Internal Market), 2010

[124] The 15 selected professions are also featured in the survey of competent authorities

Figure 4.4 Mobility by sector



Percentage of decisions (positive or negative) for different sectors, based on information from Member States and EEA countries and entered into the database (see footnote 1) up to 26.2.2010. CY, CZ, EE, ES, PT and RO did not provide figures for 2008 yet on recognition of qualifications.

Teachers & social and cultural professions: primary/secondary school teacher, university teacher/ professor/lecturer, social worker, child care worker, kindergarten teacher/ nursery school teacher/ preparatory school teacher
Health professionals: doctor of medicine, nurse, dental practitioner, veterinary surgeon, pharmacist, midwife (sectoral professions for which training conditions are harmonised at European level).
Other health professions: physiotherapist, second level nurse, radiographer/ radiotherapist, occupational therapist, speech and language therapist, medical/biomedical laboratory technician, optician, masseur/massage therapist/spa therapist, dietician, psychotherapist, chiropodist, psychomotor therapist and psychologist.
Craftsmen: joiner/carpenter, mason/bricklayer, masterbuilder, painter-decorator, tiler, plasterer, surveyor, glazier/glass-blowing and manufacture of glass apparatus, hairdresser/barber/wig-maker, building demolition contractor, restaurant owner/manager
Transport sector (maritime): ship's deck officers, marine engineering officer, ship's engineer, boat master, officer in charge of navigational watch (it should be noticed that after 20 October 2007 Directive 2005/45/EC has become applicable to certain categories of seafarers, to which, therefore, the Directive 2005/36/EC no longer applies)
Technicians: building insulator/ building insulation, electrical equipment/appliances contractor/ repairer/installer, fork lift truck operator, optometrist.

Table 4.7 Selected professions: Number of applications for recognition

Profession	Applications: 1997-2009 (rank, all professions)	Applications 2009 only (rank, all professions)	Host MS with highest applicants (97-09)			Top 3 MS as % of all applic'ns
			MS 1	MS 2	MS 3	
Secondary school teacher	29,717 (#1)	5,327 (#3)	14,670 (UK)	8,459 (DE)	1,628 (NL)	83%
Physiotherapist	11,495 (#4)	1,150 (#6)	2,298 (DE)	2,202 (AT)	1,854 (UK)	55%
Primary school teacher	7,731 (#5)	335 (#12)	2,897 (IE)	2,148 (UK)	855 (NL)	76%
Second level nurse	5,821 (#6)	588 (#4)	2,154 (IT)	1,189 (LU)	459 (BE)	65%
Social worker	3,959 (#10)	544 (#9)	1,806 (UK)	889 (IE)	697 (FR)	86%
Radiographer / radiotherapist	1,806 (#15)	143 (#20)	590 (IE)	519 (UK)	112 (DE)	68%
Medical/biomedical laboratory technician	1,529 (#19)	171 (#16)	496 (UK)	214 (LU)	190 (IE)	59%
Psychologist	1,346 (#20)	126 (#24)	312 (BE)	276 (IT)	188 (FR)	58%
Surveyor	876 (#38)	0 (N/A)	801 (UK)	60 (IE)	6 (FR/IT)	99%
Civil engineer	869 (#35[125])	178 (#17)	284 (UK)	217 (ES)	107 (EL)	70%
Optician (dispensing optician)	783 (#36)	31 (#61)	451 (EL)	105 (UK)	56 (IE)	78%
Accountant / auditor	392 (#69)	38 (#55)	184 (CY)	82 (UK)	45 (DE)	79%
Real estate agent	380 (#72)	20 (#77)	282 (BE)	50 (AT)	19 (SE)	92%
Pharmaceutical technicians / assistant	248 (#79)	50 (#48)	77 (DE)	39 (SE)	26 (CZ)	57%
Tourist guide	147 (#103)	56 (#45)	83 (IT)	31 (PT)	28 (LT)	97%
Benchmark – Sectoral professions						
Nurse	*18,358 (#2)*	*6,110 (#2)*	*5,654 (UK)*	*2,943 (IE)*	*2,499 (AT)*	*60%*
Doctor	*15,923 (#3)*	*6,137 (#1)*	*5,440 (UK)*	*3,940 (DE)*	*1,641 (BE)*	*69%*
Veterinary surgeon	*4,170 (#8)*	*755 (#7)*	*2,096 (UK)*	*796 (FR)*	*314 (SE)*	*77%*
Dental practitioner	*4,089 (#9)*	*1,255 (#5)*	*2,606 (UK)*	*310 (AT)*	*299 (DE)*	*79%*
Architect	*2,739 (#11)*	*311 (#13)*	*1,032 (UK)*	*587 (ES)*	*356 (DE)*	*72%*
Pharmacist	*2,675 (#12)*	*710 (#8)*	*1,352 (UK)*	*247 (IE)*	*216 (PL)*	*68%*
Midwife	*936 (#33)*	*290 (#14)*	*336 (IE)*	*160 (UK)*	*140 (DE)*	*68%*

Source: Professional Qualifications Database (accessed 22.3.11)

4.7.3 Patterns in mobility

There are different reasons suggested in the literature[126] and qualitative interviews carried out as part of this research for labour movement between countries:

[125] Note: Rankings of profession are based on number of decisions in EU Member States *and* EEA countries and Switzerland. Rankings do not therefore entirely correspond to the data for Member States only in the rest of the table.

[126] The literature includes: European Commission, (2008), Evaluation of the European year of workers mobility; Expert Group on Future Skills Needs and Forfás, (2005), Skills Needs in the Irish economy: The role of migration; Eurobarometer, (2010) Geographical and Labour Market mobility. Interviews included stakeholders from Austrian Institute of Economic Research, Statistics Sweden and Ministry of Labour and Social Policy, Poland.

- Mobility for professional benefit – This is where workers move between countries in order to acquire new skills, and improve their pay, conditions, employment prospects and career opportunities. This movement often comes from workers in Eastern Europe moving to wealthier, Western countries, although not exclusively.
- Mobility to a neighbouring country, with a similar identity – This is where workers move between countries that share a border, and similar values (often a shared language). Examples include movement between: Belgium, Luxembourg and The Netherlands; the Scandinavian countries; and the UK and Ireland.
- Mobility to countries with a similar language, or a taught second language – This is often very similar to neighbouring countries, where workers can move to another country that speaks the same, or a similar, language (for example the Czech Republic and Slovakia, and Austria and Germany). Sharing a similar language makes it easier for workers to find work in a different country and to settle into the new country.
- Mobility due to traditional movement or bilateral agreements – This is where there has been a traditional movement of workers between countries, or the Governments of the two countries have a bilateral agreement on the mobility of labour between the countries.

The reasons highlighted above would suggest that large countries in Western Europe would expect to have the largest number of applications (for example Germany, France and the UK); with significant numbers applying to countries with strong links to neighbouring countries (Belgium, Netherlands, Sweden and Denmark). However, the number of applicants to each country does not logically follow the reasons outlined above:

- The UK has a higher number of professionals applying to have their qualifications recognised than Germany. This indicates the importance of language, as many people in Europe learn English as a second language.
- There is a large gap between the UK and Germany and the host country with the next highest number of applications for the recognition of qualifications, Belgium. The relatively high number of applications in Belgium is due to the relationship with neighbouring countries, with the majority of the applications for recognition in Belgium coming from neighbouring home countries.
- Luxembourg had the ninth highest number of applications for the selected professions in 2009. It is not surprising that Luxembourg receives applications, as a nation with good employment conditions and many neighbouring countries.
- It is difficult to draw conclusions for Bulgaria, Cyprus, Ireland, Slovakia and Spain, due to a lack of data available for 2009 in the Professional Qualifications Database.

The number of professionals applying to have their qualifications recognised in other host countries does seem to follow a more expected pattern. This is:

- Eastern European countries experience large numbers of professionals applying for their qualifications to be recognised in other host countries (Poland has the most professionals applying for their qualifications to be recognised in other countries, and Romania the fourth highest).
- Countries with culturally-close neighbours received a lot of applications from professionals to have their qualifications recognised in other countries (for example Germany, The Netherlands, and Austria all having a high number of professionals applying to have their qualifications recognised in other countries).
- Given the size of some countries, there were a low number of home professionals applying to have their qualifications recognised in other countries (for example the UK, France and Italy).
- Countries which experienced a high number of professionals applying to have their qualifications recognised in other countries, given their size and location, were Spain and Ireland.

4.7.4 Specific profession patterns

The applications made in 2009 for the general system professions highlighted in Table 4.7 have been analysed on a profession-by-profession basis, to see if there are any professions

where there are patterns, which do not fit into the categories outlined above. More detailed analysis of this data can be found in A10.6 in Annex 10. The main points are presented here:

- As expected, for the majority of professions examined, there are a high number of applications for recognition of qualifications from Eastern European countries, and high numbers of applications to host countries for the recognition of qualifications from neighbouring home countries. However, a notable exception to these general patterns is the UK, where applicants for recognition come from a wider range of countries that includes a high proportion of applicants from Western European countries and from non-neighbouring European countries.
- One pattern which was unexpected was that many secondary school teachers in Spain applied to have their qualifications recognised in other host countries, with the second highest number of applications for recognition from a home country (behind Poland), but the majority of these applications were not made to neighbouring countries.
- In the civil engineering profession, a large number of civil engineers applied to have their Irish qualifications recognised in Poland (41% of all civil engineers applying to have their qualifications recognised in Poland). This is probably accounted for by Polish nationals training in Ireland. In the UK, a high proportion of the professionals applying to have their qualifications recognised were from Italy and Greece. Although people from Italy and Greece applied for their qualifications to be recognised in the UK in other professions, the proportion from these countries in civil engineering was surprising (37% from Italy and 20% from Greece).

4.8 Summary

Of the six sectors in Europe employing more than 15 million workers (manufacturing; wholesale and retail trade; human health and social work activities; construction; public administration and defence; and education), there is a significant concentration of regulated professions within three of these sectors: health and social care, education and construction (e.g. construction engineering). Crucially, this includes regulated professions with a significant number of applications for professional recognition. These sectors, especially in the context of healthcare professions, are where action to support easier or even automatic recognition links most closely to likely future demand. They could provide a focal point for support to establish any new approach to common platforms proposed by the European Commission.

In the context of health and social care, significant growth is projected up to 2020 and it is also a sector expected to experience significant replacement demand due to an ageing workforce. Within this sector there are already a high number of applicants for recognition under the general system, but, despite this, many countries are still experiencing difficulties in recruiting professionals, and these are expected to continue in the short to medium term, due to policy drivers and also increased demand. The professions where there is currently high mobility or that are currently experiencing skills shortages are psychologists, speech therapists, social workers, radiographers, physiotherapists, occupational therapists, second level nurses, midwifes and technicians. Many of these professions would be good candidates for further support for professional recognition. In some cases, notably social workers and psychologists, there are additional barriers to achieving quicker and easier recognition relating to the extent of differences in the scope of practice between countries. Additional support for these professions may not therefore result in the same benefits being achieved as for the other professions – certainly in terms of trying to put a system of automatic recognition in place – or it may require support over a longer timescale.

In the context of the education sector, there is an expectation of smaller growth, but there is considerable replacement demand for education professionals in the next 5-10 years. The shortages are expected to be greatest among higher secondary and tertiary teachers/lecturers and given that the sector currently benefits from a high number of applicants seeking recognition, it is reasonable to expect this to increase in the future as demand rises and current patterns show an increase in the level of EU mobility. However, there are arguably more difficult challenges to address in promoting convergence for

teachers compared to the healthcare professions, because approaches to education training are both well-established at national level and very nationally-specific. A competence-based approach would make a substantial difference in the ability to promote easier recognition, but there is little evidence of a drive for this at national level.

In the context of construction, some engineering-related professions (particularly civil and electrical engineering) could also benefit from better recognition, as it is an area where there has historically been major labour shortages and where there is already a high level of mobility. However, the risk to increased mobility is that this may increase labour shortages in some countries, where professionals in some countries may move to others where there are better working conditions. This is not a major issue at present as only a small proportion of the EU professional workforce currently migrates to work in other countries, but it may change in the future as mobility is projected to increase. There are also competing views within the civil engineering profession as to the efficacy of attempts to promote convergence or harmonisation of training. It is another area in which an outcomes-based approach could address current perceived barriers where the training inputs differ between countries.

There are also some sectors which, current evidence suggests, may not benefit from better recognition, but this situation may change in the future. However, many of these growth areas are either unregulated or have an evolving regulatory situation that makes it difficult to suggest it is a priority area. This is particularly true for green technologies, which current research tells us is likely to create a high number of jobs in the next 5-10 years. However, most countries are unclear if this is likely to lead to either increased regulation of the workforce or labour shortages as the policy response is currently at its infancy in most EU countries. There is therefore little evidence to suggest that labour shortages are expected in the next 5-10 years, although this situation may change in the future. Another sector expected to experience significant growth is ICT. There are significant labour shortages here. Yet the professions that are in greatest demand (software engineers, web designers, IT and telecoms management) are unregulated and current policy developments do not see this situation changing in the near future. The over-arching conclusion would be to focus on currently regulated professions. In particular, those professions outlined above within the healthcare sector and engineering professions are where the future benefit is likely to be greatest.

5 Other methods to achieve convergence

5.1 Introduction

The chapter relates to the study question looking at methods other than minimum harmonisation of training requirements that could achieve greater convergence in training contents in future. The study terms of reference states:

- *'In the past, the European Union achieved automatic recognition of qualifications either on the basis of minimum harmonisation of the training conditions or on the basis of professional experiences. Apart from harmonisation of training at EU level, which are the other methods to achieve more convergence on the training contents which could be the most relevant and the most effective in the next years'.*

Specifically, the study terms of reference asks which of these two approaches would best facilitate the recognition of professional qualifications and why:

- *'A convergence of training contents supported by transparent quality assurance arrangements'*
- *'Agreed definitions of learning outcomes supported by transparent quality arrangements'.*

The terms of reference also asks what would happen in terms of recognition if in one Member State training content is defined in terms of learning outcomes and in another Member State training content is defined in terms of content and duration.

5.2 The need for convergence

The online survey of competent authorities asked respondents for their view on the consistency of qualifications based on received applications and in terms of:

- the typical required length of study;
- the level at which the qualification is regulated;
- subject area coverage;
- the scope of activities covered by professional qualifications.

We look in more detail at the current picture regarding level and duration of study in Chapter 9. In general terms, though, there are no clear differences in terms of the relative comparability/consistency of qualifications under each of these elements (level, duration, subject area, scope of activities).

What emerges instead is a composite picture of comparability in which **most authorities report a high or reasonable degree of comparability / consistency, with around a quarter identifying a small number of exceptions (countries) and 15-20% reporting significantly different systems in a large number of countries**.

Table 5.1 and Table 5.2 below show the overall picture in relation to subject area coverage and the scope of activities covered by professional qualifications.

In terms of where significant differences in systems were identified:

- The competent authorities most likely to report significant inconsistency in terms of the subject areas covered were those for tourist guides (5 out of 12 respondents – i.e. 42%), real estate agents and surveyors (in both cases 4 out of 11 respondents – i.e. 36%). These were three of the less widely-regulated professions in the online survey sample – and it may therefore reflect issues relating to subject area coverage between regulated and unregulated countries. Competent authorities for surveyors were most likely to report significant differences in the scope of activities covered by professional training; elsewhere the response was similar by profession.
- Nearly half of civil engineering competent authorities (6 out of 13 respondents i.e. 46%) reported reasonable consistency in subject area coverage with the exception of small number of countries.

- Responses were relatively consistent on a national basis, as would be expected given that significantly different systems, if they exist, should be apparent to competent authorities irrespective of Member State origin. However, there was a notable concentration of respondents from the UK (7 out of 12 respondents – 53%) reporting significantly different systems in a large number of countries in relation to both subject area coverage and scope of activities. This indicates that perception of difference is, to some extent, influenced by the view of the national education and training system.

Table 5.1 To what extent are professional qualifications in your sector comparable / consistent in terms of the subject areas covered by professional qualifications from other EU countries?

	Number (and %) of responses
Highly comparable / consistent in terms of the subject areas covered	20 (17%)
Reasonably comparable / consistent in terms of the subject areas covered	40 (34%)
Reasonably comparable / consistent with the exception of small number of countries	23 (19%)
Significantly different systems are apparent in a large number of countries	24 (20%)
Don't know	12 (10%)
Total	119 (100%)

Source: online survey of competent authorities

Table 5.2 To what extent are professional qualifications in your sector comparable / consistent in terms of the scope of activities covered by professional qualifications from other EU countries?

	Number (and %) of responses
Highly comparable / consistent in terms of the scope of activities covered	18 (15%)
Reasonably comparable / consistent in terms of the scope of activities covered	36 (30%)
Reasonably comparable / consistent with the exception of small number of countries	27 (23%)
Significantly different systems are apparent in a large number of countries	20 (17%)
Don't know	18 (15%)
Total	119 (100%)

Source: online survey of competent authorities

5.3 The prospect of convergence in training contents under the Bologna process

5.3.1 Evidence of convergence to date

The reform of degree structures under the Bologna process supports improved comparability of degrees, but not necessarily similarity (or convergence) in curriculum. The independent review of the Bologna process in 2008-09 **debates whether convergence in degrees was ever an aim under Bologna**. Referring to the Bologna Declaration call for a system of 'easily readable and comparable degrees', the review says:

"The term 'comparable' has two possible meanings: (1) possible/easy to compare, and (2) similar....the aim was that it should be possible to compare degrees, but similarity was not explicitly formulated as an aim".[127]

Therefore, **convergence in training content is only likely to be, at best, an indirect consequence of the Bologna process – as a result of improved transparency and understanding of differences in training structure and content triggering action to align content**. The first decade of developing the European Higher Education Area saw a level of convergence in higher education systems, but also points of divergence, and:

"Divergence has been strengthened by the fact that key actors have interpreted elements of the Bologna reform agenda differently".[128]

[127] *ibid*

[128] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

In fact, there is a clear tension between the movement of convergence of qualification content as a result of internationalisation of education and training provision and the process of diversification as higher education institutions compete for students and are expected to be more responsive to labour market needs. Many European higher education institutions have a very good understanding of the European and international 'standard' regarding content of training for different fields of study[129] and they refer to these when designing new programmes. At the same time, especially at master level, there is a clear tendency of universities (sometimes supported by national policies[130]) to differentiate the offer[131].

5.3.1.1 The education ministry perspective on convergence under the Bologna process

Numerous education ministry interviewees expressed that convergence in training contents as a result of the Bologna reforms was not a national objective or necessarily desirable. Education ministries were fairly evenly split in terms of whether greater EU convergence was an ambition at all. The education ministries in most countries made the point that if convergence happens, it cannot be a top down process, given the autonomy of higher education institutions.

For example, one education ministry reported:

"The process of convergence should come from the professions and universities themselves; it should come from agreement within the professions not from Ministerial direction. In [the Member State] the Minister cannot direct the Higher Education Institutions. Professions have to see the benefits in order for them to see it as a priority and contribute to building mutual trust".

Another education ministry felt that:

"We need to understand and respect that universities are allowed their academic independence. Neither we, nor the EU, can prescribe exactly what is included in courses and how it's to be taught – and that is not anyone's intention anyway."

The education ministry in a third country echoed a generally-held view about Bologna and the question of convergence, before relating this specifically to the issue of recognition:

"Bologna supports comparability, not convergence. We get more transparency – you just find out when things are different...[and in the context of recognising qualifications], you might conclude it's a different subject, so we can't recognise, or [in the context of an engineering study] it's not the same machines but they understand the same principles, so we can recognise."

There was also reflection from an education ministry in a fourth country on what the overall impact of Bologna could be:

"The impact of Bologna should not be overestimated. It will never make recognition purely automatic or create automatic bridges between qualifications in different countries. It can facilitate comparison but differences will remain. In different countries qualifications preparing for the same job have different ECTS points".

As noted above, in some countries where, in the past, higher education (including aspects of programme design) was rather centralised, ministries have supported diversification of education and training provision. This is seen as a means to ensure better links between higher education and the labour market and also as an element of student choice.

5.3.1.2 The competent authority perspective on convergence under the Bologna process

There is no universal view among competent authorities about whether there has been convergence in training contents under the Bologna Process (see Table 5.3 below) based on the applications they receive. This was a difficult area for a lot competent authorities to take

[129] As, for example, expressed in the learning outcomes descriptors developed through the Tuning project

[130] For example the Czech White paper on tertiary education explicitly calls for more diversification in higher education. MSMT (2009) White paper on tertiary education

[131] See for example OECD (2008) Thematic Review of Tertiary Education

a view on, as the final recipients of qualifications information and often not directly involved in the reform of qualifications.

Given the wider lack of evidence about convergence in training contents through the Bologna process, a surprisingly high proportion of interviewees (30%) thought that they could detect it in terms of the applications received for recognition and from their wider knowledge of education and training for the profession. However, in practice these competent authorities were referring to a gradual and marginal evolution of qualifications, rather than anything particularly significant (i.e. the *extent* of convergence noted by competent authorities was not substantial in nature).

We discuss below some of the sector-led approach to supporting convergence (see Section 5.6). However, there was notably little reference on the part of competent authorities to sector work to define common approaches (outside of the civil engineering profession), which may indicate that this work either has little traction or has yet to filter through to training contents. It is also possible that the competent authorities for recognition take a broader perspective on convergence, judging based on whether there is or is not a lot of qualifications where 'significant difference' can be detected. In other words, they look at the core of the profession and of the qualification rather than on the details of the programme when thinking about the extent of convergence.

Table 5.3 Competent authority perspective: has there been convergence in training contents between qualifications that prepare for entry to the profession / enable access to the profession?

	Number of competent authorities	% of competent authorities
Yes	20	30%
No	23	35%
Don't know	23	35%
Total	66	100%

Source: case studies

5.3.1.3 The perspective of other stakeholders on convergence under the Bologna process

Other stakeholders, such as professional bodies, training bodies and ministries that are not competent authorities, were more inclined to suggest that the Bologna process led to convergence in training programmes at EU level. Over half (58%) of case study interviewees thought that there had been a major or minor impact here (see Table 5.4 below). Stakeholders in the health-related professions were more likely to report convergence in training programmes at EU level.

Much of what stakeholders were referring to was only indirectly related to the Bologna process. Work in the biomedical/medical technician and civil engineering professions to set EU standards for training was felt to be relevant, because it typically uses ECTS and, to some extent, learning outcomes to define standards.

In fact, in comparison with education ministries, it is not clear that the adaptation of training contents to achieve greater convergence at EU level is a priority or intention for other ministries (that have a responsibility for a profession, but which are not competent authorities – e.g. health ministries):

- 15 ministries said that convergence was an objective, while 16 ministries said that it was not (a further 11 ministries did not know).
- There is not even a national dimension to this – with different ministries in the same country providing alternate views.

Even where it was an objective, relatively few ministries were convinced that this was an intention shared by other bodies with an interest in the profession (e.g. universities,

professional bodies etc). It was widely reported as being an area where further action is required.

A third of other stakeholder interviewees (33%) thought that providers of training are more influenced by the structure and content of training in other countries as a result of the introduction of the three cycles or learning outcomes (see Table 5.5).

Much of this influence comes through the exchange of students and teachers and is therefore on a fairly micro level. In isolated areas, such as physiotherapy, there was a noted influence on the structure of training where, as a result of the Bologna process, there is a much greater presence of professional training for the profession in higher education.

Table 5.5 also shows that a majority (65%) of the stakeholders that perceived an impact on training providers thought that this has led to greater convergence of training programmes. It was also the education and training provider stakeholders that perceived much of the positive impact here. However, it is worth noting that what was being described were **examples of a more international perspective among some institutions (e.g. working with individual partners in other countries) rather than a generalised or systematic process**. The exception to this ad hoc or bilateral international engagement was a couple of references to Tuning projects – typically outside of the scope of the case study professions. The Tuning project for occupational therapy was held up by a number of stakeholders for other medical/health professions as an example of Bologna-led activity that had a significant influence on providers and led to convergence.

Table 5.4 Other stakeholder perspective: has there been convergence in training contents between qualifications that prepare for entry to the profession / enable access to the profession?

	Number of other stakeholders	% of other stakeholders
Yes – major impact	12	19%
Yes – minor impact	24	39%
No	14	23%
Don't know	12	19%
Total	62	100%

Source: case studies

Table 5.5 Other stakeholder perspective: the impact of the Bologna process on the outlook of providers of training

	Number of other stakeholders	% of other stakeholders
Is there any evidence that providers of training are more influenced by the structure and content of training in other countries as a result of the three cycles or learning outcomes?		
Yes	17	33%
No	19	37%
Don't know	15	29%
Total	51	100%
If yes, has this led to greater convergence of training programmes?		
Yes	*11*	*65%*
No	*2*	*12%*
Don't know	*4*	*24%*
Total	*17*	*100%*

Source: case studies

5.3.1.4 Mutual recognition agreements between Member States

One indication of convergence or alignment between training in different countries is the existence of agreements that mean applicants from particular countries do not have to go through the full recognition procedure.

Yet only 23 competent authorities (19%) responding to the online survey reported the existence of such agreements. Rather than being an indication of increasing convergence since the start of the Bologna process, these agreements were typically between neighbouring countries – most often the Nordic countries, between the Czech Republic and Slovakia and between the UK and Ireland.

There was no single defining factor underpinning/supporting these agreements. They tend to involve a combination of having:

- similar qualification systems and content;
- large flows of people between the countries;
- trust in the quality of awarding institutions in the other country; and
- a similar approach to the regulation of the profession.

5.4 Prospects for future convergence

5.4.1 Education ministry perspective

There is little evidence so far that convergence in training contents is on the horizon to a significant extent, or certainly at least that it is a medium-term consequence of EU education reforms. The evidence so far of the impact of the Bologna process strongly suggests that, where convergence happens, it is bottom-up process led by individual universities working to common frameworks for subjects/professions. However, the view on this activity from education ministry interviews was that approaches such as the Tuning project, while important, have not generally had a wider impact in terms of convergence.

5.4.2 Competent authority perspective – prospects for automatic recognition

5.4.2.1 Setting minimum requirements for qualification content

Table 5.7 below shows that the **majority of competent authorities responding to the online survey agreed that automatic recognition could be achieved if there were common minimum requirements in terms of qualification content (64%)**, although there is not widespread consensus on this question (more than a third of respondents disagreed – 36%). Table 5.6 shows the breakdown of responses by profession[132]. It shows that the healthcare-related professions more strongly believe that automatic recognition could be achieved through minimum content requirements. The overall position varies considerably by profession.

[132] Note that the number of responses per profession does not equate to the total number of survey respondents because some competent authorities have responsibility for – and are therefore included in the professional-level analysis for – multiple professions in scope of the online survey. See Annex 5 for further explanation.

Table 5.6 Automatic recognition could be achieved if there were common minimum requirements in terms of qualifications content

Profession	Agree (number)	Disagree (number)	Total respondents	Agree (%)	Disagree (%)
Second level nurses	15	2	17	88%	12%
Biomedical / medical laboratory technicians	14	2	16	88%	13%
Pharmaceutical technicians / pharmaceutical assistants	12	2	14	86%	14%
Physiotherapists	16	3	19	84%	16%
Radiographers/radiotherapists	11	3	14	79%	21%
Psychologists	7	2	9	78%	22%
Opticians	13	4	17	76%	24%
Tourist guides	7	5	12	58%	42%
Real estate agents	6	5	11	55%	45%
Social workers	10	9	19	53%	47%
Secondary school teachers	11	13	24	46%	54%
Civil engineers	6	7	13	46%	54%
Primary school teachers	7	10	17	41%	59%
Accountants	3	9	12	25%	75%
Surveyors	2	9	11	18%	82%

Source: Online survey of competent authorities

A number of competent authorities for accountancy confirmed that automatic recognition was felt to be unachievable because of differences in national legislation (tax law, commercial law, social security). Required knowledge of the national legal system was also noted as a barrier to achieving automatic recognition by one surveyors' competent authority. The barrier according to two competent authorities for tourist guides was not knowledge of national law – but instead the requirement for knowledge of the local region (culture, history etc).

The challenge in relation to primary school teachers was felt to be the extent of current differences in content, level and duration in professional training between countries – that are, practically speaking, felt to be unbridgeable in the short and medium term. In contrast with accountants/auditors, the barrier here is the embedded nature of differences in training approaches rather than a core, nationally-specific requirement (such as that relating to knowledge of national legislation).

Conversely, in the biomedical / medical laboratory profession, common minimum content requirements were seen as the key issue for a number of competent authorities. However, it is sometimes explicit in these responses that common content must align with / be based on agreed professional standards and competences.

There is also **no consensus on the part of competent authorities on how these minimum requirements should be set**, with the survey producing a relatively even split between three options offered (see Table 5.7):

- Taught subjects (as it is currently the case for certain qualifications in the automatic recognition procedure) – *38% (29 responses out of the 77 agreeing that automatic recognition could be achieved)*
- Broadly formulated knowledge, skills and competences (as it is, for example, in the case for architects) – *34% (26 responses)*
- Detailed definitions of knowledge, skills and competences – *29% (22 responses).*

The rationale for broadly-formulated knowledge, skills and competences, as reported by one architects' competent authority that uses the general system, was *'to allow a wide range of options for future careers and academic freedom'*. Europe-wide standards of professional practice, where they exist, were suggested as a useful basis for this kind of broad formulation. This could include codes of conduct, ethics or professional competence depending on the profession.

Although taught subjects was marginally the most popular approach to setting minimum requirements, there was a question from some competent authorities as to whether subject title provides sufficient information rather than further knowledge on curriculum content and syllabus. The point being made here was **not simply that more information is necessary (although, as noted elsewhere in this report there was a general view from competent authorities that having more information is beneficial to their role). Rather, it was to make the point that, especially if the competent authority is interested in the competence of the applicant, knowing the subject titles *'reveals very little'*.**

Table 5.7 Could automatic recognition be achieved if there were common minimum requirements in terms of qualifications content?

	Number (and %) of responses
Yes	77 (64%)
If yes, these minimum requirements should be set in terms of...	
...taught subjects (as it is currently the case for certain qualifications in the automatic recognition procedure)	*29 (38%)*
...broadly formulated knowledge, skills and competences (as it is, for example, in the case for architects)	*26 (34%)*
...detailed definitions of knowledge, skills and competences	*22 (29%)*
No	43 (36%)
Total	120 (100%)

Source: Online survey of competent authorities

It was clear from competent authority responses that **setting minimum requirements could require a fairly elaborate process** – which may or may not be achievable. One civil engineering competent authority responding to the online survey reported that in order to achieve greater consistency between qualifications and automatic recognition, it would require *'a complete and accurate compendium of each Member State's national qualifications process and standards assessed'*. This could, it was suggested, provide the basis for defining common minimum requirements (and additional national requirements).

A competent authority for primary school teachers describe the steps to setting minimum requirements in terms of, first, a need to catalogue essential subjects and minimum training content in each country and, second, to enable education institutions to offer elements of training that are gaps in any individual country as a standalone / additional learning. This approach implicitly assumes a modular approach to learning in line with the Bologna reforms. However, it also suggests alignment, in practice, in terms of the most extensive qualification requirements (in terms of subject coverage) because it is based on the totality of all requirements in all countries. It is, though, an example of a market-driven response that, unlike the sector approaches described under Section 5.6 below, does not attempt to influence national requirements.

5.4.2.2 Setting minimum requirements for the duration of training

A **slightly higher proportion of competent authorities agreed that automatic recognition could be achieved if there were common minimum requirements in terms of the duration of training (74%)**, although more than half of this group agree on the basis that duration is combined with harmonised qualifications content (see Table 5.8 below).

Of those authorities, two thirds (67%) suggest that this should be defined in years, hours or a combination of both, while only a third (33%) of respondents thought that workload should be defined in terms of ECTS (see Table 5.8 below). This suggests that some kind of input measure would be an important component of any procedure for competent authorities – although there is no consensus on the form that this should take.

A couple of survey respondents (for the architect profession) offered the alternative conception of years and ECTS, reflecting perhaps that although ECTS has a duration element to it, this is either not clear enough or simple enough to replace traditional forms of duration – even though there is a perceived benefit in using the wider conception of workload.

A competent authority for the biomedical/medical laboratory technician profession thought that *'the number of ECTS credits may be an additional tool, but cannot work in isolation'*. Any measure of duration, according to this respondent, only makes sense in combination with an alignment of content, because, for example, the increasing autonomy of universities may lead to a substantial difference in ECTS allocations for the same profession within the same Member State.

Table 5.8 Automatic recognition could be achieved if there were common minimum requirements in terms of duration of training programmes?

	Number (and %) of responses
Agree	40 (33%)
Partially agree	50 (41%)
Disagree	31 (26%)
Total	121 (100%)
If 'agree' or 'partially agree'....	
...Minimum duration should be defined in terms of years	*20 (23%)*
...Minimum duration should be defined in terms of hours	*9 (10%)*
...Minimum duration should be defined in terms of years and hours	*29 (33%)*
...Workload should be defined in terms of ECTS	29 (33%)
Total	*87 (100%)*

Source: Online survey of competent authorities

5.4.3 Other stakeholder perspectives

Most other stakeholders[133] interviewed as part of the case studies (81%) thought that there was a common view at national level about what constitutes the basic professional standards for the profession (in terms of the required skills, knowledge etc). This is shown in Table 5.9 below.

A total of 22 out of 57 stakeholders (39%) thought that the national view was shared by employers and professional bodies in other EU countries and that there was something approaching an EU-wide understanding of the basic professional standards required for the profession (see also Table 5.9). This provides some basis for convergence in education and training. However, the position varied by sector. For no professions was there a significant majority view that something approaching an EU-wide consensus on the basic professional standards for the profession:

[133] This encompasses the broader group of stakeholders that are not competent authorities but have an interest in professional recognition, such as professional bodies, training bodies and ministries.

- Around 50-60% of stakeholders for the biomedical/medical laboratory technician, accountant/auditor and pharmaceutical technician professions thought that there was a European consensus.
- Around a third of stakeholders for the civil engineer and physiotherapy professions thought that there was a European consensus
- Very few stakeholders for social work and real estate agents believed there to be a consensus.

Table 5.9 also shows that **a majority of other stakeholders (71%) thought that it is reasonable to assume that qualifications preparing individuals for the same profession s*hould be* comparable across different countries (other than where substantial knowledge of the national legal context is required)**. The view was that the professions are more comparable than the training, which indicates scope for further action towards convergence. However, few stakeholders thought that further convergence in training was easily achievable; because the approach to training is informed or shaped by the education system in each country.

Table 5.9 Other stakeholder perspectives on the level of consensus about basic professional standards (number and percentage of responses)

	Yes	No	Don't know	Total
Is there a common view at national level about what constitutes the basic professional standards for the profession (in terms of the required skills, knowledge etc)?	48 (81%)	7 (12%)	4 (7%)	59 (100%)
Do you think that this view is shared by professional bodies and employers in other EU countries? Is there something approaching an EU-wide consensus on the basic standards required for the profession?	22 (39%)	21 (37%)	14 (25%)	57 (100%)
Is it reasonable to assume that professional qualifications should be comparable across different countries where the qualifications are preparing individuals for the same profession (other than where substantial knowledge of the national legal context is required)?	37 (71%)	7 (13%)	8 (15%)	52 (100%)

Source: case studies

5.5 Agreed learning outcomes as an alternative to training content convergence

Competent authorities were split on the question of whether convergence of training contents or agreed definitions of learning outcomes would better facilitate the recognition of professional qualifications (see Table 5.10 below). The table shows that a significant proportion of competent authorities did not feel in a position to be able to judge the best approach. However, of those competent authorities that could express a preference:

- **60% (24 interviewees) thought that agreed definitions of learning outcomes (supported by transparent quality assurance arrangements) better-facilitated recognition.**
- **40% (16 interviewees) thought that the convergence of training contents (supported by transparent quality assurance arrangements) better-facilitated recognition.**

In practice, interviewees said that either approach could facilitate recognition. Preferences were therefore fairly marginal in nature and influenced by the wider ethos of the competent authority (e.g. whether it was engaged in or had positive views about education reform or standards-based approaches).

Preferences for learning outcomes were sometimes expressed where competent authorities thought that convergence in training contents was unrealistic (e.g. social work) because of the nature of differences in the profession between countries. It was also supported where

there was a strong preference for diversity in training contents to reflect national needs. Here, learning outcomes were thought of as a potential way of attaining a limited form of convergence, albeit one that in time could have a significant impact on the professional recognition process.

Convergence in training contents was preferred where there was either a lack of familiarity with learning outcomes or a lack of confidence in the assessment of learning outcomes. The lack of consensus here reflects the wider evidence base, which notes a high degree of uncertainty about the most appropriate basis for making a key part of the recognition decision: the assessment of whether there are substantial differences between qualifications.

The role played by assessments of substantial differences has been considered in existing research on the Bologna process. The independent assessment of the first ten years of the European Higher Education Area, undertaken in 2008/09[134], discusses recognition with reference to both professional and educational mobility. Even though the evidence in this report is primarily related to educational mobility, it points out that 'professional recognition is obviously closely linked to academic recognition'. The report suggests that ambitions to support professional and educational mobility are complicated by elements of the recognition of qualifications, which are open to interpretation by recognition authorities. It says that in spite of the Lisbon Recognition Convention:

"There are different interpretations of 'substantial differences' and other terms and practices around recognition, in particular using learning outcomes as a determinant for recognition".[135]

The implication is that the use of learning outcomes may – in the short-term at least – make consistent interpretation of differences more difficult, simply because it constitutes another potential basis for making recognition decisions.

While acknowledging that there will always be room for interpretation, the situation *'creates uncertainty and requires further attention'*. The key point here is that the issue is less to do with educational systems or the framework for recognition than with culture and attitude:

"Narrowing the bandwidth of recognition decisions to a more consistent level across Europe will be very much dependent on the consistent interpretation of substantial differences. Reaching consistency however demands the emergence of a common attitude towards recognition and will therefore be a major challenge".[136]

While the use of learning outcomes may provide for less consistency in the interpretation of qualification differences in the short-term, one education ministry respondent thought that, in the medium to long-term, the introduction of learning outcomes, alongside other Bologna/EQF reforms, fundamentally changes the basis on which qualifications are compared. In the national context:

"You'll always find differences between institutions [providing a similar course]. You can find a 1% or 5% difference between courses if that's what you are looking for. Before EQF and Bologna we looked for difference, comparing detailed programme lists. Now, it's totally changed, because of broader levels and the use of profiles."

[134] *ibid*
[135] *ibid*
[136] *ibid*

Table 5.10 Which of the following approaches would better facilitate the recognition of professional qualifications?

	Number (and %) of responses
The convergence of training contents (that could be supported by transparent quality assurance arrangements)	16 (23%)
Agreed definitions of learning outcomes (that could be supported by transparent quality assurance arrangements)	24 (34%)
Don't know / could not answer	31 (44%)
Total	71 (100%)

Source: case studies

5.5.1 Commonly-agreed learning outcomes

There has been a general trend for European professional bodies to increasingly use learning outcomes in setting the requirements for training. This implies that an approach based on agreed definitions of learning outcomes is at least possible. One professional body noted that sectoral dialogue can be extremely helpful in setting learning outcomes where the core content underpinning professions is much clearer (e.g. chemistry), but this is much more difficult where the core curriculum is less easily defined (e.g. engineering). In the former case, there is less debate and little distinction between countries regarding what is and should be scope of the subject. In the latter case, there is greater disparity – related to different scopes of practice for branches of the profession – and more debate about subject content. In all likelihood, the latter case is more prevalent in the context of professional qualifications.

One of the practical challenges – especially in the context of the regulation of professions – is that there is sometimes little read-across between generic competences in different occupational areas. The European multilingual taxonomy of Skills, Competences, qualifications and Occupations (ESCO)[137] - coordinated by the Commission in cooperation with EU Member States - is helping to redefine qualifications in terms of learning outcomes in line with the EQF and National Qualification Frameworks (NQFs) in order to facilitate transitions between employment sectors, but typically at a broad level. However, the design of ESCO is at an early stage.

While the lack of availability of agreed learning outcomes at a sufficiently detailed level is a major practical barrier to their current use as part of the recognition process, competent authorities that already use competency-based assessment (in the national context and for other purposes) were able to suggest ways in which this *could* make the qualification recognition process easier. For example, in the similar context of membership of a professional body, a competent authority for surveyors responding to the online survey suggested that *'a limited set of competencies is an essential part of being a professional....the number of years professional experience are less relevant if the competencies have not been achieved. Competency-based assessment provides for a shorter number of years' experience if a candidate has excelled'*. If the number of years' of experience in this example is substituted for number of years' of study, it shows a flexible model in which the input requirements for professional recognition could be mediated by (but not replaced by) evidence of achieved competence in the form of learning outcomes. The point about this example is it shows that competence-based approaches are already being used by some competent authorities, albeit not necessarily in the context of the Directive.

[137] http://ec.europa.eu/social/main.jsp?catId=822&langId=en&newsId=852&furtherNews=yes

5.5.2 Trust and confidence in learning outcomes

5.5.2.1 Intended and achieved learning outcomes

In relation to the confidence that recognition authorities may have in qualifications based on learning outcomes, Johnson and Wolf from Assessment Europe and King's College, University of London noted at the annual conference of International Association for Educational Assessment in 2008 that:

"learning outcomes are neither an input variable nor a genuine outcome variable. At their best, learning outcomes convey some information about what a programme of study or training is expected to achieve in terms of what holders of the resulting qualification "know, understand and can do". But the key term here is 'expected'."[138]

It is argued that the distinction between 'intended' and 'achieved' learning outcomes has been underplayed in debates on qualification framework development. There is a certain danger that the learning outcomes are used as 'wish lists' with relatively little relationship with the actual learning process and assessment. This is a clear barrier to having confidence in learning outcomes as the basis for decisions on the recognition of qualifications.

This is why the contribution of learning outcomes to the recognition process should be seen together with other initiatives under the Bologna process, namely the role of internal and external quality assurance, which should ensure that the expected learning outcomes are actually met by those who are awarded the specific qualification.

5.5.2.2 Level of trust and understanding required for the use of learning outcomes

On a related note, one of the EU stakeholder interviewees suggested that a key issue was the lack of *'general basic understanding'* of the concept of learning outcomes among *'organisations involved in the development, delivery [and] regulation of education and training'*. According to one of the national co-ordinators for the Directive, the challenge for embedding learning outcomes is that the existing qualifications landscape is so complex (even after the implementation of the Bologna process) that it is hard to build confidence in the system:

"under the general regime, bodies recognising qualifications receive documents from a country of which they often do not know the education system at all and they have never heard of the university. In such cases, it is difficult for them to trust the qualification."

Another EU stakeholder thought that lack of trust was illustrated by the perceived way in which some competent authorities compare qualification content – by looking to identify differences in content as necessarily requiring compensatory measures. The point being made was that it is to be expected that qualifications across Member States will be different. If, for example, an applicant's mathematical qualification does not contain a specific module on statistics, it does not necessarily mean that the qualification should not be recognised in a straightforward way. It might, for example, be embedded as part of other teaching components within the qualification structure. The use of learning outcomes *could* support recognition as a new form of qualification measurement if it is widely understood that comparable learning outcomes do not mean identical course content, which, it was argued by numerous stakeholders, is neither feasible nor appropriate:

"There should be differences in education systems – what is needed is a common currency and reference point for comparability" (EU stakeholder)

"I don't think training contents should be convergent, the aim of qualifications frameworks is to translate and to gain access to different qualifications and the existing richness [of qualifications]....it does not make recognition easier, harmonisation is not the goal". (Education ministry)

One professional body thought that it was important not to have an over-simplistic view of the role played by trust:

[138] Johnson and Wolf (2008)

"I'm not sure trust is the issue. If you read the experience reports, it suggests that with one or two exceptions [professions] it's not a problem with the academic standing of foreign degree courses. It's about courses being perceived as further removed from practice, and teaching, learning and assessment approaches being felt to be in the 'dark ages'".

The issue here was less about trust in the overall academic quality of education and training in other countries (i.e. the level to which a subject is actually taught), but a lack of confidence in how aligned to labour market need and professional applicability it is. This is a concern that is arguably exposed by (and complicates) the use of learning outcomes.

It is also important to note that trust is also not an issue that exclusively relates to the use of learning outcomes, but can also relate to educational reform in a broader sense. For example, another professional body thought that the Bologna reforms may provide for less confidence where the reforms have served to shorten previous qualifications at master level. This is an issue that may relate to specific contexts, such as engineering in Germany.

5.5.3 Transparent quality assurance arrangements

It is not possible to de-couple perceptions of the value of learning outcomes from the associated culture and wider systems that its use is *assumed* to involve. For **learning outcomes to have an impact on the recognition of professional qualifications, its implementation and use arguably has to therefore be understood in conjunction with the implementation of qualifications frameworks and compatible quality assurance systems**. It would be difficult in a recognition context to assess the robustness of learning outcomes without knowing whether they are part of a quality assured system, which is often linked in practice to the development of national qualifications frameworks.

For many stakeholders, the development of common or minimum approaches to quality assurance and accreditation underpin the potential use of educational reforms in a professional recognition context. **Yet only half of competent authorities responding to the online survey thought that the fact that institution awarding the qualification is quality assured at national level is a 'very important' dimension in deciding on the recognition of foreign qualifications – where the profession is not regulated in the country where the qualification was awarded** (see Table 5.11 below). Only 6% of respondents said that it was not relevant at all, but 22% of competent authorities felt that this was 'useful, but not essential' information. The remaining 23% of competent authorities thought that quality assurance in this context was 'quite important'.

Table 5.11 If the profession is not regulated in the country where the qualification was awarded, how important is the fact that the education/training institution is quality assured at national level (accreditation, quality assurance certificate)?

	Number (and %) of respondents
Very important	57 (50%)
Quite important	26 (23%)
Useful, but not essential	25 (22%)
Not relevant	7 (6%)
Total	115

Source: Online survey of competent authorities

Exploring these issues with competent authorities during the case studies, it is clear that, while the role and potential value of quality assurance is variable, the much more significant issue is that competent authorities generally are not familiar with and do not necessarily have strong confidence in (*perhaps as a result of lack of familiarity with*) national quality assurance arrangements in other countries. The fact that these arrangements are evolving in many countries as a consequence of Bologna-related developments adds to the general lack of understanding. What it suggests is that **the development of national quality assurance arrangements will not be a sufficient factor for being able to use learning outcomes and ECTS confidently for recognition purposes. What is required is that approaches**

to quality assurance are aligned between countries. There is clear need to, on one hand, ensure the implementation of the existing common European approaches to quality assurance[139]; and, on the other hand, to communicate about the implications of this approach to quality assurance as well as the results of reviews and evaluations put in place.

There are exceptions to the general lack of awareness among competent authorities. One competent authority for accountants/auditors responding to the online survey explicitly tied the issue of quality assurance to the more predominant competent authority concerns around duration of study:

"I prefer giving a person access to a regulated profession who has a qualification obtained after a "shorter" training programme, but with a very high quality guaranteed by an independent external quality assurance agency than a person who has a qualification obtained after many years' longer training programme, but with no minimum quality assurance guarantee" (competent authority, accountants/auditors).

This viewpoint was exceptional among competent authorities, but it may suggest the possibility, in the future, for competent authorities to focus more directly on 'quality' rather than 'quantity' of learning. During the more detailed case study interviews, it was difficult for competent authorities to take a view on the role quality assurance systems *could* play without knowing what a quality assurance system would look like in practice. Instead, competent authorities tended to focus on practical issues related to the difficulty in ensuring credible quality assurance systems between countries and, following on from this, scepticism about the achievability of a common approach across countries that would provide the necessary confidence.

The more practical consideration for competent authorities' thinking on outcomes-based approaches was quality assurance at the level of the qualification – and specifically in the context of assessment methodologies. Through the case studies, lack of understanding of and confidence in the assessment of achieved learning outcomes was the most commonly voiced reason why an outcomes-based approach is not currently practicable.

Significant progress has been made in quality assurance through the set up of European Standards and Guidelines for quality assurance in 2005 and the register of quality assessment agencies in 2008. However, the 2009 independent assessment of the implementation of Bologna process states that the extent of compliance of national quality assurance systems with European standards was not yet clear. It is therefore likely that the impact of new quality arrangements in providing greater confidence in the systems in other countries is limited to date. The 2009 independent assessment of Bologna also notes:

"The perceived diversity between countries in the quality of education being delivered needs to be reduced to achieve a coherent higher education system in the EHEA".[140]

The evidence from educational ministry interviews suggests that all countries had undertaken significant developments in relation to national quality assurance arrangements. In a number of cases, this involved setting up new agencies and new arrangements for external quality assurance (the position in relation to internal quality assurance is more formative). However, the impact of these systems in terms of promoting trust is untested or unproven. In fact, there is evidence that quality assurance is used differently at national level depending on the institutional landscape and national objectives.

If quality assurance systems will in future play a role in increasing transparency and trust in qualifications, this could impact on both a system based on learning outcomes and the current system.

[139] See the Standards and Guidelines for Quality Assurance in the European Higher Education Area. For a discussion on implementation of these see for example: EUA (2009) Trends in quality assurance

[140] The Bologna Process Independent Assessment: The First Decade of Working on the European Higher Education Area, Volume 1 Detailed Assessment Report, DG Education and Culture (2009)

5.5.4 Consequences of differential use of learning outcomes by country

The study terms of reference asks what would happen in terms of recognition if in one Member State training content is defined in terms of learning outcomes and in another Member State it is defined in terms of content and duration. The implicit concern here would be that the different evolution of education and training at national level somehow acts as a barrier to qualification recognition. This could simply be a function of the different pace of implementation between countries under the Bologna process (and therefore a temporary problem), or it could be a more permanent problem due to divergence in education and training systems.

A strong message from a range of stakeholder interviews in the initial phase of the study was that there is a potential false opposition between the use of duration of study specifically as part of the recognition process and the use of learning outcomes. It was felt to be unlikely that recognition authorities would use learning outcomes rather than duration, and that the use of learning outcomes would therefore have to be in conjunction with some measure of duration.

In those countries that are at a more advanced stage with educational reform, there is evidence to suggest that the use of learning outcomes is not necessarily incompatible with the current Directive requirements. They are *'not mutually exclusive'* according to one EU stakeholder, especially for full-time students. They are not *'inherently in conflict'* said another EU stakeholder. This would indicate that where qualifications are defined and presented in terms of learning outcomes – they can still be presented in terms of content and duration.

As part of the online survey, competent authorities were presented with a number of scenarios relating to how they would respond in a recognition context (and what would be their preference) in the context of learning outcomes. The results should be interpreted with care, because they are obviously based on competent authorities having a variable understanding of and familiarity with learning outcomes. Nevertheless, there is **a clear message from competent authorities that learning outcomes alone do not offer an effective alternative to a recognition system based on input measures, even though it may provide useful additional information**.

The message here and elsewhere in survey is that **competent authorities appear to be looking for more – rather than less or different – information on which to base recognition decisions.** It is perhaps debatable whether that would indeed facilitate recognition in practice or whether it would create additional barriers to recognition.

If all qualifications were described using learning outcomes, respondents were asked if they would refer to the learning outcomes / competence descriptions in their country to identify equivalence. Only 22% of respondents said that they would be unlikely to do this; while 36% said that this would be possible and 41% said that it would be likely (see Table 5.12 below).

Significantly, **the vast majority of competent authorities (83%) said that they would still take into account the content of education and training programmes (i.e. the subjects taught; curricula). Most respondents (85%) also said that they would still take into account the duration and level of studies**. **Over two thirds of respondents (69%) also said that they would find it difficult to recognise qualifications based on learning outcomes / competences only** and would require evidence that the learning outcomes / competences have actually been achieved (i.e. proof of assessment results, evidence about the assessment methods used).

Table 5.12 If all qualifications were described using learning outcomes (i.e. what the applicant is able to do in a professional context), would you…

	Number (and %) of respondents
…Refer to the learning outcomes / competences descriptions to identify equivalence with the qualification from your country	
Highly probable	50 (41%)
Possible	44 (36%)
Unlikely	27 (22%)
Total	121 (100%)
…Still take into account the content of education and training programmes (subjects taught; curricula)	
Yes	99 (83%)
No	8 (7%)
Don't know	13 (11%)
Total	120 (100%)
…Still take into account the duration and level of the studies	
Yes	100 (85%)
No	8 (7%)
Don't know	10 (8%)
Total	118 (100%)
…Find it difficult to recognise qualifications based on learning outcomes / competences only and would require evidence that the learning outcomes / competences have actually been achieved (i.e. proof of assessment results, evidence about the assessment methods used)	
Yes	83 (69%)
No	22 (18%)
Don't know	15 (13%)
Total	120 (100%)

Source: Online survey of competent authorities

The case study interviews verified the online survey findings. Few competent authorities thought that an application based on learning outcomes would be particularly problematic, but equally few said that the assessment would be based on learning outcomes only[141]. This is a critical point in the context of some of the wider questions of whether convergence in training contents or learning outcomes better-supports recognition. **While there was a significant degree of support for learning outcomes as opposed to pursuing convergence in training contents, the reality is that competent authorities are not generally in a position to recognise qualifications on this basis**. The most common response from competent authorities faced with an application based on learning outcomes would be to request further information in line with the current criteria of the Directive. As one competent authority put it:

"[An application based on learning outcomes] could create the problem for the applicant, as he or she would be required to provide additional documents. The qualification would be recognised, provided that the level and scope of the qualification would be equal to [national] legal requirements."

[141] outside of the accountancy profession ,where different consideration apply because much of the recognition activity is in the context of auditors specifically and competences are examined

The alternative scenario (i.e. where the host country qualification is defined by learning outcomes and an application was received defined in terms of content and duration) was less of an issue as, from a competent authority perspective, it simply reflected current practice under the Directive.

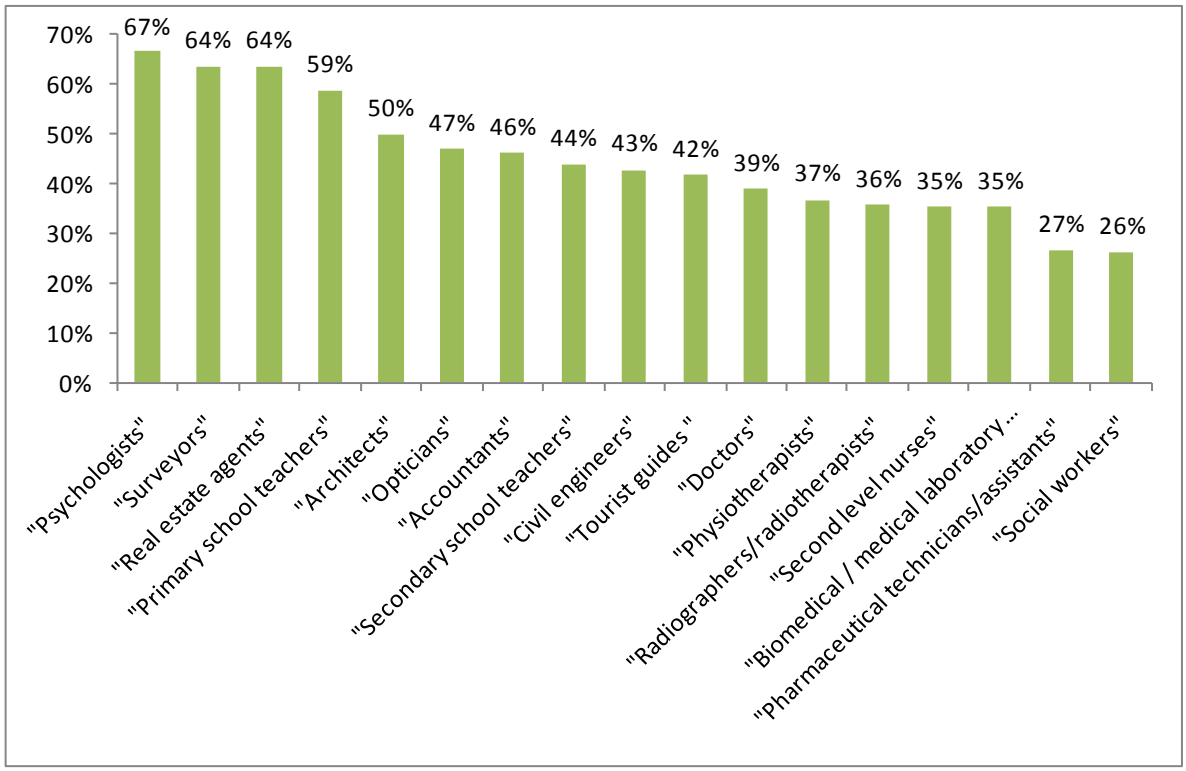
5.6 Other approaches to achieving convergence

There are a number of examples of sectoral approaches at EU level to support professional mobility. The significant point about much of this work is that it harnesses the Bologna reforms and EQF developments to provide the basis for a common sectoral approach. As well as setting either *a common framework for knowledge, skills and competence* or *common minimum standards for training*, sector approaches use labels/accreditation for individuals or programmes as a direct way of supporting professional recognition. They may be led primarily by professional bodies or education institutions.

Below we describe some examples relating to the case study professions, but before doing so, it is worth noting two general points:

- There is a significant challenge in moving these approaches from the development to the implementation phase. Irrespective of the quality of the method to set common standards, it is difficult to embed it in different national contexts. National-level stakeholders interviewed through the case studies put far greater store on 'organic' approaches to achieving convergence (educational exchange etc) rather than top down common frameworks or standards (civil engineering and, to a lesser extent, biomedical/medical technician stakeholders were a possible exception here).
- The approaches followed have to be tailored to the specific needs of the profession. There is no single approach that appears relevant across professions. This partly reflects that different professions have different degrees of commonality in their scope of practice to begin with. Figure 5.1 below shows the varying degree of importance placed on the scope of activity of the profession for competent authorities.

Figure 5.1 Proportion of competent authorities reporting that the scope of activity of the profession is 'very important' information for deciding on the recognition of a foreign qualification



Source: Online survey of competent authorities

A potential strength of sector-led approaches is that they are normally undertaken on a voluntary basis by professional bodies, which provides both a legitimacy and potentially greater take-up for the profession. However, the voluntary nature can be a problem if there is only a sample of professional groups involved. One accountant/auditor competent authority responding the online survey illustrated this point in the context of common platforms, but it is an issue that has a much wider resonance for all sector-led approaches:

"[Common platforms] take many years to construct, are difficult to reach consensus on, difficult to update and difficult to enforce. Furthermore, if only a self-selected group of bodies agrees them this would impede mobility rather than enhance it. Common platforms in trying to overcome similar challenges across different professions, where regulated and unregulated activities are diverse, could end up being more restrictive than current arrangements".

5.6.1 The Tuning method for professions regulated under the general system

Tuning Educational Structures in Europe (the Tuning project) started in 2000 and links the design, development and evaluation of degree programmes to the principles of the Bologna process. The Tuning methodology encompasses defined areas (the setting of generic and subject-specific competences; the role of ECTS; learning, teaching and assessment; and quality enhancement) and involves a standardised process led by expert groups to develop an up-to-date picture of good practice across Europe and develop recommendations validated by European networks in each area.

A number of Tuning projects have been undertaken for subject areas relating to professions regulated under the general system of the Directive. As noted earlier, a number of stakeholders familiar with the Tuning approach in general held up the example of occupational therapy as a project that enabled greater convergence. The Tuning methodology and tools have also been applied for social workers and civil engineers in the third phase of Tuning activity (from 2005 and 2006) by thematic networks under the Socrates programme. In social work, the EUSW: European Social Work Commonalities and Differences network undertook early development work. One of the challenges it reports was that the scope of the profession and culture within which the profession operates is so different between countries that the *'sophisticated Tuning discourse'* is very difficult to undertake with education institutions. The strong implication is that there needs to be a sufficient degree of commonality to the profession for potential benefits of the Tuning approach to be felt.

There was some debate among stakeholders we interviewed as to whether defining common competences or agreeing the scope of practice was the more significant barrier to successfully deploying the Tuning method. One social work stakeholder argued that while the Bologna process has had a positive impact as one of the drivers to establish social work education and training as a bachelor level study, it is unrealistic to expect educational reform or associated sectoral activity (including Tuning) to lead to harmonisation of training content. This was consistent with the view of a range of stakeholders related to the profession.

Current work referred to by national stakeholders primarily related to updating and agreeing a common definition of the profession (the IFSW and IASSW have undertaken a review of the international definition of social work that is expected to report in 2012). There was strong support among professionals surveyed as part of the review that an international definition 'should become the basic assumption of social work curricula and courses' (over 75% of respondents agreed with this proposition) and curricula[142].

5.6.2 Setting common degree course requirements and benchmarks

In the context of real estate professionals, CEPI set up the Eureduc programme in 2001. The programme aims to offer a minimum common degree course to the main universities, colleges and professional training institutes which already offer courses for real estate agents and/or property managers. This minimum course should correspond to the minimum

[142] http://www.eassw.org/Review%20Definition%20presentation%20Hong%20Kong2010-6-9.pdf

educational requirements set by CEPI, which are presented in terms of the Bologna degree cycles and ECTS.

More than fifty European educational establishments have signed the Mission Statement through which they commit themselves to integrating the Eureduc programme into their syllabus. Most of the signatories have also asked for, and were granted, the label CEPI Eur label, confirming that their activities comply with the programme.

In effect, this approach provides a basis for convergence in training contents for the profession. By working with individual higher education institutions, the professional body can then potentially influence national systems to create greater commonality in the national requirements for real estate agents, further supporting professional mobility. In reality, this is a significant challenge.

The Federation of European Accountants (FEE) reported work to develop something approaching a common curriculum for the profession in the form of the Common Content project. One of the challenges that the project seeks to address is to combine national legal and regulatory factors that are a barrier to convergence of training contents and elements of the profession that are transversal. The organisational document setting out the project's ambitions describes it in these terms:

"A collaboration between premier accountancy bodies to develop, maintain and unify high quality professional accountancy education benchmarks reflected in the distinct qualifications of these bodies and recognised internationally as meeting the challenges posed by globalisation and the needs of diverse stakeholders".[143]

The project has initially involved the professional bodies in six Member States (France; Germany; Ireland; Italy; The Netherlands; UK). It is therefore an example of joint activity between a group of interested countries rather than an EU-wide approach, although the expectation is that the standards set become widely-established.

The scope of the project is wide-ranging, including setting benchmarks for knowledge, agreeing learning outcomes, setting interdisciplinary competencies and policies on education and assessment. Significantly, the project *'is applicable to qualification programs that use either input our output-based approaches, or a combination of both'*. This reflects that there is diversity in qualification design across the sector (i.e. in different countries). The qualification requirements set out by the project explicitly acknowledge that some output-based approaches exist based on learning outcomes, as well as input-based approaches defined in terms of the knowledge content and levels required for professional entry.

Compliance of curricula with the common content qualification requirements can therefore either be judged against learning outcomes or the knowledge content and levels required. In effect, the assessment of compliance can emphasise different elements of the underpinning project framework depending on whether the qualification is input or output-based. This is because *'the qualification program as a whole (i.e. including actual assessment etc.) forms the basis for determining compliance with both the learning outcomes and the related knowledge required'*.

5.6.3 Setting international standards for the profession / professional training

In the engineering profession, there has been extensive work to accredit individuals and programmes as meeting set EU-wide standards. The European Federation of National Engineering Associations (FEANI) has developed a set of criteria with respect to the professional competences for the engineering profession. These criteria are compatible with the Bologna framework, ECTS and the EQF.

FEANI has also developed the EUR ING title based on the criteria to provide a guarantee of competence for professional engineers. EUR ING uses a self-regulating model working with Schools and Programmes at national level. EUR INGs are required to comply with a professional Code of Conduct. The European Commission, in a statement to the European

[143] Organisational Document, Common Content Professional Accountancy Project, 2010

Parliament, has recognised the FEANI Register and the EUR ING title as valuable tools for the recognition of national diplomas among Member States[144].

5.6.4 Accreditation and kite marking from international professional bodies

Since 2007, The European Network for Accreditation of Engineering Education (ENAEE) has administered the EUR-ACE Label, a decentralised European accreditation system of engineering study programmes which aims to create an accreditation framework for programmes at bachelor and master. ENAEE authorises qualified National Accreditation Agencies (or analogous bodies) to award the EUR-ACE Label. The EUR-ACE Framework Standards are compatible with the Bologna framework, ECTS, and the EQF, although are more specific with respect to the professional competences required for the engineering profession. The label is currently being implemented in five EU countries (France; Germany; Ireland; Portugal; UK) and Russia. It is seen by stakeholders as a way of simplifying the recognition procedure, because it requires a degree of alignment between actual education programmes. The approach is still described as being relatively new and does not yet have a critical mass of involvement from education institutions across Europe. It was estimated by FEANI that around 2% of engineering programmes have the EUR-ACE label. This perhaps indicates the challenge – associated with convergence under Bologna – of engaging a large number of education institutions across Europe in a process that requires common curriculum approach or design.

[144] Statement from the European Commission on a question addressed by Mr Christian Rovsing (PPE) on the FEANI Register and whether the EUR ING title may facilitate the free circulation of professionals in the EEC (10 March 1994), available at www.feani.org

6 The three-cycle structure and doctors

6.1 Introduction

This chapter relates to the study question asking:

- *'To which extent the three cycle structure offers an advantage, in terms of the free movement of doctors benefiting already from automatic recognition, compared to the integrated cycle?'*

6.2 Use of the three-cycle structure for doctors

6.2.1 Incorporation of Bologna cycles for medical degrees at national level

In order for the three-cycle structure to provide advantages to doctors seeking professional recognition, it is important that it is widely-established at Member State level. Yet **Medicine is arguably the subject area in which the Bologna cycles have the least traction in practice**. Data from Eurydice in 2007 showed that Medicine was excluded from the two-cycle structure in over half of Member States (16 out of 27 EU Member States), including many of the largest Member States (see Table 6.1).

Table 6.1 Inclusion of Medicine in the two-cycle structure by country (2007)

Included in two-cycle structure		Excluded from two-cycle structure	
Belgium	Portugal	Austria	Italy
Cyprus	Romania	Czech Republic	Lithuania
Denmark	Sweden	Estonia	Malta
Greece		Finland	Romania
Latvia		France	Slovakia
Luxembourg		Germany	Slovenia
The Netherlands		Hungary	Spain
Poland		Ireland	UK

Source: Eurydice. Table adapted from The Bologna Process Independent Assessment DGEAC (2009)

6.2.2 The prospects for future incorporation of the Bologna cycles for medical degrees

6.2.2.1 Little prospect for wider use of Bologna cycles for Medicine in the short- and medium-term

In those countries that have not incorporated the Bologna cycles within medical education, **education ministries, competent authorities and medical professional bodies generally expect this position to remain in the medium-term.**

Interviews with education ministries in early 2011 provided an insight into the prospects for future incorporation of the Bologna cycles for Medicine. Only one country that had not already done so (FR) reported that Medicine was in the process of being aligned to the Bologna cycles. This had not happened earlier, when the Bologna cycles were introduced for other subject areas, because of the structure and complexity of medical degrees.

A significant number of other countries reported that there were no plans to align medical degrees to the Bologna cycles (CZ, DE, EE, FI, IE, IT, LT, SK, SI, UK). Furthermore, although *The Bologna Process Independent Assessment* reported Poland as incorporating the two-cycle structure for Medicine, it was suggested that the two cycles are not delivered in practice in Poland, because national regulations require a second-cycle degree to practice. In Cyprus, there is currently no provision of medical degrees. It was reported that the University of Cyprus is exploring the feasibility of offering medical degrees (with the earliest student enrolment being in 2013) and it is thought that this will be an integrated cycle programme.

6.2.2.2 *Education ministries: the rationale for retaining the integrated cycle*

Education ministries provided a range of reasons for retaining the integrated cycle for Medicine. Although these reasons were expressed in different ways, much of **the rationale related to length of study and the integrated cycle providing the only meaningful labour market entry point**. In Ireland, for example it was reported that the integrated cycle remains because the learning outcomes associated with the qualification require longer than the bachelor timescale allows. In Finland and Lithuania, it was reported that the incorporation of a first-cycle degree was not under consideration because the license to practice for doctors means that any first-cycle qualification would not have sufficient value in the labour market.

The barriers, according to education ministries, are therefore more related to a lack of perceived need rather than curriculum design-related challenges. Although the latter were acknowledged by education ministries (e.g. in Ireland), they were a greater preoccupation for medical stakeholders interviewed during the case studies, especially in relation to the integration of theoretical and clinical study within medical training and education.

In Germany, it was reported that there was no 'technical' reason preventing Medicine being incorporated into the Bologna cycles, but the need to involve a wider range of ministries and professional bodies means that to do so would require significant effort – and it is not a current priority.

The difficulties in building the practical support required to introduce educational reform were noted elsewhere. One education ministry reported that Medicine was not included within the Bologna cycles primarily because professional bodies were not in favour of it. As a relatively 'self-contained' profession (where training takes place in separate medical schools and hospitals), it was easier for the profession to stand apart from educational reform.

It is worth noting that Medicine is not unique in being a subject area outside of the Bologna degree structure. Education ministries often referred to other sectoral professions remaining outside of the Bologna degree structure in their country (most commonly Dentistry; Veterinary Studies and Pharmacy).

6.3 Perceived advantages of the three cycle structure for the free movement of doctors

6.3.1 Extent to which doctors' competent authorities see advantages in the three cycle structure

Around half of responding doctors' and architects' competent authorities (47%) saw no added value in the implementation of the Bologna cycles for the free movement of professionals (see Table 6.2 below). **The figure rises to 70% of doctors' competent authorities specifically.** Many of the other competent authorities are neutral on this question and only a small minority (10%) see added value. This percentage is the same for architects and doctors authorities. Architects' authorities were more likely to be neutral on the question than doctors' authorities (58% vs 28%).

The response is not particularly surprising given that a significant number of countries have not implemented the Bologna cycles for these professions (which limits any potential added value), particularly in the context of Medicine. **The view of competent authorities largely reflects the decision at national level on if and how to reform medical education in the context of the Bologna cycles**. There were responses from 14 Member States to the online survey relating to doctors:

- Nine of these countries had not introduced the two-cycle structure for Medicine according to the *Bologna Process Independent Assessment,* seven of which were in the category of responding authorities seeing no value in the Bologna cycles for the free movement of doctors already benefiting from automatic recognition (AT, CZ, EE, FR, DE, ES, UK). There was one neutral response (IE) and only one positive response (FI) from those countries retaining the integrated cycle for Medicine.
- The five responding countries that had introduced the Bologna cycles for Medicine typically saw benefits (NL; BE Flanders) or were neutral (DK; LV; BE French-speaking

Community) on the question. The responding authority in only one country (EL) provided a negative response.

Table 6.2 Is there, or would there be, an added value for the free movement of professionals (in terms of recognition of their professional qualification) if the cycle system under the Bologna process (bachelor – master – Doctorate) is implemented for the professions of doctor and architect?

	Number (and %) of responses
Yes	3 (10%)
Neutral	13 (43%)
No	14 (47%)
Total	30 (100%)

*Source: Online survey of competent authorities**

The case studies explored perceptions of the added value of the Bologna cycles for doctors with a wider group of stakeholders. As in the online survey, a minority of case study interviewees (9%) felt that there were advantages, but the case studies showed that many of the respondents who are rather neutral on this question do not see advantages (see Table 6.3 below). Responses were consistent across types of organisation (ministries, professional bodies), although education institutions interviewed in relation to doctors were typically unable to comment either way.

The lack of perceived advantage is apparent irrespective of whether the Bologna cycles have been introduced in the interviewee's country. Some interviewees reflected that for any potential advantages in a recognition context to become a reality, it would require that a significant majority of countries had incorporated the Bologna cycles for Medicine.

Table 6.3 Does the three-cycle structure introduced under the Bologna Process (bachelor-master-doctorate) provide any advantages in supporting the free movement of doctors in the context of the profession already benefiting from automatic recognition when compared with the integrated cycle?

	Number (and %) of responses
Yes	3 (9%)
No	26 (81%)
Don't know	3 (9%)
Total	30 (100%)

Source: Case studies

As numerous respondents reported, doctors already benefit from relatively free movement compared to other professions. Competent authorities, in particular, were more likely to focus on whether the current approach offers sufficient public protection (i.e. whether the system effectively ensures fitness to practice in the host country). There was therefore no identified need to further facilitate free movement of doctors, because the system of automatic recognition effectively does this.

Case study interviewees generally felt that there was no link between the Bologna cycles and improved professional recognition for doctors given that a system of automatic recognition is already in place:

- *'The Bologna system has nothing to do with the question of professional mobility' (Health Ministry)*
- *'Current difficulties in relation to the movement of doctors [relate to] the profound differences in the training they receive and the scope of activities that actually correspond to the speciality of the doctor. The three-cycle [structure] does not address this'. (Professional body)*

- *'What is needed is trust in the value of the degrees awarded, and this does not depend on the Bologna compliance or not for doctors'. (Health Ministry)*

6.3.2 Indirect benefits of the three-cycle structure

It is important to note that the results here do not reflect a general lack of perceived value among case study interviewees in the Bologna cycles. Rather, that **the advantages provided by the Bologna cycle are not directly related to qualified doctors in the context of professional recognition.**

In general terms, there are a range of perspectives among medical stakeholders on whether the introduction of the Bologna cycles is a positive development. One EU stakeholder summarised this as follows:

"There is no consensus view among medics on the split qualification under Bologna – what it means, how it might work and whether it is useful [compared with the integrated programme]".

6.3.2.1 Free movement of medical students between cycles

Those case study interviewees who thought that there were advantages in the three-cycle structure for doctors' free movement included two professional bodies emphasising the **indirect advantages from the free movement of medical students between cycles**. The logic was that greater student mobility acts as a catalyst for greater alignment of approaches between countries.

This is a theoretical advantage, as little evidence of inter-cycle movement was provided during the study. However, it was suggested that, even in spite of the lack of traction of Bologna-structured medical degrees in large parts of Europe, changes to national higher education funding in some countries could become a trigger for increased student demand for mobility and the delivery of more flexible degree structures (in the context of the European market for higher education).

6.3.2.2 Wider labour market benefits

The other main advantage of the Bologna cycles for Medicine, in a wider economic context, is that **it enables students to gain recognition for a substantial part of learning if they do not complete the full integrated cycle / second cycle**. According to an education stakeholder, the current debate at national level in one country (that retains the integrated degree) is progression routes for students who do not complete the full cycle. It was reported that having the Bologna framework *'supports this debate'.*

This is explicitly not a consideration for the recognition of doctors' qualifications – although concerns relating to the status and labour market activity of first-cycle completers of medical training are a common reason why elements of the medical profession in some countries are opposed to the Bologna cycles (i.e. concerns relating to lower-qualified professionals fulfilling elements of the doctor's role). Also, according to one professional body, it *'creates confusion and false expectations'* on the part of students.

The extent to which non-completion of degrees is an issue varies by Member State. There also appears to be little evidence that first-cycle medical degrees are being used to develop 'mini doctors'. In fact, the contrary appears to be the case. A number of competent authorities in countries with the Bologna degree structure for Medicine explicitly made the point that the economic case was to facilitate those who drop-out of medical training (for whatever reason) to pursue other careers, which may be health-related (e.g. hospital administrators or managers; businesses related to selling medical products) or may not be.

The Survey of master Degrees in Europe provides the examples of a German higher education institution offering *'a complex body of provision, with a variety of exit and transfer points'*, not all of which *'will deliver qualified medical practitioners and therefore be in compliance with the Directive*[145]*'*. It reports some as welcoming *'the bachelor stop-off or*

[145] Davies H, The Survey of master Degrees in Europe, EUA, 2009

switch-over point, noting that roughly half of medical graduates will never take up work as physicians. Labour market access at this point is therefore a viable option'[146].

6.4 Barriers or issues relating to the three cycles for doctors

6.4.1 The lack of a case for introducing the cycles

While very few competent authorities responding to the online survey saw added value in the Bologna cycles for the automatic recognition of the sectoral professions, **a majority of respondents (60%, 18 out of 30 respondents relating to doctors and architects) saw no particular problems in the implementation of the cycle system for the free movement of professionals**. Doctors' respondents specifically were evenly split on this question.

The case studies elaborated this response, suggesting that the position of a significant number of stakeholders was that while the introduction of the Bologna cycles for Medicine was not inherently problematic, there was little perceived demand for or benefit likely to result in the restructuring of the integrated cycle. According to one medical regulator, *'medical schools see no advantage in the three-cycle structure, we are neutral. There's just no case for it in practice - no one is pushing for it'*.

Factors such as the perceived preference of the profession itself for the status quo and the relative independence of medical education within the wider higher education systems at national level were suggested as reasons why, in the absence of a strong case for change, the Bologna cycles had not been widely introduced to date. Perceptions of agreed practice internationally also play a part. According to one case study respondent based in a University, *'there is a general tendency in Europe to accept the integrated system up to the level of master degree as a general standard'.*

We found a mixture of opinions – among medical stakeholders and education respondents at national level responsible for the Bologna reforms – as to whether it meant that medical degrees would in time be more widely structured in terms of the Bologna cycles. The consensus appeared to be that *if* this was to happen, it is unlikely to be short- or medium-term activity.

6.4.2 A mix of additional concerns

There is no single problem identified by competent authorities in using the Bologna cycles. A variety of concerns are felt by competent authorities. Of the 12 respondents (40%) to the online survey that envisaged problems, the most widely-reported problem was:

- the lack of clarity about the professional value of the first cycle qualification (8 respondents).

This was followed by:

- the duration of studies (6 respondents);
- the multiplication of qualifications – specialisation in the second cycle (6 respondents);
- the content of training programmes as set out in the Directive (5 respondents);
- the notification procedure for the Directive (3 respondents).

Other issues were reported in the survey, such as fears regarding an 'unintended standardisation of medical education', concerns that it could require additional regulation, and question marks about whether there is capacity to deliver additional places implied by the introduction of a first-cycle qualification. These concerns were all echoed during the case studies, in particular, the assumption that the *'three cycles would impose the same curriculum across the whole of Europe and this would completely stifle innovation'* (professional body).

[146] Davies H, The Survey of Master Degrees in Europe, EUA, 2009

The duration of studies was a common barrier identified in the case studies. One ministry described the bachelor-master split for Medicine as being *a' straightjacket approach'*, given that the basic elements of medical education and training are integrated throughout the courses. Others argued that this need not necessarily be the case, but given the lack of widespread implementation to date there is an absence of models to test out whether the introduction of Bologna cycles for Medicine necessarily equates to a split between theory and practice.

7 Calculating the duration of training for doctors

7.1 Introduction

This chapter relates to the main study question asking:

- *'To which extent would there be an advantage, in terms of the free movement of doctors already benefiting from automatic recognition, to calculate in a harmonised training system, the duration of training in ECTS credits rather than in teaching hours?'*

The study terms of reference also asks whether there should be a calculation still in teaching hours and why this should or should not be the case.

7.2 Awareness of ECTS

There is a relatively high degree of awareness among doctors' stakeholders of ECTS (see Table 7.1 below). The extent of familiarity with the system is more mixed, although nearly two-thirds of case study interviews (63%) described themselves as being at least 'quite familiar' with ECTS. Doctors' professional bodies were generally slightly less familiar with ECTS than health ministries.

Many interviewees were much less comfortable in drilling down into specific elements of credit systems (e.g. credit allocation). This is not surprising given the technical nature of the subject and the extent to which ECTS is still to become established at institutional level in many countries. Lack of detailed knowledge of the system may not be a barrier to the use of credit.

Table 7.1 How familiar are you with the European Credit Transfer and Accumulation System, known as ECTS?

	Number of responses	% of responses
Very familiar	6	19%
Quite familiar	14	44%
Aware - but not at all familiar	11	34%
Not aware	1	3%
Total	32	100%

Source: Case studies

7.3 Perspectives on the potential added value from using ECTS rather than teaching hours

7.3.1 Extent to which ECTS adds value

Around half of doctors' stakeholders (47%) interviewed during the case studies saw potential added value in automatic recognition based on ECTS credits rather than using teaching hours. Many of these interviewees supported the approach in principle, because they felt that the current focus on teaching hours is a limited measure – in that it says nothing about the competence of doctors. The interpretation of ECTS in this context was therefore based on having ECTS linked to learning outcomes, which is not yet always the case.

A number of respondents were sceptical about how easy it would be to build consensus on the definition of minimum standards (or training requirements) in the context of ECTS. It was also noted, though, that ECTS is already widely used by medical schools in some countries at least.

7.3.1.1 Necessary conditions for ECTS to add value

The following comments were noted with respect to the necessary conditions for ECTS to add value:

- One health ministry interviewee noted the need to first address issues relating to credit accumulation – relating to the standardisation of what a credit means in each country.
- According to another health ministry interviewee, the importance of equitability of assessment and quality assurance, especially in the context of observational assessment of practice was felt to be an area in which trust was lacking.
- Its effective use implies and requires *'a better competence system'* according to one professional body. This was suggested as being a common system across Member States, but that is certainly not a majority view across the case study interviewees (this issue is discussed more fully in the context of learning outcomes in Chapter 8).
- The extent to which ECTS provides an advantage for doctors' stakeholders depends on how the scope of learning is defined. The problem is that interviewees had different perspectives on what constitutes an ideal solution here. It *'should only be based on hours under the supervision of the university'*, according to one ministry interviewee, while others saw the added value of ECTS in being able to incorporate the full range of settings in which doctors train.

Table 7.2 Would the free movement of doctors be facilitated by having automatic recognition based on duration of study defined in terms of ECTS credits rather than teaching hours (the current system)?

	Number of responses	% of responses
Yes	7	22%
It depends on other factors (i.e. 'yes, if...')	8	25%
No	13	41%
Don't Know	4	13%
Total	32	100%

Source: Case studies

7.3.1.2 ECTS to augment not replace existing duration measures with the Directive

Although there is not widespread support for using ECTS as an *alternative* measure to duration (years / hours) in the context of automatic recognition, there is support for its inclusion as an *additional* element. Table 7.3 below shows that two-thirds of doctors' authorities responding to the online survey agree or strongly agree that ECTS would strengthen the existing system.

The experience reports for doctors show that significant importance is placed on the calculation of duration in terms of teaching hours/years. Where reference was made to the duration of studies, this was often to support the approach (for example, in the reports of Finland, Bulgaria, Germany and Spain). A number of countries made no comment on the duration of studies. However, there are also references to a desire for more information about skills, knowledge and competencies required of trained doctors in other Member States. This could create a potential advantage of ECTS if it is assumed that a credit-based approach is the most effective means of measuring learning outcomes (given that the Bologna reforms explicitly link credit and learning outcomes).

There was some debate among interviewees about whether the current Directive requirements should be interpreted as requiring studies of a minimum duration in years *and* hours – as opposed to years *or* hours. In the context of the former interpretation, a number of case study interviewees described ECTS as adding value to replace the existing measure of hours, alongside minimum study duration in terms of years. There is, of course, a direct link between ECTS and the calculation of duration in years, which would mean that the use of ECTS in tandem with number of years is quite straightforward – in theory, at least. ECTS is based on the principle that one year of full-time studies is equivalent to 60 ECTS. Applying this logic, six years of full time medical training are equivalent to the workload that corresponds to 360 ECTS. This is in line with the use of ECTS as defined in the ECTS

Users' Guide[147]: *'Qualifications which have formal programmes lasting three fulltime academic years are allocated 180 ECTS credits'.* In countries where all bachelor degrees have the same duration and so do all master degrees it is not unusual for countries to define a-priori that all Bachelor degrees are, for example 180 ECTS, and all Masters degrees are, for example, 120 ECTS, or to define that a Bachelor degree is a minimum of 180 ECTS[148]. For example in France, the requirements state that students must obtain 180 ECTS to gain a *Licence* degree (bachelor) and to gain a master's degree they have to gain 120ECTS (after having achieved a *Licence*)[149].

Table 7.3 Do you agree that the existing system should be strengthened by explicitly mentioning the minimum volume of ECTS credit per qualification in the Directive? (number and % of respondents)

	Doctors	Architects	Total
Strongly disagree	0	2 (14%)	2 (7%)
Disagree	3 (17%)	3 (21%)	6 (20%)
No opinion	3 (17%)	2 (14%)	5 (17%)
Agree	9 (50%)	3 (21%)	12 (40%)
Strongly agree	3 (17%)	4 (29%)	5 (17%)
Total[150]	18 (100%)	14 (100%)	30 (100%)

Source: Online survey of competent authorities

7.3.2 Elements of ECTS that support or are a barrier to the free movement of doctors

According to case study interviewees, it is the entire package of ECTS that could add value rather than specific elements. Figure 7.1 below shows where interviewees identified particular elements of ECTS as supporting the free movement of doctors in the context of automatic recognition.

Around a third of total interviewees identified benefits in the fact that it is based on workload rather than teaching time, the way that it includes non teaching elements as part of an overall assessment of workload and the way in which it is linked to learning outcomes. Slightly fewer respondents also thought that there was a benefit in being able to look at workload at the level of specific learning modules. These elements are inter-connected, so the result is not surprising.

It is clear, though, that far fewer doctors' stakeholders thought that specific elements of ECTS were a barrier to free movement of doctors in the context of automatic recognition. A significant number of interviewees thought that ECTS would have a neutral impact considering that a system of automatic recognition is in place, and it was a minority of interviewees that had view either way.

Many of those who thought that ECTS supports the free movement of doctors did so because measuring workload and linking credit to the achievement of competencies was felt to provide a more meaningful comparison of fitness to practice. The implicit assumption for some interviewees here was that the current model of automatic recognition is unsustainable because it was felt not to reflect the quality of training.

This assumption is rooted in the wider concerns voiced by some doctors' stakeholders (competent authorities and other stakeholders) that the current system might not provide sufficient safeguards to ensure public protection. It should be noted, though, that it is difficult to unpick the extent to which these concerns relate to ensuring doctors are generally competent to practice in the host country, as opposed to specific concerns – beyond the scope of this study – relating to ensuring language competence.

[147] P.17 http://ec.europa.eu/education/lifelong-learning-policy/doc/ects/guide_en.pdf

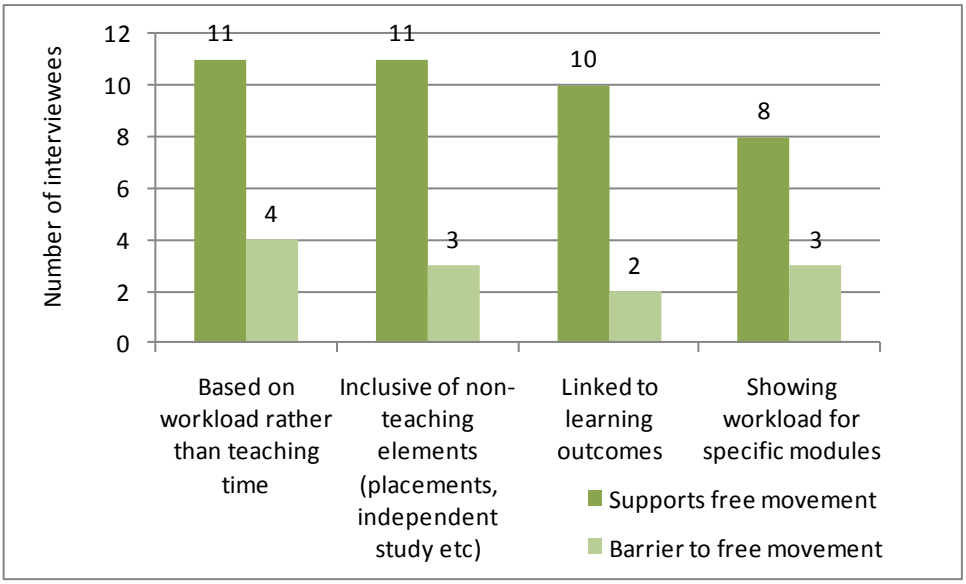
[148] See Eurydice National Education Systems descriptions – section 6 on tertiary education

[149] P.166-167 http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/eurybase_full_reports/FR_EN.pdf

[150] NOTE: The profession totals do not correspond to the overall total for both professions because 2 respondents reported their response as applying to both doctors and architects.

Alternatively, some respondents saw the link to workload as providing a *'less precise'* measure of the qualification, which could lead to ambiguity in the recognition process. One interviewee questioned whether national systems having different credit allocations would be an obstacle to free movement. The link to learning outcomes was problematic for some because it implied a *'lower level of theoretical knowledge is acquired by the student'*.

Figure 7.1 ECTS elements that support or a barrier to the free movement of doctors under the harmonised system based on automatic recognition



Source: case studies

7.4 Confidence in ECTS

7.4.1 Credit allocation and assessment

Doctors' stakeholders were relatively evenly split in terms of whether or not they were confident that ECTS points are allocated in different Member States in accordance with the Bologna rules (i.e. one credit stands for around 25 to 30 working hours). For a small number of interviewees this was a significant issue – because it makes comparison between qualifications more difficult. Other interviewees were more pragmatic, suggesting that while it was almost impossible to know the precise basis of credit allocation, it was possible to have trust in the overall system and accept that the basic parameters of ECTS (i.e. the number of credits aligned to a year of full-time study) are broadly similar between countries. These interviewees were less concerned about possible inconsistencies in the detailed mechanics of credit allocation; because their overall perception was that the ECTS approach provided more detailed and meaningful information about the structure of medical education. In should also be noted that credit allocation was an area that many interviewees thought was beyond their competence to understand in detail.

This is why over half of interviewees believed that a common assessment method for the allocation of credit would increase confidence in the ECTS system. Some interviewees were sceptical as to how feasible this would be given that the *ECTS User's Guide* was already in place. Others emphasised that whether a common assessment method increased confidence in the system would depend on how it was implemented.

Only just over a third of interviewees thought that having an external body within the Member State checking the allocation of ECTS points would increase confidence in the system. This appeared to simply raise more questions than it would answer for competent authorities in particular. There was a clear lack of trust in some cases and scepticism as to whether an arms-length body could really understand the allocation process.

Table 7.4 Confidence in ECTS credit allocation and assessment (Number and % of interviewees)

	Yes	It depends on other factors	No	Don't know	Total
Would you be confident that ECTS points are allocated to training programmes in the different Member States in accordance with the Bologna rules?	12 (38%)	4 (13%)	11 (34%)	5 (16%)	32 (100%)
Would a common assessment method for the allocation of ECTS points increase confidence in the ECTS system?	17 (57%)	6 (20%)	6 (20%)	1 (3%)	30 (100%)
Would you be more confident if the allocation of ECTS points would be checked by an external body in the Member States?	11 (37%)	8 (27%)	7 (23%)	4 (13%)	30 (100%)

Source: case studies

7.4.2 Setting credit values

There was a lack of consensus among interviewees on the question of credit values. When asked whether they had confidence in a credit system in which one credit can range from 25-30 hours workload, only around a quarter of interviewees said that they did not have confidence in this approach. A significant proportion of interviewees (32%) did not know, while nearly half (42%) of the case study interviewees related to doctors said that they were confident in the system, although over half of this group specified that they would be confident only if credit was defined in similar ways in all countries (see Table 7.5 below).

Interviewees were evenly split on the question of whether confidence would increase if one credit stood for a fixed minimum number of hours. Health ministries were much more likely to agree that a fixed minimum number of hours would increase confidence, while professional medical bodies were more circumspect (half of professional bodies did not know). This reflects a wider division between those interviewees who saw confidence in the system as being associated with *'control over the credit system',* and those for whom the effective incorporation of ECTS required culture change (*'a move away from the minutiae'* of recognition decisions). There was also the sense for a number of interviewees that the effective incorporation of credit systems into the recognition process for doctors depends on there first being a generally-accepted and consistent outcomes-based approach to recognising qualifications at European level.

Table 7.5 Confidence in ECTS credit values (Number and % of interviewees)

	Yes	No	Don't know	Total
Would you have confidence in the credit system where 1 ECTS point can refer to a number of hours of workload with a spread between 25 and 30 working hours?				
All stakeholders	13 (42%)	8 (26%)	10 (32%)	31 (100%)
Would you be more confident if one credit would stand for a minimum fixed number of hours?				
All stakeholders	11 (37%)	11 (37%)	8 (27%)	30 (100%)
Ministries	8 (62%)	4 (31%)	1 (8%)	13 (100%)
Professional bodies	2 (17%)	4 (33%)	6 (50%)	12 (100%)
Education and training bodies	0	2 (100%)	0	2 (100%)
Other (Independent regulators; registration bodies etc)	1 (33%)	1 (33%)	1 (33%)	3 (100%)

Source: case studies

8 Methods to better-guarantee automatic recognition for doctors

8.1 Introduction

This chapter deals with the study question asking which out of two methods would better-guarantee automatic recognition of qualifications for doctors and why:

- *'Recognition based on the harmonisation of content and duration (as in the current Professional Qualification Directive system)*
- *Recognition based on learning outcomes, without taking duration into account'*

It is important to note that the evidence base relating to the two methods proposed here is difficult to compare. The most accurate basis for comparison is to look at evidence of recognition activity for each approach – using learning outcomes and harmonised content and duration. While this is possible in the case of harmonised content and duration, there are two reasons why this information is not available for the use of learning outcomes:

- Learning outcomes are not used by competent authorities for the purposes of automatic recognition.
- It would be difficult to imagine how learning outcomes could be used by all Member States given that learning outcomes are still becoming established across all countries.

This situation points to the fact that the current system provides a better guarantee of automatic recognition, because it is the only one of the two systems currently established under the Directive and the only system that can be applied in all Member States.

If the intention of the study question is to look at what may be a better guarantee of automatic recognition in the future, then it is possible to draw on a wider evidence to explain the likely benefits of each approach in comparison. This wider evidence base includes:

- Evidence relating to the functioning of the current system (although this evidence cannot be used to suggest that the learning outcomes approach may be better)
- Evidence relating to the likely future use of learning outcomes (although this evidence is qualitative and based on inference).

8.2 The need to better-guarantee automatic recognition

In terms of the demand for changes to the current automatic recognition system, Table 8.1 below shows that **doctors'/architects' authorities are relatively evenly split between preferring to maintain the current system and including new/additional criteria**. The results were similar for both professions.

When exploring this issue with doctors' authorities in the case studies it was clear that a number of different considerations inform the headline picture. In particular, those preferring the maintenance of the current system are often adopting a pragmatic response. There are different improvements that many doctors' stakeholders could suggest, but a prevailing view among this group was that the system is currently existing and functional and, more importantly, that to attempt to introduce new or additional criteria could put the basis for automatic recognition at risk.

Table 8.1 Is your preference to maintain the current automatic recognition system with no changes, or do you believe that there is a need to strengthen confidence in the process by including new/additional criteria?

	Number (and %) of responses
Maintain the current system with no changes	13 (43%)
Enhance the confidence in automatic recognition by including new/additional criteria	11 (37%)
Not sure / don't know	6 (20%)
Total	30 (100%)

Source: Online survey of competent authorities

The nature of the need to strengthen confidence in the system was explained by some competent authorities in the experience reports for doctors produced in 2010:

- *"comparability is largely based on length of training rather than training content or the range of competencies that medical education develops. The overall result is a climate in which competent authorities cannot have full confidence in each other's medical training and education" (The Netherlands).*
- *"[the] focus on time served in training rather than the outcomes of training has imposed constraints which have impeded us in developing undergraduate medical education in line with the UK's needs" (UK).*
- *"at the present time, the adequacy of training is based largely on the duration of training to the detriment of the content and field of knowledge developed by the medical training" (France).*

While there was a split between online survey respondents preferring to maintain the current system and those believing that there was a need to introduce new or additional criteria, **it was generally felt that explicitly mentioning a minimum list of competences (based on learning outcomes) would strengthen the existing system.**

Over two-thirds of respondents (69%) agreed or strongly agreed that this is the case, while only 17% disagreed (see Table 8.2 below). No respondents strongly disagreed with the proposition and a small number were neutral on the question. The overall pattern of responses was similar for doctors' and architects' authorities, although doctors' respondents were more likely to strongly agree that a list of competences would strengthen the existing system.

Table 8.2 Do you agree that the existing system of automatic recognition should be strengthened by explicitly mentioning a minimum list of competences (learning outcomes) in the Directive?

	Number (and %) of responses
Strongly agree	8 (28%)
Agree	12 (41%)
No opinion	4 (14%)
Disagree	5 (17%)
Strongly disagree	0
Total	29 (100%)

Source: Online survey of competent authorities

8.3 Perspectives on the two systems (learning outcomes and content/duration)

8.3.1 Overview of the preferences of medical stakeholders

The majority of case study interviewees relating to the doctors' profession (58%) thought that the current system of recognition based on harmonised minimum training content provided greater confidence than a system based on learning outcomes without taking duration into account.

Table 8.3 below shows that the results were similar for competent authorities specifically and for all interviewees. Similar responses were also found for ministries specifically and for professional bodies. There was no particular country pattern to responses – so the result is also not a simple reflection on the national familiarity with learning outcomes.

Table 8.3 The current Directive bases automatic recognition on the harmonisation of minimum training content and duration. Does such approach inspire more confidence than a system of recognition based on learning outcomes only (without taking duration into account)?

	Competent authorities		All interviewees	
	Number of responses	**% of responses**	**Number of responses**	**% of responses**
Yes	9	60%	19	58%
No	5	27%	10	30%
Don't know	2	13%	4	12%
Total	16	100%	33	100%

Source: case studies

8.3.2 The rationale for learning outcomes to provide more confidence as a system of recognition

While the majority of case study interviewees thought that the current system was preferable, **it is superficially surprising that as many as 30% of respondents thought that learning outcomes inspire more confidence** – given that this approach is without taking duration into account. It is important to note, though, that **no interviewees suggested that the recognition of doctors' qualifications should ideally take place without reference to duration**. Many thought that setting harmonised content/duration against learning outcomes with no reference to duration was *'a false opposition'.*

In practice, interviewees took a more nuanced view of the question and many of those suggesting that a learning outcomes-based approach provided more confidence thought that the expression of the achievement of learning outcomes had to inevitably make reference to the volume of learning (e.g. through ECTS). The debate according to one medical education stakeholder ran as follows:

"You don't get any certainty from hours [spent training]. You need [a measure of] duration, but its not mutually exclusive. The key test is when medical student finishes, are they fit the practice? This is a competence question, not a curriculum question."

Among the competent authorities in five countries that felt that learning outcomes inspired more confidence, in two cases this was simply an acknowledgement of the importance of learning outcomes for the specific purpose of building confidence in the system. In two cases, more specific examples were provided:

- **Pragmatic response:** One competent authority described itself as being *'in theory'* in favour of the learning outcomes approach. The increasing number of undergraduate medical programmes in the country and the general move towards a competence-based approach is making it *'increasingly difficult to co-ordinate content in these cases - and the standards approach is more appropriate'*. It was acknowledged that *'duration is an issue'*, and there was clearly a minimal requirement, but the preference for learning outcomes here was in part a response to a perceived over-emphasis on the minimum number of years' study that has a detrimental effect on moves to focus on what is

important from a recognition perspective (the competences developed through training rather than the time spent studying per se).

- **Principled response:** Another competent authority described the concern in terms of whether the existing system is able to effectively identify competence. If learning outcomes provide a more accurate assessment of a doctor's fitness to practice then this should be used even if it complicates the assessment: *'There are examples of applicants that have come to us with all the necessary qualifications and therefore we could not have refused the application. However, in reality the person was not suitable to be a doctor, they might be a microbiologist, and may not have the right attitude to deal with patients. A learning outcomes based system would mean that the applicant would prove that they could do the job - the practical side of things, not just ace some theoretical exams. It would inspire more confidence'*.

8.3.3 The rationale for the current system (content / duration)

Interviewees who were more confident in the current system of harmonised minimum content and duration predominantly held this position because of the widely-held view that a measure of duration is crucial to the recognition process. Other factors were influential as well:

- Some interviewees believed that there was not yet sufficient experience of the use of learning outcomes to provide a definitive view on how workable the approach was. There was an underlying scepticism that medical training across Europe was sufficiently reformed along Bologna lines to make the use of learning outcomes feasible.
- Along similar lines, others questioned how feasible it would be to develop a common outcomes measure for doctors that was sufficiently detailed to be useful and yet commonly agreed across Member States.
- The stakeholders who were most opposed to the use of learning outcomes feared that it would dilute the theoretical underpinning of medical degrees based on the logic that it could mean that certain subject areas, such as anatomy, which are argued to require a minimum input duration (in study hours, months or years) may no longer be safeguarded in terms of the depth of learning. This type of reaction may indicate a misunderstanding of the concept of learning outcomes among competent authorities for qualification recognition. Theoretical knowledge is also a learning outcome and the use of learning outcomes is not in opposition with learning of theoretical knowledge. When using learning outcomes, universities can design education programmes so that they contain courses/course components that refer to theoretical knowledge and that they define the learning outcomes (i.e. the knowledge) that learners achieve upon completion of the course.
- Although not explicitly articulated by many interviewees, it was clear that the views of stakeholders were to some extent determined by the medical training system in their own country.

However out the 19 doctors' interviewees preferring the current system (harmonised minimum content and duration), 12 of these interviewees said that they would have more confidence in if, in addition to learning outcomes, the system of recognition was based on harmonised minimum training duration defined in years and ECTS credits. This shows that **the reluctance to incorporate learning outcomes among the medical profession is to a significant part based around the concern that the input measure of duration is lost**.

Overview of the strengths and weakness of the two approaches according to medical stakeholders

Harmonised content/duration:

Strengths:

- It is a 'consolidated system' and largely effective (it supports mobility in the first instance)
- It has been effective – and more effective than any other approach – in promoting a degree of harmonisation at European level.
- People are familiar with the system
- There is always going to be a minimum duration to learning the knowledge, skills etc.

Weaknesses:

- Training and education systems have to evolve (and are evolving) - there is no mechanism within the existing system for updating.
- Duration is too crude a measure – there needs to be a demonstration of competence.
- Duration is an inflexible measure.

Learning outcomes:

Strengths:

- More attuned to public expectations (patients would expect doctors to have particular competencies – interpersonal skills etc)
- Could impact on perception of training – what it should encompass.
- Would lead to a harmonised mentality for the profession (ethics, attitudes to health etc).

Weaknesses:

- Only a current weakness, but it depends of having equivalent outcomes between Member States.
- Provides less confidence because it is less tangible than looking at the training content itself.

Source: case studies

8.4 How learning outcomes should be incorporated

8.4.1 Level of detail

Competent authorities and professional bodies for the medical profession were not particularly confident in putting forward opinions regarding whether learning outcomes, if incorporated within the recognition process, should be detailed or broadly defined. Where they could put forward a position there was a strong preference for detailed learning outcomes (see Table 8.4 below). Only 13% of interviewees thought that learning outcomes should be broadly defined. Unprompted awareness of existing sets of learning outcomes (such as those developed through the Tuning project for Medicine, for example) was low.

Some interviewees were interested in adding detail to the recognition procedure (*'the more detailed information on what the person is able to do, the better'* – ministry interviewee). However, through exploration of the issues with interviewees – it was often the case that ensuring comprehensive coverage of knowledge, skills and competence was the concern, rather than the need for detailed outcomes *per se*. Other interviewees were concerned specifically about further medical specialties, where it was felt that detailed learning outcomes were inevitable.

Interviewees preferring broadly described learning outcomes were concerned about the practical reality of defining agreed learning outcomes between Member States and the overall intent of the exercise:

- *"Learning outcomes can't be too 'fluffy', but there is a sense that discussions among national medical regulators along these lines will end up with a 25 page document that is*

too detailed, too prescriptive and unworkable - defeating the object of looking at the more fundamental competences" (competent authority).

- *"It took years for any agreement on hours for doctors so it would take a long time to reach agreement on broad outcomes let alone detailed ones. It mustn't be restrictive in terms of technical skills which do change considerably" (competent authority)*.
- *"Minimum competence bundles probably best describes it, not listed like a text book and not in so much detail that it loses sight of skills" (ministry).*

Some interviewees in the 'don't know' category were opposed to the notion of introducing learning outcomes and therefore could not make a judgement on whether broadly-defined or detailed outcomes were preferable – for some of these interviewees focusing just on theoretical knowledge was preferable. However, the category also included at least two interviewees who said that there should be a combination of broad and detailed learning outcomes (with more detailed learning outcomes underpinning broad areas of competence). This has been the approach developed through the Tuning project. It is also how professional standards have been set for doctors, such as in the UK/England (*Tomorrow's Doctor*).

Table 8.4 If the minimum training and content requirements would be replaced by learning outcomes, should these learning outcomes be formulated rather broadly or at a more detailed (i.e. harmonisation of the scope of activity)?

	Number (and %) of responses
Learning outcomes should be detailed	12 (39%)
Learning outcomes should be broadly defined	4 (13%)
Don't know	15 (48%)
Total	31 (100%)

Source: case studies

There was no clear view among doctors' case study interviewees about whether an obligation to assess learning outcomes through one or several examinations would provide more confidence in the use of learning outcomes (see Table 8.5 below). Interviewee perspectives here were varied and were bound up in the wider ethos of the organisational and medical establishment in each country.

A significant number of interviewees did not have a clear view at all on this question. This partly reflected a lack of familiarity with the subject matter; and while there are major question marks about the assessment of learning outcomes, this is to some extent based on a lack of knowledge among medical stakeholders rather than evidence that it cannot be done.

Interviewees who agreed that there should be an obligation to assess learning outcomes through examination also said:

- That a validation of these 'exit exams' across Member States could ensure that they are developed to a comparable standard.
- Each detailed competency should be examined either during or at the end of the study programme.
- A final examination after an 'internship' or practical training element is completed provides a good basis for licensing.

Interviewees who did not believe that an obligation to assess learning outcomes through one or several examinations would provide more confidence were concerned about the format of examination implied here. One health ministry interviewee stressed the *'need [for] a mix of practice observation and mock ups that can capture behaviour and ability to diagnose'* in the way a written examination cannot. A health ministry interviewee in another country was concerned about the implications of a European examination:

'Medical Colleges take a long time to devise the examinations...there are very high stakes involved and they are expensive to administer. If this would be the case [a European examination], the curriculum would fossilise...it would essentially be counterproductive'.

Table 8.5 Would you have more confidence if there was an obligation to assess learning outcomes through one or several examinations?

	Number (and %) of responses
Yes	10 (34%)
No	7 (24%)
Don't know	12 (41%)
Total	29 (100%)

Source: case studies

8.4.2 Potential models for learning outcomes at European level

One of the issues that medical stakeholders returned to time and again in the case study interviews was the perceived impracticality of agreeing a framework of competences and learning outcomes that could form the basis of a system of automatic recognition for doctors. There are examples of professional body- and university-led activities related to doctors and other sectoral professions that use competences as a way to improve aspects of education and training. This may indicate an appetite for something approaching the use of learning outcomes for the sectoral professions. It further indicates how EU professional bodies and consortia are leading work that makes use of Bologna-related developments.

In the context of Medicine specifically, there has been work to define common competences and learning outcomes using the Tuning methodology. Case study interviewees also referred to discussions among medical stakeholders on ideas such as a European medical examination. There has also been work to test and pilot outcomes-based approaches for medical specialists. Much of this work is ongoing or at an early stage of development – but it indicates something about what is possible and what are the potential pitfalls in trying to establish common learning outcomes.

8.4.2.1 The Tuning project for Medicine

Directly linked to the Bologna programme, from 2004 to 2008 The Tuning Project (Medicine) developed *'widespread consensus on a set of learning outcomes for primary medical degree qualifications in Europe'*[151]. The project followed a methodology of reviewing existing frameworks to develop a draft framework. This was consulted through a series of Tuning workshops and an online opinion survey in 2006 of over 1,300 academics, graduates and employers, who were *'asked to rate learning outcomes in terms of their importance for graduates'*.

The project team consulted on 115 learning outcomes, and also asked respondents to *rate the importance of 39 knowledge domains related to medical practice, and 14 practice settings in which students might gain experiential learning'*. Analysis of the results took account of national influences and differences between types of respondent. It is clear that one of the impacts of the consultation was to shift the focus away from some research and experimentation-oriented outcomes – because these are not priorities for *all* medical graduates. The outcomes were approved by the MEDINE Thematic Network and validated by expert panel in June 2007.

The final report, presented to the European Commission in January 2008, presents two levels of learning outcome / competence:

- 12 major level 1 outcomes (*e.g. carry out consultation with a patient; provide immediate care of medical emergencies, including First Aid and resuscitation; apply scientific*

[151] Cumming A and Ross M (2008) Learning Outcomes / Competences for Undergraduate Medical Education in Europe – The Tuning Project (Medicine)

principles, method and knowledge to medical practice and research) designed as curriculum themes and to provide the basis for assessment programmes.

- The level 1 outcomes are further defined through 69 more detailed Level 2 outcomes within the main themes, intended to *'help to define the content of such themes in terms of teaching, learning and assessment'*.
- The further set of more generic 'medical professionalism' outcomes (e.g. ethical commitment; empathy; working within multidisciplinary teams) that can also be used, where relevant, for programme design.

The overall approach was designed to set out the core outcomes from medical training across Europe, but without trying to achieve *'rigid curricular uniformity – indeed one advantage of an outcomes based approach is that diversity in educational process and curriculum can be preserved'.* This allows institutions to design programmes with particular emphasis (e.g. a research focus) *'without compromising the essential competence of their graduates and their fitness to care for patients'*.

While the Tuning report for Medicine acknowledges Directive 2005/36/EC in its introduction, it does not explicitly map the results of the project to the minimum training requirements for doctors. It does not tackle the question of assessment – which was a constant refrain among certain medical stakeholders interviewed as part of the case studies. Work that the network is undertaking in 2011 and beyond (MEDINE2) includes developing learning outcomes for the first and third degree cycles under Bologna. This is a contentious area for the network given that there is a lack of consensus among the medical communities of Europe over the first cycle in Medicine.

An identified information gap has been in understanding how far away the medical schools of Europe are from the Tuning model. The implication from what doctors' stakeholders reported during the case study interviews is that in a number of countries they are quite far away – but it is difficult to be categorical about the nature of the gap here. Therefore, the survey MEDINE2 is undertaking (launched September 2011, and reporting in October 2012, with early results in Spring 2012) should be a useful exercise. It asks medical schools to self-evaluate against the use of the Tuning learning outcomes (how explicit they are; whether they assessed).

This suggests a 'bottom up' evolution in the establishment of common learning outcomes for medical training. While examples of the Tuning outcomes being used in individual situations have been reported both at institutional level (e.g. the University of Malta reportedly uses the Tuning framework as a blueprint for its final examinations) and national level (the latest iteration of professional standards for doctors in the UK draws on Tuning for the 'doctor as practitioner' element of the standards), it appears difficult for project-based activity such as Tuning to fundamentally influence the mainstream approach of the medical profession across Europe.

8.4.2.2 Core competences for medical specialities

The European Union of Medical Specialists (UEMS) set up the European Council for the Accreditation of Medical Specialists Qualifications (ECAMSQ) in October 2010. The ECAMSQ aims at harmonising medical specialists qualifications by developing a core curriculum of competences (knowledge, skills and professionalism) that each specialist should obtain by the end of specialist training. It adopts a competence-based approach that is compatible with the Bologna framework. The ECAMSQ framework provides a model for assessing the knowledge, skills and competence in medical training and assessment will be supported by an e-platform to track medical trainees' achievements and progress in the light of harmonised European standards of medical training developed by the UEMS Specialist Sections and European Boards.

In February 2011, the UEMS organised the first pilot test of knowledge assessment for medical trainees in Intensive Care Medicine. Twelve candidates from Ireland, Norway, Portugal and UK took part in this test. Similar tests were planned assessing knowledge of medical trainee in three other specialties (Anaesthesiology, Cardiology and Radiology).

8.4.2.3 Other sectoral professions

Pharmacists

The PHARMINE project[152] (2008-2011) aimed to develop an EU standard for pharmacy education and training. Led by a consortium of four universities (Brussels, Nancy, London and Lisbon) that are members of the European Association of Faculties of Pharmacy and EU partner associations representing: the community (Pharmaceutical Group of the European Union); hospital (European Association of Hospital Pharmacists); industrial pharmacy (European Industrial Pharmacists Group), together with the European Pharmacy Students' Association, it developed an evidence base for producing a common competency curriculum (as well as curricula) for specialised pharmacy practice.

The final report was produced in April 2011, so it is difficult to say anything about the likely traction the work will have in embedding an educational consensus around the initial professional competence required of pharmacists.

Nursing

Since 2002, work has been undertaken on a Tuning project for nursing, which has led to the development of competences for general nurses at bachelor level associated with registration/license to practice. These competences have been developed over the course of some years, informed by existing subject benchmarks and competences for the profession. Under Tuning, working descriptors for first, second, and third cycle degrees have been set out and there appears to be a degree of consensus about nursing practice. In particular, there appears to be a degree of consensus as to the competences that are appropriate at first and second level degrees. Country differences have not appeared to be significant, tending to reflect cultural differences and the developmental stage of nursing at national level (i.e. knowledge of a second language and the ordering of research skills). According the 2011 version of the Tuning brochure for nursing, these competences are still described as *'a work in progress'*, because of the way in which the nursing profession is evolving (academically and professionally)[153].

While similar challenges may be said to exist as with the Tuning project for Medicine in terms of how the embed this project-based activity at national level, the Tuning competences for nursing have been included within the Danish legal framework for nursing. In 2010, the Nursing Subject Area Group under Tuning also published a guide on writing learning outcomes[154], to address the fact that under the early Tuning work, it became apparent that while degree profiles may have a benefit for recognition purposes:

"the way in which the competences and learning outcomes were described by universities was so diverse, ranging from short lists of very general statements to lengthy and detailed descriptions of several pages, that they could not be used as a coherent and balanced source of information by the target group [credential evaluators]".

This activity shows that while work to establish learning outcomes in the context of sectoral professions is ongoing, tools to support greater consistency in approach have emerged.

[152] www.pharmine.org

[153] Tuning: Nursing Brochure 2011

[154] Lokhoff et al, A Tuning Guide to Formulating Degree Programme Profiles Including Programme Competences and Programme Learning Outcomes (2010)

9 Assessing three systems of levels

9.1 Introduction

This chapter focuses on two related study questions. First, it addresses the study question asking:

- *'Which of these three systems would facilitate better recognition of qualifications for competent authorities and respectively for citizens:*
  - *A system based on five levels defined by duration and level of studies as in article 11 of the Directive?*
  - *A system of eight levels based on learning outcomes?*
  - *A system without any level defined?'*

Second, it looks at the follow-up question asking, where the evidence has pointed towards an eight-level system based on the EQF as being the most appropriate system to facilitate the recognition of qualifications, *'explain how to deal with qualifications awarded before 2012 and which are not related to a national qualifications system / framework referenced to the EQF'.*

9.2 The basis for comparing the five- and eight-level systems

It is important to distinguish two elements of the study question, particularly in comparing the current Directive system under Article 11 with the European Qualifications Framework (EQF), which is an eight-level system based on learning outcomes:

- The two approaches constitute a different number of levels; and
- The two approaches constitute levels of a different nature.

9.2.1 Implications of different numbers of levels in a recognition context

Part of the rationale for the current Directive system in comparison with the EQF is that it contains fewer levels (five rather than eight) and, as such, better supports mobility.

According to a paper produced by the European Commission, DG Internal Market and Services:

"Reference to EQF levels would not be helpful; it would rather generate confusion that might lead to misapplication of the directive. For instance, as it is clear that the differences between qualification levels are much more apparent with eight levels than with five, if host Member States' competent authorities misleadingly refer to EQF levels when applying the directive, they might, in situations where the directive imposes recognition of a qualification, refuse such recognition..."[155]

9.2.2 Implications of the different nature of levels in a recognition context

Under Article 11 of Directive 2005/36/EC, the five levels are defined in terms of inputs: the duration of studies and the type of institution where the studies take place. Under the EQF, the eight levels are defined in terms of knowledge, skills and competence, whereby higher levels express greater complexity, breadth of knowledge, higher proficiency, as well as greater responsibility and autonomy.

Stakeholders such as EURASHE make an explicit connection between the EQF and transparency / understanding of qualifications:

"The fact that the EQF is based on learning outcomes is a break-through that should underpin all qualifications and relate learning with the social and economic realities of the

[155] Directive 2005/36/EC on the mutual recognition of qualifications and the European qualifications framework, DG Internal Market and Services

modern world. This is a most innovative element for education and training, which enhances their transparency in favour of the individual learner and of all stakeholders."[156]

The input-based approach and the outcome-based approach are not always mutually exclusive in the context of NQF development. Many countries are designing NQFs in which each qualification type (clearly defined group of qualifications) is allocated at one single level. There can be several qualification types at one level, but it seems that, in most countries, it will be the case that the qualifications within a given type will all be at the same level. This is not the case in all NQFs. For example in the UK, NVQs span across a range of levels. In countries which have a relatively simple qualifications system where the number of types of qualifications issued by the formal education system is relatively restricted (for example FI, CZ, SK), in general, one NQF level would be linked with one type of qualifications from the formal system. These qualification types also have a typical duration of programmes that prepare for them. This typical duration of formal education programmes remains an important reference for many qualifications systems (it can be expressed in terms of credit points). Therefore a certain link with input measures remains.

What is new is that in the EQF/NQFs other qualifications (such as certificates issued by non-formal education providers – businesses, NGOs, etc.) can also be placed at the same level as the formal education qualifications under certain conditions and following a defined process. These qualifications that are not from the formal education system may have very different durations than those from the formal education system. Therefore, it is possible that at a given level of an NQF there will be qualifications that are typically achieved through programmes of different duration.

Most countries that are currently developing NQFs have not yet addressed this issue, as the first steps of NQF design and implementation focuses on the formal qualifications systems. Certain discrepancies between the EQF levels and the Article 11 levels are already apparent. Under the EQF (and also under the Bologna framework), all first cycle qualifications are at the same level (i.e. all bachelor degrees are at levels in NQFs that correspond to the level 6 of the EQF). The fact that all bachelor degrees should be treated as equivalent – for example, for progression to master's level when students are mobile - is an important feature of the three-cycle reform. Under Article 11, a three-year bachelor degree is found on a different level to a four-year bachelor degree, while a four-year bachelor degree is at the same level as a master's degree. Although this does not negatively affect professional recognition, because of the clause according to which competent authorities have to consider qualifications where there is one level difference, it is seen as sending the opposite message to what the Bologna process is trying to achieve.

9.3 The use of the current five-level system

9.3.1 Education stakeholder concerns relating to the five-level system

Article 11 sets out the five levels of professional qualifications for determining whether applicants from other Member States can access a regulated profession in the host country. The applicant must attest to a level of training at least equivalent to the level below that required in the host Member State. As noted above, the Article 11 levels are based on duration of study and the type of institution where studies take place.

A large number of education stakeholders interviewed for the study argued a critique of the current five-level system on the basis that educational reform makes levels *'outdated'* (EU stakeholder), or *'isolated from'* (professional body) the ongoing reforms to higher education. This was a common message among stakeholders and education ministries that are familiar with Directive 2005/36/EC. This viewpoint was largely based on a presumption that the EQF and the outcomes-based approach represent current thinking in the educational field. This does not in itself mean that the five levels are problematic.

[156] EURASHE, A standpoint from EURASHE on the Development of a European framework of qualifications for lifelong learning (2005)

Further exploration during the education ministry interviews, exploring why some stakeholders felt that the current five-level system could be improved, tended to have less to do with the Directive itself than with a desire to establish the EQF. **Proponents of the EQF clearly see Directive 2005/36/EC as an opportunity to provide a new EU-wide legal status to the EQF and to educational reforms more widely**, irrespective of whether this was the intention of education reform.

More specifically, as one education authority in a country relatively advanced in terms of NQF/EQF develop put it, **the input-based Directive levels are felt to provide a potential, indirect barrier to the implementation of outcomes-based educational reforms in some countries**. The rationale is that some countries may argue that an input-based system must be retained in order to comply with Article 11 of the Directive. In this context, the Directive becomes part of ongoing debates about the future of education reform, even though this is out of the scope of the Directive itself.

This has also been interpreted as leading to parallel systems that could create less alignment in the context of both the Directive and education reform. A stakeholder conference organised by the EHEA in April 2011 reported that:

"The use of different descriptors of levels (the five-levels grid in the case of the Directive; the three-cycle structure and the Bologna Overarching Higher Education QF for the Bologna Process)....can create confusing situations, by which some qualifications are reformed according to the three-cycle structure agreed upon in the EHEA while others remain unchanged or expressed in study hours or years to be in conformity with the Directive"[157].

9.3.2 Perceived importance of Article 11 levels for competent authorities

A significant minority of competent authorities (38%) do not use the five levels contained within Article 11 as part of the recognition process under the general system. In spite of this, three quarters of respondents (76%) felt that it is useful to maintain a system of levels within the Directive (see Table 9.1 below).

Respondents to the online survey of competent authorities were asked how important various types of information were in deciding on the recognition of foreign qualifications. Table 9.2 below presents the results and shows the importance placed on duration of study by competent authorities (89% of respondents said that this was either 'very important' or 'quite important' information). Training content was also felt to be important (more so than subject titles), as, notably, was qualification level according to Article 11 of the directive (83% of respondents thought that level was 'very important' or 'quite important').

These results may, in part, reflect that authorities involved in applying the Directive would be expected to report that elements contained in the current Directive are necessarily important. They must also be seen in comparison with nearly two-thirds of respondents (63%) reporting that EQF/national system levels was important/very important information. This result is actually surprisingly high given that national qualification frameworks referenced to the EQF are substantially 'works in progress' and not yet widely used in practice. It highlights the value placed on having a measure of level as part of the recognition process.

Table 9.1 Use and perceived value of the Article 11 levels

	Yes	No	Total
Do you use the five levels when you examine an application for recognition?	72 (62%)	45 (38%)	117 (100%)
Do you consider it useful to maintain a system of levels?	84 (76%)	26 (24%)	110 (100%)

Source: Online survey of competent authorities

[157] Guillaume K, Report by the General Rapporteur: Stakeholders' Conference on Recognition in the European Higher Education Area (2011)

Table 9.2 How important is the following information for deciding on the recognition of the foreign qualification?

	Very important	Quite important	Useful, but not essential	Not relevant	Total
Education and Training					
The duration of the training programme	81 (67%)	27 (22%)	13 (11%)	0	121 (100%)
Content of subjects taught (curriculum, description of training content)	74 (61%)	26 (21%)	18 (15%)	4 (3%)	122 (100%)
Qualification level according to Article 11 of Directive 2005/36/EC	73 (60%)	28 (23%)	14 (12%)	6 (5%)	121 (100%)
Titles of subjects taught as part of the qualification	52 (44%)	36 (31%)	26 (22%)	4 (3%)	118 (100%)
Accreditation of the qualification by a professional body	50 (42%)	32 (27%)	23 (19%)	15 (13%)	120 (100%)
Types of learning activity undertaken (e.g. theoretical, practical etc)	45 (37%)	39 (32%)	25 (21%)	12 (10%)	121 (100%)
Level according to the national qualifications system or EQF	38 (32%)	37 (31%)	31 (26%)	13 (11%)	119 (100%)
A description of learning outcomes (knowledge, skills and competence)	29 (25%)	45 (38%)	37 (31%)	7 (6%)	118 (100%)
The type of assessment / methods used (final exam, practical assignment, thesis)	27 (22%)	33 (27%)	42 (35%)	19 (16%)	121 (100%)
Professional Experience					
The professional experience of the applicant	61 (50%)	40 (33%)	18 (15%)	3 (2%)	122 (100%)
The scope of activity of the profession in the home Member State	55 (45%)	38 (31%)	23 (19%)	6 (5%)	122 (100%)
Evidence that the applicant has undertaken CPD	23 (19%)	31 (25%)	57 (47%)	11 (9%)	122 (100%)

Source: Online survey of competent authorities

9.3.3 Difficulties related to the use of levels for competent authorities

In order to make a recognition decision in a timely and straightforward way, it assumes that competent authorities have the required information on which to base the decision. It is also easier to make the recognition decision where there is a sufficient degree of similarity between the home and host country in relation to professional training and the scope of the profession itself. In the context of the assessment of qualification level, it is therefore relevant to understand whether competent authorities face difficulties in applying Article 11 (assigning level to an applicant's qualification) and whether the system of levels makes it difficult to recognise qualifications in practice because professions are regulated at different levels in different countries. In terms of understanding the effectiveness of the current system overall (i.e. whether it facilitates quick and easy recognition), it is also possible to look at whether difficulties in relation to the assessment of level are more or less of a problem than other elements of the recognition decision (e.g. the assessment of substantial difference in training content).

There was little evidence that assigning level to an applicant's qualification under Article 11 is difficult for competent authorities. Furthermore, qualifications for the same profession being regulated at different levels by country under the Directive are a frequent difficulty for just over 1 in 5 responding competent authorities (22%). Table 9.3 below shows that **differences in subject coverage and in the proportion of practical/theoretical training in foreign qualifications are a more common challenge on a frequent or occasional basis**. In contrast, issues relating to different scope of professional practice are much less of a consideration for competent authorities.

It is clear that qualification level is more likely to lead to difficulties for those professions regulated at level d under Article 11, where the level beneath can involve a large difference in duration of study. Where the applicant's duration of study is less than half the duration

required to access the regulated profession in the host country, competent authorities report that it can be difficult to define compensation measures.

As a general point, it is worth noting that some of the difficulties relating to the categories in Table 9.3 are, according to a small number of competent authorities, magnified or related to practical difficulties in verifying or understanding the applicant's qualification (e.g. providing sufficient detail on course syllabus and content if the qualification was undertaken a number of years ago and if there programme has subsequently changed or if the institution no longer exists).

Table 9.3 How frequently are difficulties in relation to the recognition of foreign qualifications linked to the following issues?

	Frequently	Occasionally	Rarely	Never	Total
The theoretical knowledge covered by the qualification is different (i.e. subjects covered are different)	32 (28%)	50 (43%)	18 (16%)	15 (13%)	115 (100%)
In the country where the foreign qualification was awarded, the proportion of practical/theoretical education/ training is very different	27 (24%)	48 (42%)	24 (21%)	14 (12%)	113 (100%)
In the country where the foreign qualification was awarded, the level of the education/ training under the directive is very different	**24 (22%)**	**33 (30%)**	**35 (32%)**	**18 (16%)**	**110 (100%)**
In the country where it was awarded, the foreign qualification corresponds to a profession that is much narrower than the profession in our country (i.e. the professionals are able to do fewer activities/tasks than in our country)	18 (16%)	48 (41%)	27 (23%)	23 (20%)	116 (100%)
In the country where it was awarded, the foreign qualification corresponds to a profession that is much broader than the profession in our country	10 (9%)	32 (28%)	40 (35%)	32 (28%)	114 (100%)
In the country where it was awarded, the foreign qualification corresponds to a profession that does not exist in our country at all	10 (9%)	45 (38%)	26 (22%)	36 (31%)	117 (100%)

Source: Online survey of competent authorities

9.3.4 The importance of qualification level under Article 11 varies by profession

The importance of Article 11 to competent authorities varies a little by profession. It appears that it is a less significant part of the recognition decision for health-related professions than other professions – although this is a question of emphasis. Table 9.4 below shows the top and bottom five professions (excluding doctors and architects) in relation to the overall perceived importance of Article 11 according to the online survey of competent authorities.

Although the importance of Article 11 varies by profession, it is difficult to generalise given that the national context and requirements also vary. The volume of applications also varies considerably and this might determine to some extent how the Article 11 assessment of level is perceived. These differences in perceived importance often translate into whether or not Article 11 is used as part the recognition process at all.

Where it is used, the purpose of the assessment of levels is the same irrespective of profession – to provide an overall understanding of the applicant's qualification to inform the assessment of substantial difference in content and, more practically, to determine whether the applicant meets the eligibility criteria in relation to level of training.

There are some professions that highlight the conditions under which the assessment of level under Article 11 appears to become more or less important, for example:

- Qualification level can be, in itself, an important part of the assessment where....
  - **The required level of training in the host country has evolved over time to clarify the criteria under which a profession can be practiced and to raise qualification requirements:** In the case of biomedical / medical laboratory technicians, the online survey and case studies both raised the issue of dealing with applications from countries where the duration/level of study was less than the 180 ECTS established as a minimum requirement in a number of Member States. A number of respondents from both the competent authority and professional body perspective identified that the profession of biomedical / medical laboratory technicians was particularly problematic on this basis because of a) the extent to which practice diverged in terms of entry requirements between countries and b) as a result of those requirements evolving in some countries through processes to professionalise the workforce – in effect, raising qualification requirements in terms of level. It might therefore be argued that level is a more pressing difficulty for this profession rather than others – although respondents to the online survey also reported issues related to the relative proportion of practical and theoretical training (and consequently, differences in the equipment used as part of training, for example).
  - **There is a distinction in practice between countries providing / requiring degree level study for entry to the profession and those that do not:** An issue reported in the context of social workers was that one area in which very different professional contexts and definitions becomes apparent is whether or not training for entry to the profession requires a tertiary-education degree. An assessment of level can therefore serve a purpose in making a valuable basic comparison between countries.
- Qualification level is often seen as less important where there are other considerations relating to training contents that are of such significance to competent authorities that the assessment of level, in itself, is practically discounted. For example, where..:
  - **The scope of practice is significantly different between countries:** In the physiotherapy profession, competent authorities in some countries reported an issue where the scope of activities is narrower in the home country, corresponding to substantial difference in the content of training and making this deficit hard to bridge through experience (for example, in some countries qualifications cover elements of osteopathy, while in others this is not the case). In this context, the assessment of qualification level is less meaningful to competent authorities than where there is greater similarity in professional scope between countries. In the context of radiotherapists / radiographers, it may be more important to understand whether training was undertaken towards radiography *or* radiotherapy rather than knowing the length of study *per* se. The example was given of comparing a two-year multi-disciplinary course including diagnostic radiotherapy, radiation therapy, clinical measurement and nuclear magnetic resonance imaging with a professional entry route in which radiography and radiotherapy are separate, longer courses.
  - **A significant knowledge component relates to national legislation:** In the accountants and auditors profession, it was emphasised that differences in the theoretical and practical knowledge between the Member States reflects differences in tax legislation between countries.
  - **The size of the taught knowledge component varies between countries:** A number of competent authorities for primary school teachers emphasised (in a way that other competent authorities did not) that perceived shortfalls in theoretical knowledge in applicants could not easily be made up through compensation measures. Level of study is therefore much less important than the approach to learning for these competent authorities.

Table 9.4 Number and % of competent authorities reporting that qualification level according to Article 11 is 'very important' per profession

Profession	Number of responses	Total respondents per profession	% of total responses
Professions with the highest proportion of competent authorities reporting that Article 11 levels are 'very important'			
1. Tourist guide	10	12	83%
2. Secondary school teacher	18	25	72%
3. Social worker	13	19	68%
4. Primary school teacher	11	17	65%
5= Real estate agent	7	11	64%
5= Surveyor	7	11	64%
Professions with the lowest proportion of competent authorities reporting that Article 11 levels are 'very important'			
5= Physiotherapist	9	19	47%
5= Pharmaceutical technicians / assistant	7	15	47%
4. Accountants / auditor	6	13	46%
3. Civil engineer	6	14	43%
2. Biomedical / medical laboratory technician	7	17	41%
1. Radiographers / radiotherapist	4	17	29%
All professions	**73**	**121**	**60%**

Source: Online survey of competent authorities

9.3.5 Reasons for not using Article 11

During the case studies, a number of reasons were provided by competent authorities for not using Article 11, including a noted preference for examining each application in detail (regarding content and the presence of substantial difference).

One of the questions raised during the study was whether, in the context of the current Directive, it is a realistic possibility to see applicants attesting more than one level out under Article 11. Over a third of respondents to the online survey (39%, 43 out of 111 responses) reported that they had experienced this situation, which is higher than might have been expected – although the case study interviews suggest that it is an infrequent occurrence.

In this context, **by far the most common reason for not deploying Article 11 according to case study interviewees was the perceived lack of value in knowing whether an applicant's qualification was at either the level (according to Article 11) at which the profession is regulated or at the level below**. It was therefore not considered to be useful enough criteria for distinguishing between applicants – although, significantly, Article 11 is still playing a role here in ensuring that applicants at a lower level are considered on the basis of the content of their training. The breadth of the Article 11 levels meant that, in many cases, an applicant at the level below that at which the profession is regulated could easily be at a significantly lower level in terms of the learning inputs (as measured, for example, by duration of study). This highlights the logical view that Article 11 is not intended – and does not provide – the basis for making the recognition decision in most cases.

According to some interviewees, however, it was rare that an applicant's qualification would be at very different level to that required and that this would be used as a reason to reject an application:

- One competent authority for social workers that uses the levels to identify if qualifications are more than one level below the Article 11 requirements said: *'In practice, this never happens'*. Another competent authority for the same profession described the Article 11 levels as *'too all-encompassing, really'*.
- Competent authorities for real estate agents typically used the levels, but even one interviewee for this profession said that they had *'never seen a case where recognition was turned down because the level was not appropriate'*.

According to another group of interviewees, the Article 11 levels were difficult to apply in practice anyway:

- Physiotherapy competent authorities were mixed in terms of their use of the levels. Numerous interviewees for this profession thought that the levels were useful (in setting the terms of engagement with home country competent authorities, by providing an initial gauge of the type of qualification being attested, that host competent authorities could use to base requests for further information), while one interviewee felt that the levels were *'not in line with reality'*, because they were such a narrow measure of length of study.
- Competent authorities for the pharmaceutical technician profession were equally mixed between interviewees who thought that the levels were an important dimension that facilitate recognition (*'a firm basis for assessment'*) to others that found it difficult to apply the relevant qualifications (*'our qualification lies between level b and c of the Directive, so there is overlap'*; *'the levels are too broad'*).
- Competent authorities for civil engineering consistently questioned the value of levels in relation to the need to recognise qualifications at the level below that required in the host country. As one interviewee said, this element *'should be deleted from the Directive [as] its not enough for the competent authorities to be certain that the qualification lives up to the national requirements'*. Another interviewee described recognition on these terms as being *'too lax'*, while it was common for civil engineering interviewees to question the value of Article 11 levels in general terms (*'the levels are not useful in considering equivalence'*). These comments are significant, because they indicate that in the absence of Article 11, some competent authorities may refuse to recognise just on the basis of duration and institution of study.
- Accountancy competent authorities typically found little relevance in the levels because the vast majority of professional qualifications in this area would inevitably be on a similar level in the context of the Directive (*'The vast majority of accountancy qualifications are at the same level, issues only arise with older qualifications and these are rare'*; *'for accountants, it is nearly impossible that a foreign qualification would not match (in terms of level) one of the cases defined in the national legislation'*).

Some competent authorities are confused by the structure of the levels – and it is apparent that the introduction of NQF/EQF levels magnifies that confusion. This echoes some of the general points made by stakeholders, including whether in the context of higher education, they really represent five levels:

"Higher education is only interested in levels c, d and e in the current Directive...but the distinction between levels 4 and 5 are spurious (because a four-year course can fit into both categories)" (EU stakeholder).

A national co-ordinator raised thought that levels d an e are clear, but:

"Levels a, b and c are subject to interpretation, it is not clear where to put some qualifications".

It is important not to overplay the potential for ambiguity and confusion here. It appears to be an abstract rather than practical consideration (except maybe in a few isolated cases) as most competent authorities consider the content of qualifications for substantial difference anyway and do not always apply the text of Article 11 in its strictness sense.

9.3.6 The added value of Article 11 for competent authorities

Overall, while levels are used variably, Article 11 is deemed to be important and significant part of the competent authority landscape. For some competent authorities, the levels are *'an important reference point'*. Even while recognising that the levels may not in themselves be sufficient to distinguish applicants that should / should not be recognised, **they provide a firm basis for assessment and, significantly, are viewed positively as framing the basis for engagement with home country competent authorities**. This may be as simple as providing a reference point for requesting further information from home competent authorities by providing a broad understanding of the level of the applicant's qualification and how it corresponds to the host country education and training system.

This was particularly important for competent authority interviewees:

- who may be less familiar with the professional qualifications landscape (e.g. some ministries acting as competent authority for a large number of professions),
- or who may receive very few applications each year (a fairly common scenario across many of the case study professions, which are themselves among the highest volume professions under the general system)

Very few interviewees – irrespective of whether or how they used Article 11 – thought that the levels constrain the recognition process in any way. It is just that only a minority of competent authorities find them to be particularly useful – and then, it is typically as a comfort measure.

9.4 The development and implementation of the eight-level EQF system

9.4.1 Progress to date with EQF implementation and developing national qualifications frameworks

For the eight-level EQF system to be viable in the context of Directive 2005/36/EC, it assumes that national qualification levels or established NQFs have been linked to the EQF in all Member States, or that qualifications systems have been referenced to the EQF (it is not a condition for countries to develop an NQF in order to use EQF and some are, in the first stage, referencing their qualifications systems rather than NQFs).

NQF development is an ongoing process and, so far, half of EU countries have developed and implemented NQFs. As of October 2011, 10 countries (Belgium-Flanders; Denmark; Estonia; France; Ireland; Latvia; Malta; The Netherlands; Portugal; United Kingdom) have completed their referencing to the EQF. This suggests that **it is too early to predict with any confidence what the impact of the eight-level system might be in practice on the recognition of professional qualifications**.

Cedefop's August 2010 report on the *development of national qualifications frameworks in Europe* classified the stage of NQF development at Member State level as follows:

- Conceptualisation and design stage:
  - Deciding the scope and structure of the framework: Belgium (FR); Italy; The Netherlands; Slovakia; Sweden
  - Completing level descriptors, setting stakeholder roles etc: Bulgaria; Cyprus; Hungary; Latvia; Poland; Romania; Slovenia; Spain
- Consultation and testing stage: Austria; Finland; Germany; Greece; Luxembourg
- Official establishment/ adoption stage : Belgium (FL); Czech Republic; Denmark; Estonia; Lithuania; Malta; Portugal
- Practical implementation stage: France; Ireland; UK.

The stage of development is not necessarily a clear marker of the level of work related to the NQF undertaken so far. It reflects that national discussions on defining the goals of the NQF and consultation with a broad range of stakeholders (national authorities, agencies, education and training providers, quality assurance agencies, employers, trade unions, etc.) in order to gain wide support for the NQF requires time. In some cases, even if the original purpose was increased transparency, NQF development has inspired reform or more

significant restructuring of education systems. Annex 11 shows the timeline for NQF development in different Member States, adapted from information in country summaries contained in the Cedefop report. This shows that active NQF development started at different points (typically from 2005 to 2009) and involved different approaches to consultation and testing.

The education ministry interviews provided both an update on progress with NQF development and referencing to the EQF, as well as an outline of future developments. This is summarised in Annex 12. The table is organised in relation to the stages of development for each country as set out in the Cedefop report, although there has clearly been movement since then. Some countries have progressed to the next stage of development (e.g. Malta is implementing its framework; Slovenia has moved from the design to the consultation stage; Finland and the Netherlands have developed an NQF agreed by the stakeholders and awaiting government and parliament approval). In other cases, development appears to have slowed, or it is less clear when implementation will start (e.g. Hungary). There are still considerable challenges reported by the education ministries, even where development appears to be on track. In a number of countries, such as Bulgaria and Hungary, national policy developments have impacted on progress with the NQF.

9.4.2 Direction of travel and issues for future EQF implementation

9.4.2.1 Likelihood of achieving EU-wide NQFs referenced to the EQF based on progress to date

It is relevant to ask whether the nature of development to date suggests anything about the likely future importance and impact of NQFs. In this context, the delays in linking national qualifications levels to the EQF beyond the initial target date of 2010 can either be interpreted as a lack of commitment to this activity at national level, or a reflection of an over-ambitious (*'unrealistic'*[158]) initial timescale.

The view from stakeholders, as well as from education ministries across the board is that the second position is the correct one. Rather than lack of commitment the delays also show that many countries initially underestimated the task of NQF development and EQF referencing and the time it requires in particular to consult and negotiate with stakeholders.

It has also been argued that the decision by Member States to voluntarily introduce NQFs beyond what was initially envisaged under the EQF recommendation, signifies that there cannot be a lack of commitment to this work – but instead that there is a more ambitious programme of reform being undertaken at national level. Most countries have started to develop NQFs only recently. These NQFs usually include qualifications from the whole of formal education and training system and – increasingly – qualifications outside the formal system (qualifications awarded by companies, private providers, acquired through the validation of informal and non-formal learning). Therefore, the conceptual development of NQFs and consultation with stakeholders to gain political and professional support takes time and effort.

Existing research provides a plausible explanation for why it is likely to be some years before frameworks are established nationally, in terms of the complexity of the task:

"This [missing the original 2010 deadline] is mainly because the development of an NQF implies that all national qualifications need to be described not just in terms of general level (secondary education, undergraduate programmes, postgraduate programmes, etc), 'profile' or orientation (essentially academic versus vocational) and student workload, but also in terms of learning outcomes, and learning outcomes have not traditionally featured in many European national education systems".[159]

The point is echoed by the education ministry interviews, where it was commonly reported that the use of learning outcomes is at an early stage and there are considerable practical and political difficulties in attempting to develop qualifications frameworks that encompass

[158] Johnson and Wolf (2008)

[159] Johnson and Wolf (2008)

different educational sub-systems. These difficulties relate to the cultural change necessitated by viewing traditionally separate (and higher and lower status) elements of the education system as being comparable in terms of the level of qualifications offered.

Either way, it takes time for new concepts to become established. For example, one education ministry reported that the NQF/EQF:

"brings many new concepts to the table which are not familiar to [the people]. For example, they do not see CVET studies as being a qualification..... In addition, the learning outcomes approach is also seen as different to the system that was in place before. The difficulty therefore is in ensuring that individuals understand the new system and that institutions are able to make the widespread changes in a realistic timeframe."

Another education ministry reported:

"There is a lack of understanding at the European level of just how heavy and time-consuming the national process involved in developing and referencing an NQF is, and how many interested parties need to be involved nationally. The [country's] horizon for observable results of the NQF is probably no less than 5 years. It has already taken 5 years – things take time."

There is a high-level commitment to NQFs aligned to the EQF within the higher education sector as well. The European Association of Institutions in Higher Education (EURASHE), as part of its '10 Commitments for the European Higher Education Area for 2020', agreed in March 2010, states:

"Our vision for 2020 is an EHEA where NQFs are implemented in all Bologna countries, higher education institutions , and where a single, universal European Qualifications Framework has been developed, certified against the Overarching Qualifications Framework for the EHEA and aligned to the European Qualifications Framework for Lifelong Learning"[160].

This commitment neatly shows that further work is required over the medium term to effectively implement qualifications frameworks for lifelong learning. The statement goes on to set out the specific areas in which further work is required:

- Ensuring that the EQF can become a reference to sector- or profession-specific approaches.
- Ensuring that the principles of the EQF are *'understood, reflected in the institutional policy and fully implemented into curricula'*[161].

This implies significant further development work, and it is important to note that EURASHE itself emphasised that the 2010 commitment was very much an ambition rather than an expected outcome even by 2020.

It looks unlikely that NQFs referenced to the EQF will be universally implemented as early as 2012. One education ministry reported that while progress is likely to continue to vary by country, it is expected that by the end of 2012 there will be a *'critical mass'* of large countries with frameworks in place. From this point, it is likely that there will be additional pressure on countries not referenced to the EQF to conform with common processes relating to the EQF, which can support recognition in the medium term.

This is important because another education ministry reported that if more Member States had referenced their NQFs then there would be a lot more clarity about the difference between professions in terms of levels and what might be done to bring some convergence through the professions and higher education institutions.

[160] EURASHE 2010 10 Commitments for the European Higher Education Area in 2020

[161] ibid

9.4.2.2 *The risk of introducing NQFs too quickly*

It is important to note that much of the current focus is on ensuring frameworks are developed and in place in the context of the 2012 target for framework development. There is a risk of less attention to detail being paid on actual implementation. The experience of more advanced countries suggests that implementation itself can be a long and unpredictable process. One education ministry expressed concerns about the feasibility of developing an NQF and completing referencing at the same time. Each is a significant task in itself and there was a degree of scepticism about whether current planned timescales are achievable for some countries.

Among the various risks associated with the introduction of qualification frameworks (e.g. use of terminology to define learning outcomes), the existing literature suggests that lack of sufficient research and analysis of the qualifications system (i.e. the adoption of level descriptors without analysing all qualifications and making them outcomes-based) and lack of sufficient consultation with the range of stakeholders that define, regulate and use qualifications may raise doubts about the legitimacy of some NQFs in practice:

"The biggest risk....is the possibility that some countries might introduce qualifications frameworks superficially.....a hurried introduction of qualifications frameworks without proper discussions at national and institutional/programme level might lead to the overly quick writing of level descriptors and learning outcomes that do not correspond with reality. This could harm rather than help progress towards valid recognition of qualifications".[162]

This was a concern expressed by a number of education stakeholders involved in EQF development and referencing who wondered whether all frameworks going through the process were *'real'* frameworks, based largely on the presumed pace of development in some countries.

9.4.3 The use of EQF levels for recognition purposes

Given the state of progress in implementing the EQF, very few competent authorities (11%) interviewed for the case studies had ever dealt with applications for the recognition of professional qualifications where the EQF level (or indeed an NQF level) was clearly stated (see Table 9.5 below). This related to a range of professions. All interviewees that had seen EQF/NQF level stated within applications said that is still a rare or uncommon practice.

From the limited experience to date, competent authorities found that the NQF/EQF level in applications was generally the same in the 'foreign' qualification as required in the host country. Only one competent authority (for civil engineers) reported that it had received a single application in which there was a major difference in the EQF level of the applicant (i.e. more than one level below).

The experience of competent authorities is a result of NQFs referenced to the EQF only being in place in a few countries and, even where they are, as applications do not generally require applicants to state EQF level, it could not be expected that applicants (few of whom would have qualified post NQF implementation) would pro-offer this information.

However, the lack of activity related to the use of EQF levels within the recognition process does not mean that competent authorities are themselves unable to understand EQF equivalence. The case study interviewees were evenly split in terms of 'knowing' if and how the required professional qualification in their country related to NQF/EQF level. In fact, in some cases competent authorities appeared to report that the required professional qualification was part of an NQF referenced to the EQF where this was unlikely to be the case (especially given that when the research was undertaken in spring and summer 2011, relatively few countries had referenced to the EQF). A third of interviewees said that the relevant qualification was part of an NQF referenced to the EQF, a third said it was not and third of interviewees did not know whether the professional qualification was part of an NQF

[162] Andrejs Rauhvargers (2009): Recognition and qualifications frameworks, Assessment in Education: Principles, Policy & Practice, 16:1, 111-125

referenced to the EQF. These responses were not concentrated by country as may have been expected.

When exploring this with competent authorities, including asking them about the EQF level to which the professional qualification in their country relates, it was clear that interviewees were making assumptions about EQF level on the basis of knowing the Bologna cycles and how the Bologna cycles notionally map onto the EQF at levels 6-8. For competent authorities dealing with higher education qualifications, the EQF concept is therefore straightforward *as a system of levels*, because of the earlier reforms under the Bologna process to establish degree cycles.

Table 9.5 For the case study profession, have you dealt with applications for the recognition of professional qualifications where the EQF level is clearly stated (or level in an NQF)?

	Number of responses	% of responses
Yes	6	11%
No	37	67%
Don't know	12	22%
Total	55	100%

Source: case studies

9.4.4 Perceived value in EQF levels for recognition purposes

Even if there is not yet sufficient evidence and experience in using EQF levels for the recognition of qualifications, 63% of competent authorities responding to the online survey thought that EQF level or level according to a national qualifications system was very or quite important information (see section 9.3.2 above).

Overall, though, half as many respondents rated EQF/national qualification system level compared to Article 11 qualification level as being 'very important'. The relative breakdown of perceived importance of EQF level by profession is similar to that for qualification level according to Article 11, meaning that each profession fairly consistently sees Article 11 level as being more important than EQF level (see Table 9.2). These results to some extent reflect perceptions that elements relating to the existing Directive are bound to be seen as being more important for making recognition decisions.

9.4.4.1 Competent authorities split in terms of preferred systems of level

However, when asked directly about whether a system of levels defined in terms of inputs (as in Article 11, based on the level and duration of studies and level and type of institution where the studies take place) or a system based on levels defined in terms of knowledge, skills and competence (as with the EQF) *would* better facilitate recognition, there was a slight preference among competent authorities for the EQF, although competent authorities were quite split on this question.

Table 9.6 below shows **this slight preference among competent authorities for a system based on the eight EQF levels rather than the current five-level system in Article 11 of the Directive, but no clear majority preference either way**.

Table 9.6 In your view which of these three systems would facilitate better recognition of qualifications for competent authorities and respectively for citizens:

	Number (and %) of responses
A system based on levels that are defined in terms of inputs as in Article 11 of the Directive (five levels), the duration of studies, and the level and type of institution where the studies take place (higher education etc)	48 (43%)
A system based on levels that are defined in terms of knowledge, skills and competence whereby higher levels express greater complexity, breadth of knowledge, higher proficiency, greater responsibility and autonomy etc, as in the European Qualifications Framework (eight levels)	56 (50%)
A system without any defined levels	7 (6%)
Total	111 (100%)

Source: Online survey of competent authorities

9.4.4.2 *Perceived value in EQF level by profession*

Table 9.7 below presents the preferred system by profession. Once again, medical professions were less likely to rate EQF level as being very important. Teaching-related professions were more likely to see it as an important element. The notable contrast with the Article 11 responses (in Table 9.4 above) is for the surveyor profession, which drops from 64% of profession respondents considering Article 11 levels 'very important' to zero considering EQF levels to be 'very important'.

Table 9.7 Number and % of competent authorities reporting that qualification level according to national qualifications systems or EQF is 'very important' per profession

Profession	Number of responses	Total respondents per profession	% of total responses
Professions with the highest proportion of competent authorities reporting that EQF level is 'very important'			
1. Tourist guide	5	12	42%
2. Primary school teacher	7	17	41%
3. Secondary school teacher	9	25	36%
4. Psychologist	3	9	33%
5. Social worker	6	19	32%%
Professions with the lowest proportion of competent authorities reporting that EQF level is 'very important'			
5. Second level nurse	3	17	18%
4. Pharmaceutical technician / assistant	2	15	13%
3. Radiographers / radiotherapist	1	14	7%
2. Biomedical / medical laboratory technician	1	17	6%
1. Surveyor	0	11	0
All professions	**38**	**119**	**32%**

Source: Online survey of competent authorities

9.4.4.3 *Value of NQF level for applicants from countries that do not regulate the profession*

There is a sense that NQFs can aid competent authorities in dealing with applicants who qualified in a country that does not regulate the profession. In this context, **just under half of host competent authorities (45%, 52 out of 114 respondents) think that the inclusion of the applicant's qualification in a national qualification framework or national register of qualifications is very important information for the recognition decision.** This is despite the fact that only three countries had implemented NQFs referenced to the

EQF when our research started. Only a small proportion of competent authorities (7%, or 8 respondents) think that this is not relevant information.

For competent authorities, the inclusion of a qualification within a national qualification framework is of similar importance to knowing if the qualification is recognised by a relevant professional organisation in the awarding country (45% or 53 respondents reported that as being 'very important'; 7% or 8 respondents 'not relevant'); and marginally less important than knowing that the awarding institution is quality assured at national level.

9.4.4.4 Value of EQF/NQF level in assessing substantial difference in qualifications

Competent authorities interviewed as part of the case studies were generally unsure whether EQF/NQF level was valuable in practice for comparing qualifications – and in particular, whether it supported the assessment of substantial difference. This partly reflects the lack of experience in using this system as part of the recognition process.

Only a minority of competent authorities (20%) thought it would not possibly be beneficial information in that context. This compared to 35% of interviewees who did believe that EQF/NQF level was valuable. It is worth noting here that competent authorities based their opinion on the current trends and assumed future progress in linking NQFs to the EQF across Member States. Also the value perceived by some competent authorities was directly related to it containing additional levels to Article 11.

Table 9.8 Is the indication of the EQF/NQF level valuable information to understand and compare qualifications, in particular to assess possible substantial differences between the training programmes?

	Number of responses	% of responses
Yes	18	35%
No	10	20%
Don't know	23	45%
Total	51	100%

Source: case studies

9.4.4.5 The potential for the EQF to add value to the recognition process

The majority of respondents to the online survey (68%) said that they would not agree to recognise a foreign qualification for the same profession automatically (without any compensatory measures) if the EQF level of the qualification is the same as the EQF level of the national qualification (see Table 9.9 below). Those competent authorities that said they would recognise on this basis were also assuming a degree of convergence in subject area/curriculum.

The *potential* added value of EQF as a measure within the recognition process tended to relate to confidence provided by knowing that a qualification was comparable in terms of learning outcomes:

- The minimum quality would be guaranteed by an independent quality assurance agency (competent authority for accountants/auditors).
- The level of competence would be similar, if not the same (competent authority for secondary school teachers).
- Through the external accreditation of qualifications on national frameworks aligned to the EQF, the EQF should in time provide 'the best and easiest' way to ensure the equivalence of professional competence (competent authority for social workers).

The reasons provided for the EQF not adding value to the recognition process were typically based on general doubts among competent authorities about the value of assessing levels to recognise qualifications. They were not typically related to the EQF specifically – with the exception of concerns voiced by some competent authorities that the EQF was not sufficiently established to be able to judge its added value. In practical terms, it can be

assumed that the role played by the EQF as an alternative measure of levels would be the same as that currently provided by Article 11.

Table 9.9 Would you agree to recognise a foreign qualification for the same profession automatically (without any compensatory measures) if the EQF level of the qualification is the same as the EQF level of the national qualification

	Number of competent authorities	% of competent authorities
Yes	35	32%
No	73	68%
Total	108	100%

Source: Online survey of competent authorities

9.4.5 Summary of strengths and weaknesses of EQF levels compared to Article 11

Current thinking in the context of academic recognition provides an insight into the role qualifications frameworks *may* in time play, which is pertinent also to debates regarding professional recognition:

"QFs are transparency tools that will contribute to fair recognition but certainly not imply automatic recognition....QFs mainly provide information about the positioning of a qualification to a specific level within a national system, which is also referenced to an agreed overarching framework. However, as the levels of a QF are described in generic terms, an assessment of the foreign qualification is still needed".[163]

9.4.5.1 Competent authority views and evidence

Competent authorities summarised the following strengths and weaknesses of the two systems in terms of facilitating the free movement of professionals during the case study interviews. *Note that these reflect the rainbow of opinion among competent authorities and, unless stated, cannot be considered a predominant view. It also includes areas for which there was fundamental disagreement between competent authorities*:

<u>System based on levels defined in terms of inputs (e.g. Article 11 - duration of studies and the type of institution where the learning takes place):</u>

- Strengths:
  - **Familiarity** – A number of authorities were not aware of the EQF levels and therefore, naturally, preferred the existing Directive levels.
  - **Ease of application** – There is *'no problem'* with current system according to some competent authorities and it has proven to be a reasonably effective way of structuring the recognition process.
- Weaknesses:
  - **Perceived irrelevance to the professional context** – One of the arguments against the current input-led system is that where various education and training pathways can lead to professional entry, the dimensions of duration and institution of study are not meaningful criteria for underpinning the recognition decision (unlike learning outcomes). This was a minority view, but is interesting in that it is one of the few areas in which a tangible comparison is made that *could* be argued to show that a system of levels based on learning outcomes concretely supports free movement in comparison with Article 11. The logic here – and it is untested in practice – is that a system of levels that refers to learning outcomes provides competent authorities with a clearer perspective on what applicants can and cannot do in a professional context, which allows them to provide a more measured assessment of any substantial differences in content of training.

[163] Guillaume K, Report by the General Rapporteur: Stakeholders' Conference on Recognition in the European Higher Education Area (2011)

- **Perceived contradiction in Article 11 as a definition of level** – One competent authority argued that the notion of 'level' contained with Article 11 was problematic because it is primarily based on duration of study, and could not safeguard the achieved level of the student as well as an outcomes-based approach: '*You cannot use inputs to measure levels. Levels can only be about outcomes rather than outputs. You could be teaching at the wrong level for years and have the right outputs, but not the right outcomes'*.

<u>System based on learning outcomes (e.g. EQF – where level denotes complexity, breadth of knowledge, proficiency, autonomy etc):</u>

- Strengths:
  - **Preference for detail** – A number of competent authorities were interested in having a mechanism that allowed for a greater ability to distinguish between applicants according to qualification level. This was one of the most common reasons for competent authorities preferring the eight-level system, though it was very much based on theory rather than practical experience of being able to do this. Indeed, a small number of interviewees among the competent authority community who were familiar with detailed EQF/NQF developments argued that at the higher education levels, use of the EQF did not entail an additional number of levels in comparison with Article 11. However, for many competent authorities, their preference was based simply on a calculation that to have more levels is better. The implication here is that some competent authorities are looking for greater discretion to exclude applicants for recognition based just on level of training – therefore this apparent strength according to competent authorities is a weakness in the context of promoting free movement of professionals.
  - **Transparency** – Some competent authorities firmly agreed with the view, noted above, that the EQF, *'if used with right instruments, increases the transparency of qualifications between countries'*. The important point noted here was that the added value of the EQF approach is dependent on its use in conjunction with education reform tools, notably the use of ECTS to determine workload.
  - **Relevance** – In some contexts, the structure of professional requirements (standards-based) and the nature of the education system means that the eight levels are considered more relevant to national/professional practice. One interviewee described this in terms of learning outcomes saying *'something about the definition of the profession'*, which was considered extremely helpful for comparing applications.
- Weaknesses:
  - **Quality assurance** – Question marks were commonly raised about the quality assurance of learning outcomes associated with qualifications referenced ultimately to the EQF. This was suggested to make the assessment of equivalence more difficult in practice. According to one interviewee: *'It is necessary to have detailed information on inputs to assess equivalence of degrees. Basing assessment on learning outcomes gives too much space for possible acquisition of competences outside the study context, not certified and assessed in the expected manner'*. Another interviewee argued that while the EQF might be valuable for non-regulated professions, it posed particular problems in the context of regulated professions because *'the responsibility of providing guarantees is so high that as high equivalence as possible needs to be sought'*. This echoes the underlying concern among some competent authorities that a system of levels based on learning outcomes is somehow less rigorous that one using concrete input measures and that equivalence is therefore harder to assess. Education stakeholders would surely question this assumption, but it highlights the way in which competent authority views of the EQF system are in some cases shaped by the lack of understanding of learning outcomes that we noted earlier.
  - **Achievability of implementation** – Some competent authorities thought that stakeholders are a long way from accepting the underpinning ethos of education

reform (the outcomes-based approach). According to one interviewee, *'it's hard to conceptually imagine a systemic change - a world where only learning outcomes is used'*. Having said that, it needs to be recognised that the education reforms are not calling for a system where only learning outcomes would be used – rather inputs and learning outcomes would each have a different role in governing the systems.

- **It cannot provide the basis for the recognition assessment** – While the transparency of EQF in conjunction with other tools was a marked strength according to some competent authorities, others viewed the idea that EQF could be the foundation for (or the first step to) the recognition decision (in the way that Article 11 theoretically is) as something that would provide less confidence than the existing process. According to one competent authority: *'learning outcomes sound like a good idea - I like the idea of competencies - but I can't see a system where the inputs would not be included. I mean why would you not ask the applicant to demonstrate that they studied at university for a minimum number of years?'*
- **Standardisation** – A concern was noted that NQFs may involve an undue standardisation of qualifications. It is not clear how this would happen (many education stakeholders would argue the opposite in the context associated developments related to credit-based approaches to qualifications), but it shows how judgements about systems can be based on limited knowledge about those systems.

It is notable that stated preferences relating to the provision of additional detail by incorporating the EQF are **typically articulated in terms of what meets the needs of the competent authority itself, rather than which elements will promote free movement**. Any requirement for applicants to provide more information, for example if the EQF was somehow combined with existing input measures, could either facilitate recognition by offering more confidence to competent authorities about the professional level and appropriateness of training of applicants, or it could provide greater scope for identifying areas of difference between home and host training, which logically is a barrier to free movement.

Also, the responses from interviewees, and the deeply-held concerns where these exist, are **a reflection of the variability of knowledge and understanding about the role and function of qualifications frameworks**. This is understandable given the extent of progress in implementing national frameworks. It may be expected that the views of competent authorities will evolve as familiarity increases – however, it is not clear over what timeframe this is likely to happen or what the mechanism could be that will facilitate it happening quickly.

Among competent authorities there is a **disagreement about whether the use of outcomes-based levels makes the comparison of equivalence of qualifications easier (more relevant) or more difficult**. The problem is that, in practical terms, there is simply not sufficient evidence to state which perspective is the more accurate view. In the short- to-medium term it is likely that both opinions could be arguable depending on the specific professional context and the varying importance of 'level' as a defining consideration for recognition purposes.

Ultimately, there was **much more consensus on the view that input and outcome measures should be combined within the recognition process**. However, it is not clear whether this actually facilitates recognition procedures or creates an additional burden for applicants (because in practice, it relates to an additional rather than combined criteria). That depends very much on how individual competent authorities approach the assessment, and there is little concrete evidence of this happening already. Once again, therefore, the most sensible conclusion is that combining these dimensions would, all other things being equal, lead to less consistency in the approach to the recognition of professional qualifications.

9.4.5.2 Other stakeholder views and evidence

Other stakeholders (professional bodies, ministries where not competent authorities, education institutions and training bodies involved in professional development) interviewed as part of the case studies raised similar themes, although often in broader conceptual terms. The debate for these stakeholders was less to do with the systems of levels

themselves, rather than the practicability and value in using an outcomes-based or input-based approach to defining levels. This is significant, though, in providing a wider professional context for understanding how well-established approaches aligned to the EQF are for different professions:

- **Accountants and auditors:** There was strong emphasis from professional bodies and professional training bodies that outcomes measures were standard practice. There was confidence that the examination system for accountants and auditors effectively assessed learning outcomes and that the duration or method of study is therefore irrelevant.
- **Civil engineers:** Those stakeholders who could comment felt that the strengths and weaknesses of each system in isolation were much less important than the potential value of a multi-dimensional assessment of years (total duration), teaching hours, workload (ECTS) and, where possible, learning outcomes. In the context of engineering professions more broadly, this was argued to be beneficial because current differences in the basic structure of professional training (duration and subject coverage) are a barrier to free movement when they should not necessarily be in practice.
- **Medical/biomedical laboratory technicians and pharmaceutical technicians:** Similar views were provided by stakeholders for both the medical/biomedical laboratory and pharmaceutical technician professions. There was a slightly preference in using EQF/NQF levels because of the perceived differences within the profession in different countries relating to the scope of practice. However, it was commonly stated by professional and education bodies related to medical/biomedical laboratory technicians that the use of learning outcomes is in its infancy – while this was a general stakeholder view, it was marked among stakeholders for this profession. Once again, the added value of combining the systems was emphasised by stakeholders.
- **Physiotherapists:** Some interviewees who had been involved in the development of learning outcomes for physiotherapy reflected that this was difficult in terms of writing / defining outcomes and testing them. It was easier to simply identify areas of specialism. Notwithstanding this, there was strong support for the approach because of its employer-relevance. Again, though, the preferred solution for stakeholders was to use input and outcome measures in conjunction, because the length of time an individual had been training to become a physiotherapist was widely acknowledged to be important, relevant information for making an over-arching judgement on equivalence.
- **Real estate agents:** It was difficult for wider stakeholders for the real estate profession to express a view on the strengths and weaknesses of the two systems. There was generally perceived to be limited current mobility under the Directive, and, that being the case, it was preferable and practical for competent authorities to undertake a detailed, individual assessment. This also reflected the perception that there was a lot of variation in education and training for real estate agents in different countries. From that perspective, learning outcomes were felt to be valuable in providing an additional dimension to the applicant's experience and in a way that *'relates to the world of work'*.
- **Social workers:** Once again, the consensus among stakeholders was for a combination of input and outcome measures, reflecting that the two systems offered complementary advantages. However, this was the profession for which feasibility of agreeing common outcomes for the profession that could facilitate free movement was viewed with the highest degree of scepticism. Some interviewees did not believe that this was even a positive ambition, given the context- and culturally-specific nature of social work practice.

9.5 The case for a system without reference to levels

It is possible to envisage that general system recognition under the Directive would not request competent authorities to first assess the level of qualifications, but it would immediately ask them to consider the content of qualifications to see whether there are substantial differences. However, this does not yet mean that competent authorities would not take information about level into account. The information about level would be provided by applicants anyway as their diplomas and certificates hold an indication of level – and are expected to hold an indication of EQF level in the future. As seen from the responses below,

competent authorities consider that the information about level is important, even though they do not currently use it as a reason for rejection of requests.

One could consider that the most important feature of the Directive when it comes to levels is that it requires competent authorities to also fully examine qualifications that are at a lower level than required in the host country. As a result, competent authorities cannot use the argument that a qualification is one level below (for example a two year post-secondary qualification instead of three years) for immediate rejection. This feature of the Directive is important as it ensures a more 'open' treatment. To maintain this approach in a Directive without a system of levels would require that the Directive specifies that the level alone cannot be considered as a basis for rejection and substantial difference in content has to be demonstrated. An alternative approach could be to mention in the Directive that the fact that a typical training programme from the home country is one year shorter than the typical programme in the host country cannot be considered as substantial difference alone. This approach would be coherent with the current input-based logic of the Directive.

9.5.1 Is there sufficient consistency in levels?

There could be an argument for removing the system of levels from Directive 2005/36/EC if there is sufficient consistency in the level at which professions are regulated for it not to be a significant issue for the recognition process. **Over three quarters (77%) of competent authorities responding to the online survey reported that there is a reasonable degree of consistency in the qualification level at which the profession is regulated**. Competent authorities can determine this on the basis of their knowledge of the qualification level of applicants – and what constitutes the required qualification level for applicants from various countries.

However, **only a quarter of competent authorities would go as far to say that levels of study are 'highly consistent' across countries** (see Table 9.10 below). More significantly, a similar number of competent authorities believe that there is reasonable consistency with the exception of a small number of countries. In this case it is logical that competent authorities may wish to refer to level, even though differences may only be pertinent in a small number of cases.

Table 9.10 To what extent are professional qualifications in your sector comparable at EU level in terms of the level at which the qualification is regulated in different countries (e.g. secondary school level, university level)?

	Number (and %) of responses
Highly comparable / consistent in terms of the level of study	29 (24%)
Reasonably comparable / consistent in terms of the level of study	36 (30%)
Reasonably comparable / consistent with the exception of small number of countries	28 (23%)
Significantly different systems are apparent in a large number of countries	16 (13%)
Don't know	11 (9%)
Total	120 (100%)

Source: online survey of competent authorities

The professions most likely to report significant differences in a large number of countries in relation to qualification level were tourist guides (4 out of 12 respondents, 33%) and surveyors (2 out of 11 respondents, 18%). These were also among the professions noting significant differences in terms of subject areas covered. However, these professions also have a relatively small overall number of decisions on applications for recognition under Directive 2005/36EC[164].

The inclusion of professions reporting differences in a small number of countries alters the picture somewhat. **At least 40% of competent authorities for six professions reported significant differences in the qualification level at which professions are regulated among either a small or large number of countries**:

[164] Compared to the other professions in scope of the online survey

- Primary school teachers (8 out of 17 respondents, 47%);
- Secondary school teachers (11 out of 24 respondents, 46%);
- Surveyors (5 out of 11 respondents, 45%);
- Social workers (8 out of 19 respondents, 42%);
- Tourist guides (5 out of 12 respondents, 42%);
- Opticians (7 out of 17 respondents, 41%).

In the context of Article 11, qualification level is described primarily in terms of duration of study. Table 9.11 below shows that competent authorities report that qualifications for their profession are just as comparable in terms of duration as level.

Table 9.11 To what extent are professional qualifications in your sector comparable in terms of the typical required length of study?

	Number (and %) of responses
Highly comparable / consistent in terms of the duration of study	19 (16%)
Reasonably comparable / consistent in terms of the duration of study	42 (35%)
Reasonably comparable / consistent with the exception of small number of countries	33 (28%)
Significantly different systems are apparent in a large number of countries	19 (16%)
Don't know	7 (6%)
Total	120 (100%)

Source: Online survey of competent authorities

9.5.2 Frequency with which competent authorities see significant differences in applicants' qualification level

In practice very few competent authorities interviewed for the case studies reported that it was a 'very common' occurrence to see an applicant qualified at a different qualification level to that required in the host country (see Table 9.12 below).

The examples where this was the case related to real estate agents and (somewhat surprisingly) accountants/auditors, but the experience seems so isolated that it would not be wise to draw wider conclusions on a profession-specific basis.

Some interviewees noted that there was an element of self-selection on the part of potential applicants for professional recognition and, to the extent that recognition requirements are clear, they would not necessarily expect to see significant differences in applicants' level (according to Article 11).

However, around a third of interviewees (32%) across a range of professions reported applicants qualified to practice at a different qualification level to that required by the host country as being quite a common occurrence. This might only represent one or two applications a year, but for some competent authorities that is a meaningful number within the overall volume of applications.

Table 9.12 How common is the situation where an applicant is qualified to practice in his/her home country but at a different qualification level to that required in your country?

	Number (and %) of responses
Very common	2 (5%)
Quite common	14(32%)
Uncommon / rare	28 (64%)
Total	44 (100%)

Source: case studies

9.5.3 Does reference to levels provide useful information?

Competent authorities interviewed for the case studies were split on the fundamental question of whether referring to qualification levels in general provide valuable information for recognition purposes (see Table 9.13 below).

Table 9.13 Is referral to levels necessary as part of the recognition process?

	Number (and %) of responses
Yes	22 (49%)
No	15 (33%)
Don't know	8 (18%)
Total	45 (100%)

Source: case studies

The diversity of opinion here reflected the more general split in preference between the five- and eight-level systems. When exploring with interviewees what was valuable in the information provided about level it became apparent that its purpose – for a significant body of competent authorities – was to provide basic confidence that they were 'comparing like with like'. Level is a proxy for academic challenge, even though duration and content is more important. While a measure of qualification level is not the only way to look at equivalence, it is the way that most competent authorities are familiar with. Some interviewees argued that well-designed learning outcomes can do the same thing – and can indirectly define level in a more useful way. However, overall familiarity with learning outcomes is not high enough among competent authorities for this approach – more sophisticated though it may be – to provide that same basic confidence as the existing recognition requirements.

A quarter of respondents to the online survey (24%, 26 respondents) did not consider it useful to maintain a system of levels. These respondents were slightly more concentrated in:

- the accounting/auditor profession (31% of these respondents did not consider it useful)
- and some medical/health-related professions (second-level nurses, radiographers/radiotherapists, doctors authorities that had used the general system – 28/29% of each of these professions did not find it useful).

In the case of accountants/auditors, the lack of value perceived in the use of levels appears to be a function of the way in which Directive 2005/36/EC is applied in conjunction with the Statutory Audit Directive. Also, the basic requirements of Article 11 are often assumed to be met by qualified accountants having trained in other EU countries. The assessment of levels is therefore practically irrelevant.

For the medical and health-related professions, the issue for some was that qualification levels (certainly in terms of the Article 11 levels) are not a significant consideration when set against other factors. These factors relate to the practice of the profession in the home country in terms of:

- the specific structure of the health system;
- the definition of job roles within that system;
- and, most importantly of all, the degree and level of autonomy of a profession in relation to its interaction with other health professions.

When asked whether a five, eight or no level system *would better facilitate recognition*, very few respondents to the online survey (6 respondents, 7%) thought that a system without any defined levels would be preferable (see Table 9.6). The lack of appetite for having a system without any defined levels is unsurprising given that competent authorities generally appear to express preferences for more rather than less information.

9.6 Recognising qualifications introduced before 2012

The question of how to deal with qualifications awarded before 2012 and which are not related to a national qualifications system / framework referenced to the EQF has two elements to it:

- A time dimension – i.e. how to deal with qualifications that were awarded before the national qualifications framework/ system was referenced to the EQF (the expected time by which countries are supposed to have referenced their framework or systems to the EQF being 2012)?

- A question concerning the scope of the qualifications systems / frameworks – i.e. how to deal with qualifications that are not part of the qualifications framework or system?

9.6.1 How to deal with qualifications that were awarded before the NQF or NQS was referenced to the EQF?

The competent authority perspective on the issue varied. The most commonly expressed view was that the existing system would have to be retained in parallel to one based on learning outcomes. This was felt to be workable for some on the basis that there was a strong equivalence between the five and eight level systems. Competent authorities were fairly relaxed with the notion of dealing with older qualifications, given that it is something that routinely happens anyway. Some suggestions were provided that indicate the recognition process becoming less straightforward for applicants with pre-2012 qualifications. For example, one competent authority for accountants suggested:

"We would apply the same processes that we use for non-EU countries, namely to ask the university to define their qualifications in terms of learning outcomes, and then we compare these against our criteria."

This suggests that if EQF levels were to replace Article 11, different practices may be deployed in different countries, which could be problematic. A more systematic approach would be necessary. However, given that the NQF/EQF implementation is still in relatively early stages, the question of older qualifications has not yet been tackled in the vast majority of countries or at European level. It is possible, though, to set out a hypothetical analysis of the options.

In case the decision is made to use the EQF levels for qualification recognition under the Directive, the following two options exist to deal with 'older qualifications':

- 1) The referencing to the EQF level applies retrospectively (i.e. there may be an existing referencing to a national framework that, assuming no subsequent change to the qualification, can be used to place an older qualification on a level in the EQF).
- 2) The older qualification is placed on a NQF/NQS level which is related to the EQF (i.e. there is an explicit process to incorporate older qualifications, perhaps on a case-by-case basis, as part of the work to develop an NQF).

9.6.1.1 Applying the EQF referencing retrospectively

The referencing report is simply a snapshot of the national qualifications levels and the EQF at a specific time[165]. The qualifications systems evolve, new types of qualifications are introduced and new requirements are defined for existing qualifications. This may have an impact on the referencing of the NQF/NQS to the EQF. In other words, what influences/affects the relationship between the NQF/NQFs and the EQF are changes and reforms of the qualifications systems.

When the EQF referencing of an NQF/NQS is defined, it concerns the qualifications system as it is at a given point in time. It can be used retrospectively until the time when the latest qualification reform affecting a given qualification has been introduced.

Example A:

A country refers its qualification framework to the EQF in 2012. According to this referencing, the qualification A is placed on a level in the NQF which corresponds to the level 5 of the EQF. The requirements for the qualification A have been reformed in 2004 when new qualifications standards started being used, defining the qualification in terms of learning outcomes. Since then the qualification has not undergone changes that could affect its positioning in terms of level of learning outcomes. Consequently, one could consider that the qualification is at a level equivalent to the level 5 of the EQF as from 2004 but not before that.

[165] p. 39 http://ec.europa.eu/education/lifelong-learning-policy/doc/eqf/note3_en.pdf . See also page 30 of http://ec.europa.eu/education/lifelong-learning-policy/doc/eqf/note3_en.pdf

Example B:

In another country, the development of the qualifications framework is part of a large-scale qualifications reform. As part of this reform, all qualifications are redefined according to new (or at least partly new) principles. This includes defining the learning outcomes for each qualification. This new qualifications framework (and the new qualification) is implemented as from 2012 when the framework is also referenced to the EQF. Given that the qualifications system has undergone major changes before the NQF implementation and EQF referencing, the results of the EQF referencing cannot be applied retrospectively.

These two examples are possibly two extremes – the reality of most countries is probably somewhere in the middle – qualifications frameworks and the use of learning outcomes bring in some change[166], but it is possible that this change does not radically affect the level of qualifications.

According to Cedefop[167], **most qualifications frameworks currently in development in EU countries do not have a reforming character but their goal is to 'communicate' (i.e. describe) qualifications systems in a new and more transparent manner**. Consequently, it can be assumed that in most cases the NQF implementation will not radically reform the qualifications system and qualifications requirements (it will not bring in new qualifications or radically reform the existing qualifications). At the same time, it appears that countries are increasingly making use of learning outcomes to define qualifications. EQF requires NQFs and NQS to be based on learning outcomes and subsequently also qualifications are expected to be defined in terms of learning outcomes.

It can be argued that when a qualification becomes defined in terms of learning outcomes and is then referred to the qualifications framework, it is a new qualification that is different from the qualification before the introduction of learning outcomes. On the other hand, it can also be argued that the fact that a qualification becomes explicitly defined in terms of learning outcomes does not make it radically different from the previous qualification where the learning outcomes achieved by learners were not explicitly defined (but learners still gained knowledge, skills and competence).

9.6.1.2 Placing of older qualifications in the NQF

National authorities could be supported or encouraged to ensure that older qualifications are referenced to the NQF. Most countries are currently busy dealing with defining qualifications frameworks based on existing qualifications and the issue of older qualifications is not being discussed. This is therefore a substantive current gap in NQF development work. However, there are examples suggesting that the issue is being addressed by some countries with more established qualifications frameworks. For example, the French NQF contains old qualifications that are no longer being awarded. In Ireland the National Qualifications Authority has already undertaken work to place some former qualifications within the NQF. Its *Policies and Criteria for the Establishment of the National Qualifications Framework*[168] sets out a proposed approach:

- The key criteria for placement of former awards are learning outcomes. Relevant evidence can be used for determining evidence of standards and learning outcomes (e.g. programme descriptions and curricula, historic equivalences with other qualifications, transfer and progression opportunities associated with the award).
- It is noted that placement of a former qualification on the framework does not imply that all outcomes associated with newer, framework-based qualifications at the same level have been achieved because the purpose of the qualifications may be different: *'Awards*

[166] This can even be very important change for certain aspects of education and training such as: assessment processes, use of learning outcomes for teaching or the possibility to validate and recognise non-formal and informal learning

[167] Cedefop (2010) http://www.cedefop.europa.eu/EN/Files/6108_en.pdf

[168] National Qualifications Authority of Ireland (2003), Policies and Criteria for the Establishment of the National Qualifications Framework

will be placed at levels in the Framework on an overall 'best fit' basis, with no judgment made or implied about the attainment of any specific learning outcome by individual holders of the award'.

- Sets of awards may be placed at the same level if there is evidence that they share standards. If not, *'then more detailed work will be required to place subsets of individual awards at appropriate levels in the Framework'*.
- It is also set out that a former award may be placed at multiple levels in the framework depending on specific grades or measures of attainment.

The 'best fit' approach appears logical and would provide the most straightforward way of NQFs adding value in the context of professional recognition for older qualifications. Although there has been little development activity in this area so far, there is a strong rationale for suggesting that those older qualifications that are most likely to be used for the purposes of professional recognition are those that national authorities will focus attention on mapping to NQFs.

9.6.2 How to deal with qualifications that are not in the NQF/NQS that was referred to the EQF?

Countries are developing their NQFs and NQS progressively and most begin this process by including only those qualifications that are awarded by the formal education and training sector (i.e. qualifications that are achieved after initial education and training)[169]. However, regulated professions can sometimes be linked to qualifications that are not part of this 'formal education and training system'. In some cases, the regulated profession is conditioned by a qualification awarded by a recognised professional organisation – for example chartered engineers.

The regulation for chartered engineers is typically related to the fact that a professional organisation gives them a certificate that entitles them to perform certain rights. This certificate is not a qualification from a formal education system. The professional organisation often requires that the candidate holds a certain education qualification (there can be more than one type or level of qualification – for example, as in the Czech Republic) and that he has some professional experience. There may also be an examination in front of a jury. Independent of the education qualification, all those who hold this professional certificate have equal rights to practice the profession.

It is not clear whether countries will include such certificates in their qualifications framework. In some countries with well-established NQFs, not all qualifications of the above type are included in the NQF, for example:

- In France, the qualification to work as auditor (commissaire aux comptes) can be achieved through two pathways which both require substantial professional experience[170] . One is linked to an initial education qualification complemented by professional experience. The initial education qualification is in the NQF but the certificate of auditor as such is not.
- In France, it would theoretically be possible to include this qualification in the NQF, although the way the certification is defined would have to comply with some criteria. The authority governing the certification would have to request that and it is highly likely that they have an interest in doing so (there is no added value for them).

This issue is likely to be determined on cases-by-case basis, depending on whether the professional organisation is interested in having its certificate in the NQF. For these qualifications, it would not be possible to use the reference to EQF levels because they are outside the NQFs/NQS.

[169] See Cedefop 2010 and 2009 on NQFs http://www.cedefop.europa.eu/EN/Files/6108_en.pdf

[170] http://www.metiers.justice.gouv.fr/presentation-des-metiers-10070/les-autres-metiers-de-la-justice-10074/commissaire-aux-comptes-16329.html

10 Conclusions and recommendations

10.1 The Bologna process and professions falling under the General system

10.1.1 Convergence under the Bologna Process

Does convergence under the Bologna Process facilitate (or not) the recognition of professional qualifications?

The transparency between different higher education systems in the Bologna process has supported easier recognition for around a third of competent authorities. While the Bologna reforms support student mobility, they do not yet widely support the recognition of qualifications in a way that facilitates free movement of fully-qualified professionals.

The element of the Bologna reforms that is the most widely-established and best-understood element of the reforms is the three-cycle structure. It has a value in exposing or making transparent fundamental differences in the structure and level of training and has to some extent led to restructuring of qualifications. Given that there is a correspondence between the bachelor and master cycles and levels d and e of the Directive, the task of ascribing these qualifications to Directive levels is a simplified and more consistent process as result of the Bologna reforms. This can be helpful for professional recognition purposes, but only in certain cases (where ascribing level in the context of Article 11 may in otherwise have been difficult) and only with certain parameters (it short-cuts the process for competent authorities marginally, but does not significantly alter the recognition process).

The added value for competent authorities has been in being able to use ECTS for basic comparative purposes across a wider cross-section of qualifications. It promotes understanding of the applicant's qualifications where these are unfamiliar to the competent authority. The use of learning outcomes is much more contested and too early in its implementation to provide anything more than theoretical benefit in most cases for the time being. Competent authorities are rather split in terms of whether the competence-based approach is appropriate and beneficial to understanding and recognising foreign qualifications. There are strong views on both sides here and any explicit incorporation of learning outcomes within the Directive would be likely to lead to less confidence in the system for a significant number of authorities involved at national level.

In the context of ECTS, its value is seen as providing complementary information for making the recognition decision rather than necessarily as a replacement measure for level/duration of study. There is not yet sufficient confidence in ECTS definition and credit allocation at institutional level for most competent authorities to be comfortable using it as a replacement measure. This is due to different definitions of workload and different approaches to the allocation of credit. More fundamentally, there needs to be much wider use of ECTS linked to learning outcomes in order to add value for those competent authorities interested in outcomes-measures. The countries are working on this link to better facilitate recognition.

10.1.2 Which professions would benefit from easier recognition

For which economic sectors and related regulated professions would quicker and easier or even automatic recognition be most beneficial by 2020 and respectively 2030?

When looking at future priority professions for concentrating efforts to pursue easier recognition, it is not possible or sensible to substantively distinguish between 2020 and 2030 as points for looking at future labour demand. This is simply because few employment forecasts are as long-term as 2030.

However, it is possible to use the available labour market information to suggest where demand is likely to rise or where a shortfall in supply may be met by increased professional mobility. When set in the context of how professional regulation maps across to sectors, it is apparent that current recognition activity is concentrated within a small number of sectors. Taking this into account, the following sectors and professions are all areas in which a case could be made for economic benefit resulting in better professional recognition:

- Health and social care is a sector that could benefit from better recognition of professionals as significant growth is projected up to 2020 (both at an EU level and also from most of the national reports) and it is also a sector expected to experience significant replacement demand due to an ageing workforce. It is also one of the largest sectors in the EU and one where there is already a high degree of professionals that currently apply for recognition. Despite this many countries are still experiencing difficulties in recruiting professionals, and these are expected to continue in the short to medium term, due to policy drivers and also increased demand. The professions where there is currently high mobility or that are currently experiencing skills shortages are psychologists, speech therapists, social workers, radiographers, physiotherapists, occupational therapists, second level nurses, midwifes and technicians. Many of these professions would be good candidates for further support for professional recognition. In some cases, notably social workers and psychologists, there are additional barriers to achieving quicker and easier recognition relating to the extent of differences in the scope of practice between countries. Additional support for these professions may not therefore result in the same benefits being achieved as for the other professions – certainly in terms of trying to put a system of automatic recognition in place – or it may require support over a longer timescale.
- In addition, education is another sector that may benefit from better recognition as it is a large sector in the EU, and in many countries is expecting growth (albeit at a reasonably small scale). However, the demand for education professionals is higher due to an expectation of considerable replacement demand in the next 5-10 years. The shortages are expected to be greatest among higher secondary and tertiary teachers/lecturers and given that the sector currently benefits from a high number of applicants seeking recognition, it is reasonable to expect this to increase in the future as demand rises and current patterns show an increase in the level of EU mobility. However, there are arguably more difficult challenges because education and training are both well-established at national level and very nationally-specific.
- The engineering sector (particularly civil and electrical engineering) is also an area that could benefit from better recognition as it is an area where there has historically been major labour shortages and where there is already a high level of mobility. However, the risk to increased mobility is that this may increase labour shortages in some countries, where professionals in some countries may move to others where there are better working conditions. This is not a major issue at present as only a small proportion of the EU professional workforce currently migrates to work in other countries, but it may change in the future as mobility is projected to increase. There are also competing views within the civil engineering profession as to the efficacy of attempts to promote convergence or harmonisation of training. It is another area in which an outcomes-based approach could address current perceived barriers where the training inputs differ between countries. There is also extensive existing work within the sector to support mobility and, significantly, much of this work draws on the Bologna tools. Engineering professions are therefore worth targeting to supporting easier recognition.

However, many other growth areas are either unregulated or have an evolving regulatory situation that makes it difficult to suggest it is a priority area. This is particularly true for green technologies, which current research tells us is likely to create a high number of jobs in the next 5-10 years. However, most countries are unclear if this is likely to lead to either increased regulation of the workforce or labour shortages as the policy response is currently at its infancy in most EU countries. There is therefore little evidence to suggest that labour shortages are expected in the next 5-10 years, although this situation may change in the future. Another sector expected to experience significant growth is ICT. There are significant labour shortages here. Yet the professions that are in greatest demand (software engineers, web designers, IT and telecoms management) are unregulated and current policy developments do not see this situation changing in the near future.

The over-arching recommendation would be to focus on currently regulated professions. In particular, those professions outlined above within the healthcare sector and engineering professions are where the future benefit is likely to be greatest. These professions could

provide a focal point for any work to establish a new approach to common platforms for easier or better recognition.

10.1.3 Other methods to achieve convergence

Do alternative approaches to convergence linked to EU educational reforms facilitate (or not) the recognition of professional qualifications?

EU educational reforms do not directly lead to convergence of qualifications. This is not the aim of the Bologna process either, which promotes transparency and comparability of diplomas. Where convergence is taking place, it is a voluntary, 'bottom up' process. If anything, the evidence supports a potential divergence in qualifications contents as a result of the Bologna process. There is a deep scepticism among a range of stakeholders in most professions that convergence in training contents is an achievable and desirable ambition anyway. In fact, there seems to be two opposite movements: on the one hand, voluntary convergence regarding certain core requirements/standards in a given field of study and, on the other hand, diversification as a result of market forces to provide greater choice.

This is why, even though there is no realistic basis for recognition based on learning outcomes, it was felt by a significant portion of competent authorities to provide a more realistic basis for convergence, but only in the future. All Bologna countries have agreed to have national Qualification Frameworks with learning outcomes-based approach to be integrated by 2012. This is a long way off in most professions – given the variable use of learning outcomes to date, the lack of understanding around how common learning outcomes (at a detailed level) could be agreed between countries and, most significantly for competent authorities, doubts about the assessment and quality assurance of the achievement of learning outcomes.

Much of the implied or theoretical convergence under the Bologna process would be 'bottom up' anyway – the result of institutional reform across higher education supported by systemic change, particularly through improved quality assurance and accreditation of qualifications and institutions Developments across institutions are uneven and while significant steps have been taken across Europe on accreditation and quality assurance, this work is ongoing. Even with the existence of European standards and guidelines for quality assurance, it is important to note that it will be some time before there is anything approaching commonality in national approaches.

It is much easier to see the potential impact of more 'top down' work led by sectors at European level to set common frameworks (professional standards, training standards) and the accreditation of qualifications or institutions. This work is voluntary in nature, which provides credibility to the outputs produced (as does the fact that the methods deployed to set common frameworks/approaches is generally high-quality). The difficulty with these top-down approaches is that there can be a tension between the European professional dimension and either the professions in particular countries or national authorities. It is difficult for this work to have traction with training or recognition practice on the ground. This says more about the challenge of implementation than the quality of approach. It is notable that sector work generally deploys the Bologna tools, accepting that outside of the recognition arena; they provide the common currency for qualification design and standards-setting. This perhaps also provides a rationale for thinking that any new approach to common platforms proposed by the Commission could use the Bologna tools, such as learning outcomes.

10.2 The Bologna process and doctors

10.2.1 The three-cycle structure and doctors

Does the three-cycle structure facilitate the free movement of doctors?

There is no persuasive evidence that the three cycle structure currently facilitates the free movement of doctors. This is partly a result of a significant number of countries having an integrated degree in medicine and not a three-cycle structure. The perceived benefits of the Bologna cycles for Medicine relate to the value in being able to recognise the learning of

students who do not complete the full master or integrated cycle qualification. This is a significant issue in some countries, but stakeholders are unanimous in saying that this benefit is explicitly guided towards supporting medical students to access the labour market for professions other than doctor. It is therefore relatively inconsequential to the free movement of doctors.

However, there is also evidence to suggest that the introduction of the Bologna cycles is not or should not be problematic to the existing education and training of doctors:

- if implementation of the Bologna cycles is not aimed at creating an artificial split between the theoretical and clinical elements to training; and
- if the introduction of the bachelor and master for Medicine does not equate to a change in the basis on which medical students enter training (i.e. students still 'sign up' for the two cycle programme as this is the entry point to the profession).

10.2.2 Calculating the duration of training for doctors

Does calculating the duration of training using ECTS facilitate the free movement of doctors?

There is a sufficient degree of awareness of ECTS to envisage using this system in the recognition of professional qualifications. A clear majority of competent authorities saw ECTS as adding value. However, concerns have been raised about the inconsistent use of ECTS across countries and a lack of consensus about the fundamental role ECTS should play (i.e. as a slightly refined measure of duration or as the cornerstone of an approach to recognition based on knowledge, skills and competence). The countries taking part in the Bologna process have agreed that ECTS shall be the common credit structure, or shall be related to the ECTS-scale. This means that its introduction could be, in the short-term at least, potentially confusing and lead to different interpretations at national level.

It is much more straightforward to suggest that there is added value in including ECTS as an additional element to the existing duration measures. How ECTS might be incorporated in this context depends on the interpretation of the current duration criteria (of at least six years' study or 5,550 training hours) as being separate options or cumulatively applied. Under the Commission's latter interpretation, numerous stakeholders saw ECTS as a potential replacement for hours alongside the six-year requirement. Replacing the taught hours by credit would enable more flexibility in the design of programmes, as ECTS takes into account all forms of learning. However, it is not clear that this would substantially support the free movement of doctors given that the six-year requirement remains. ECTS is based on the principle that one year of full-time studies is equivalent to 60 credits, so it could be used instead of number of years – meaning that the requirement would be formulated as 360 credits.

The argument for ECTS additionally supporting free movement of doctors is clearer if it replaces the existing duration criteria (hours and years), by enabling more flexible delivery of medical training. This has been noted as an issue in the context of other sectoral professions (e.g. nurses); however it appears to have little traction with doctors' stakeholders and is unworkable for two reasons:

- There is consensus on the need for clear minimum requirements related to duration. Proponents of the Bologna reforms in the context of Medicine agree that that educational reform does not replace this basic need for a measure of duration.
- Even though, ECTS retains a link to duration through the process of credit allocation there is currently an understandable lack of confidence in this process at institutional level (partly because ECTS is a new system in some areas and partly because the process of credit allocation does vary). If ECTS were the main measure of volume of input into study, this would undoubtedly become a major concern for competent authorities and unlikely to work in practice.

Ultimately, it is highly-debatable whether ECTS offers concrete advantages over the current system in the context of the free movement of doctors. In contrast with other professions regulated under the general system (*where ECTS is seen by some as providing a potential*

platform for a more confident comparison of qualifications – and therefore arguably better recognition), the consensus among doctors' stakeholders appears to be that automatic recognition is a simple system for qualified professionals (because under automatic recognition, competent authorities do not assess the content of the qualification).Not all stakeholders agree that ECTS provides sufficient confidence in the quality and appropriateness of training for doctors, but this is a much wider point about the system of automatic recognition. ECTS is neutral to that debate – except to note that some stakeholders see the Bologna reforms generally, and ECTS specifically, as making more detailed comparison of training possible and therein exposing substantial differences in approaches to medical training that are not apparent through qualification title and minimum training conditions. In this context, there is an argument for considering ECTS in relation to any future updating of the requirements for training contents for doctors.

10.2.3 Methods to better-guarantee automatic recognition for doctors

Does recognition based on learning outcomes without taking duration into account better-guarantee automatic recognition for doctors?

The current system of recognition based on minimum harmonised content and duration is a better guarantee of automatic recognition than recognition based on learning outcomes without taking duration into account. Duration is a key element of the recognition of doctors' qualifications – and is almost universally accepted as such.

Even medical stakeholders who believe that there are limitations in the current system – in terms of whether it guarantees fitness to practice – do not generally believe that the solution is to remove the duration criteria. There were stakeholders suggesting that the current duration criteria should be adapted, but it is generally accepted that one of the safeguards within the recognition procedure is the minimum duration of training undertaken by doctors.

However, stakeholders do not view learning outcomes and duration to be mutually exclusive concepts. The difficulty is that, taken in conjunction, it is difficult to see how they could better guarantee automatic recognition (given the relatively straightforward nature of recognition for doctors currently). It may better-guarantee the quality of doctors recognised under the Directive, but that is a separate and to some extent contested point.

10.3 Assessing the systems of levels with regard to the recognition of professional qualifications

Do alternative systems of levels facilitate (or not) the recognition of professional qualifications?

First of all it must be stressed that:

- very few competent authorities experience applications more than a single level lower than the required level under Article 11; and
- a significant proportion of competent authorities do not use the current system of levels in order to exclude qualifications from the recognition process .

This means that applicants are generally not refused recognition on the basis of level (according to Article 11). In this sense, the requirement to recognise a qualification at the level below that required in the host country is crucial for ensuring that the basis for decisions is substantial differences in content rather than type of qualification (e.g. refusing to recognise an applicant on the basis that he or she has a bachelor degree where a master is required, or if he or she has a post-secondary vocational qualification where an academic qualification is required in the host country). This provides for a consistency of assessment, irrespective of the educational structure of the applicant's home country. It is not that level is an unimportant consideration to competent authorities, but that the requirements of the Directive mean that it does not become the basis for recognition decisions in itself (and therefore appears to be a less central concern).

The issue at stake for recognition professionals is therefore much more about whether Article 11 is redundant than whether an alternative system would better facilitate recognition.

There is a separate argument for the EQF system proffered by education stakeholders that Article 11 of the Directive is an impediment to EU educational reform, because it provides an indirect rationale for limiting the implementation of outcomes-based educational reforms in some countries. The potential, at least, for confusion in having 'competing' systems of levels has percolated through to some competent authorities and professional bodies involved or interested in professional recognition. Again, though, the arguments here do not directly relate to whether an alternative approach (i.e. the use of EQF levels) would facilitate recognition.

The area in which a different system of levels may impact on recognition is in terms of Article 11 being based on input measures, while the EQF is outcomes-based. This ties the debate around the systems of levels to the more general discussion on the use of learning outcomes for professional recognition. While a significant number of competent authorities said that an outcomes-based system is more professionally-relevant, a significant body of the preference for the EQF simply relates to it offering additional levels (compared to Article 11) and therefore greater potential to discriminate between applicants. The comparison of the systems of levels suggests that this is unlikely to be a major factor in practice – owing to a similarity in the higher education field.

In any event, the evidence suggests that, from a practical standpoint, the benefits accruing from the development of national qualifications frameworks linked to the EQF will only be seen over the course of the next decade. There is much work for national authorities in many countries to continue the development and implementation of frameworks, to iterate consistency and credibility in EQF levelling in practice, and, most importantly, to embed national frameworks through the large-scale review of existing qualifications. The length of time taken for this activity does not indicate anything about its likely achievement; rather it shows the scale of the task at hand. Ultimately, the alternative option posed by the EQF is not yet widely-used enough to form judgements about its utility and added value.

It is not clear that removing levels entirely would have a beneficial impact on the free movement of professionals. The current system of levels provides an indirect benefit to many competent authorities as a frame of reference for approaching the question of equivalence and shaping the recognition assessment in practice:

- On a practical level, this may be as simple as providing a kind of 'terms of engagement' with the home country competent authority to request information. This is important given that most competent authorities are dealing with a relatively low number of applications under Directive 2005/36/EC each year. As a consequence, familiarity with the education and training systems in other countries can be quite limited. It is also worth noting that the breadth of the competent authority universe means that there is huge variation in the internal expertise and knowledge relating to individual professions within competent authorities. Therefore, if the system of levels were to be removed, it would in the short-term quite probably create a degree of confusion and possible delay.
- More importantly, the use of Article 11 as a frame of reference also indicates that qualification level is a consideration that implicitly informs the assessment of substantial differences. It provides a starting point for competent authorities to gauge whether or not they would expect to see differences in content as a consequence of differences in duration. The level of the qualification helps competent authorities to understand and interpret potential differences in content.

This is not, in itself, an argument for inaction – but it is worth emphasising two final points:

- The levels contained within Article 11 are so broad that, with the requirement to recognise the level below, it means that it is highly-supportive of free movement. Although, in certain specific cases, the Article 11 levels are also hard to apply in practice as they can contradict the reality of qualifications systems.
- It could be argued that if the system of levels was removed from the Directive, competent authorities may attempt to base decisions not to recognise on the basis of level and type of qualification in a way that they do not (explicitly) under the current system.

Are there significant issues in handling older qualifications under an alternative system and what are the implications for considering alternative systems?

As it currently stands, there is a lack of concrete evidence that older qualifications will be mapped to NQFs linked to the EQF. The focus of national authorities is on qualification reform and development work, rather than the question of legacy qualifications – so it does not necessarily mean that older qualifications will remain un-referenced. In practice, it appears possible to use a 'best fit' model to apply level to older qualifications. It is recognised that doing so may mean that eligibility and progression provisions do not necessarily apply to the older qualification. However, the presumption that provisions should be extended to holders of former qualifications is the important element – and this is already seen in the specifications for NQFs.

ANNEXES

Annex 1 List of Sources

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Annex 2 Study tools

A2.1 Education ministry interview topic guide

Begin by confirming the interviewee's role and areas of responsibility in the context of education policy at national level.

- Ensure that we have a clear understanding of the division of government responsibility by department etc for key education reforms (the Bologna process / European Higher Education Area; development of a National Qualifications Framework linked to the EQF).
- As necessary, gather further contact information for follow-up on specific areas of educational reform (where there are significant gaps in the main interviewee's knowledge).

Provide information on the context and the scope of the study and assess the interviewee's knowledge of the Professional Qualifications Directive. If necessary, explain briefly the principles of the recognition of professional qualifications.

1) State of play with the implementation of educational reforms

1a) *Referring to the background paper*, confirm our understanding of the two-/three- cycle model most commonly incorporated in the country as part of the Bologna Process?

- Please summarise any exceptions to this model?
- Has the implementation of the new degree structure been consistent across all disciplines, and, in particular, has the timescale been the same between academic disciplines and professional disciplines?
- How does the situation vary by discipline/profession?
- For which disciplines has the duration of studies been significantly modified in the course of introducing the Bologna system?
- *Refer to the list of fields excluded from the two-cycle structure:* Are these fields still excluded? Why? Are any of these fields planned for future incorporation in the two-cycle structure? Are any other fields excluded from the two-cycle structure?

1b) *Referring to the background paper*, confirm our understanding of the credit system in place within the country?

- Are ECTS credits linked to all higher education programmes?
- Are they also linked to learning outcomes – or will they be in future (if so, when)?
- If ECTS credits are already linked to learning outcomes, to what extent has this involved the re-structuring or re-design of qualifications and training contents?
- If a credit system other than ECTS is used, what is the link between the national system and ECTS? How does the national system map to ECTS?
- How are ECTS calculated? Explore whether there are different rules for particular subject areas / disciplines? What is the rationale for any exceptions identified?
- Explore as relevant the potential for credit transfer to evolve / develop into a basis for a credit accumulation and transfer system (timescales; key requirements).

1c) *Referring to the background paper*, confirm our understanding of the stage of development or implementation of a National Qualifications Framework (NQF) linked to the EQF – *e.g. defining the scope and structure; in the design phase; undertaking consultation and testing; official establishment and adoption; implementation*:

- Explore if/whether there have been – or are anticipated to be – any particular challenges in the development/implementation process and the impact on timescales for development.
- *Referring to the background paper*, confirm our understanding of how the NQF is referenced to the EQF in terms of Levels.
- Are these levels (NQF and/or EQF) set out on Diplomas issued by qualification/training authorities?

- *Referring to the background paper,* what is the relationship between any educational sub-systems (e.g. higher education qualifications, professional qualifications, vocational qualifications) and the NQF? Is there convergence between existing sub-systems – especially in the context of the development of the NQF? Specifically, are all types of qualification referenced to the NQF?
  - If not, will this happen in future?
  - If yes, does this support alternative pathways by enhancing comparability between different types of qualifications?

1d) *Referring to the background paper*, confirm our understanding of the internal and external quality assurance systems in place for higher education.

- Are reformed quality assurance arrangements and European standards in this area likely to provide the basis for increased confidence in the quality of training / learning undertaken in other countries? Why?

2) Future developments in the implementation of educational reforms at national level

2a. How well-established is the Bologna process within Higher Education at national level?

- What further developments would you expect to see over the next two years (to the end of 2012) and what impact may this have on the Higher Education system in future?

2b. What are the next steps in terms of the development of the National Qualifications Framework?

- What progress is likely to be made over the next two years?
- *As appropriate,* what is the timetable for referencing to the EQF? What barriers or issues still need to be addressed to achieve implementation of an NQF referenced to the EQF?

2c. What are the next steps in the implementation of quality assurance arrangements in terms of the development (ort further development) of external quality assurance systems and in terms of the development of internal quality assurance systems at institutional level?

2d What obstacles still need to be overcome in order to achieve the objectives of transparency and comparability of diplomas at EU level?

3) The impact of educational reforms on the content of training / qualifications at national level

3a. How have the various reforms (*refer back to the list of reforms in scope as necessary*) influenced the content of training programmes?

- To what extent have any of the reforms led to the modification of training contents?
- Which have been the key reforms influencing training contents in this context?
- If relevant, explain how individual reforms have influenced training and qualification contents in different ways?

As part of this discussion, look to clarify:

- Breadth of impact – *The extent to which we are talking about widespread change across the higher education sector, or change concentrated on specific subject areas (which disciplines/professions?)*
- Depth of impact – *The level of modification involved and the nature of the changes, to the extent that it is possible to generalise (wholesale course and qualification re-design; the reorganisation of existing content to fit in with new structures etc).*
- Drivers for change – *How the change came about and which actors were involved in it (cooperation between ministries, cooperation between universities, input of professional associations, etc)*
- External influence – *Has the international/European dimension to these reforms led to greater external influence on the content of qualifications / training (e.g. through new forms of joint working with universities in other countries; through greater exposure to how qualifications and training are organised in different countries; through other*

avenues – such as a result of increased student mobility etc)? Have the changes been driven by the desire to achieve a greater convergence at European level?

- Outcomes – *Have the changes in training contents implemented at national level contributed to greater convergence at EU level?*

Prompt in terms of specific reforms, as appropriate:

- Have new quality assurance arrangements led to greater consistency and comparability (not necessarily uniformity) between training content within subject areas / disciplines but at different institutions.
- Have learning outcomes been used to design new training courses or to review existing training courses? What has been the impact on the contents of training courses?
- Have the contents of the training programmes been modified following the implementation of the three-cycle structure (in particular, if the duration of training has been modified, how the training content has been re-organised)?
- Did the universities involved in a Tuning project modify the contents of their programmes?

3b. Is it expected that there will be further revision of training / qualification content in the context of next steps with the Bologna Process, the introduction of new credit systems, NQF/EQF and quality assurance?

4) Approaches to enhancing future convergence of training / qualification contents

4a. For the education ministry, is it an objective or intention that training contents are adapted to achieve a greater convergence at EU level? Is this an area where further action is required?

- From what the interviewee knows, is this an ambition that is shared across the higher education sector (universities) and across related bodies (e.g. professional bodies, regional authorities, where relevant)?
- Does the position vary by subject area / discipline?
  - For which discipline is there a particular awareness of the need for convergence at EU level? Why?
  - If convergence is not the intention in all disciplines, why is this the case?
  - For those disciplines where convergence is supported, how are these changes likely to occur and over what timescale?

4b. For certain professions benefiting from automatic recognition, the minimum training requirements (in terms of duration and subjects) were harmonised at EU level. Apart from harmonisation, what other methods or approaches may enhance the level of convergence in qualification / training content?

- To what extent do approaches at institutional level (such as the issuing of joint degrees, Tuning etc) contribute significantly towards convergence in practice?
- Which other approaches could be proposed? Which actors should be involved in order to achieve a greater convergence of training contents at EU level?

5) Are there any other points that are worth noting at this stage in the context of the study e.g.:

- National research to be aware of;
- Specific issues in relation to our selected case study professions;
- Other contextual factors at national level that impact on the level of professional mobility.

A2.2 Online survey of competent authorities

Section 1: Respondent Information

1. Please complete the following information about yourself and your organisation:	
Name of the person completing the survey:	
Organisation name:	
Job title:	
Telephone:	
Email:	

Profession for which the organisation is Competent Authority: *[Check box]*

Accountants ☐	Architects ☐	Biomedical / medical laboratory technicians ☐
Civil engineers ☐	Doctors ☐	Opticians ☐
Pharmaceutical technicians /pharmaceutical assistants ☐	Physiotherapists ☐	Primary school teachers ☐
Psychologists ☐	Radiographers/radiotherapists ☐	Real estate agents ☐
Second level nurses ☐	Secondary school teachers ☐	Social workers ☐
Surveyors ☐	Tourist guides ☐	Other (please specify below) ☐

If your organisation is also Competent Authority for other professions, please specify:	

Member State:		Austria Belgium Bulgaria Cyprus Czech Republic Denmark Estonia Finland France Germany Greece Hungary Ireland Italy Latvia Lithuania Luxembourg Malta Netherlands Poland Portugal Romania Slovakia Slovenia Spain Sweden United Kingdom

Section 2: Trends in the Recognition Procedure

2. In the last two to three years, has the <u>duration of the recognition procedure</u> changed in practice? Has the time required to complete the procedure.....	
...increased over this period	☐
...been fairly constant over this period	☐
...decreased over this period	☐
3. Roughly, how many weeks on average does it take to complete the recognition procedure from the point when an application is received to a decision being made?	☐ Weeks
[If the organisation is a Competent Authority for a profession that has automatic recognition under the Directive (e.g. doctors, architects), route to Section 3. All other professions go to Section 4.]	

Section 3: Automatic Recognition

The following questions relate to the Automatic System for the recognition of professional qualifications for doctors and architects.

4. Is there, or would there be, an added value for the free movement of professionals (in terms of recognition of their professional qualification) if the cycle system under the Bologna process (bachelor – master – Doctorate) is implemented for the professions of doctor and architect?

Yes
No
Neutral

If yes, please explain:

5. Do you see any particular problems in the implementation of the cycle system under the Bologna process (bachelor – master – Doctorate) for the free movement of professionals who are doctors or architects?

Yes ☐ No ☐

If yes, what do these problems relate to (please tick all applicable answers)?

The duration of studies ☐

The content of training programmes as set out in the Directive ☐

The notification procedure for the Directive ☐

The multiplication of qualifications (specialisation in the second cycle) ☐

The lack of clarity about the professional value of first cycle qualifications ☐

Other (please explain below): ☐

[free text box]

6. Is your preference to maintain the current automatic recognition system with no changes, or do you believe that there is a need to strengthen confidence in the process by including new/additional criteria?

Maintain the current system with no changes

Enhance the confidence in automatic recognition by including new/additional criteria ☐

Not sure / don't know ☐

7. Do you agree with the statements below?

	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree
The existing automatic recognition system should be strengthened by explicitly mentioning minimum teaching hours in the Directive (if it is not yet the case)					
The existing automatic recognition system should be strengthened by explicitly mentioning training subjects in the Directive (if they do not yet exist)					
The existing system should be strengthened by explicitly mentioning the minimum volume of ECTS credit per qualification in the Directive ECTS credit expresses typical student workload needed to achieve expected knowledge, skills and competence and stands for around 25 to 30 working hours per credit point. Workload relates to all learning activities, not just teaching hours, and can include attending lectures, seminars, independent and private study, preparation of projects and examinations etc.					
The existing system should be strengthened by explicitly mentioning a minimum list of competences (learning outcomes) in the Directive.					

8. In relation to the notification procedure for new qualifications, do you prefer to:

Maintain the current notification procedure for new qualifications ☐

Delegate the notification procedure for qualifications to the national level while ensuring compliance with criteria defined at European level (for example, as part of the national quality assurance process that all higher education qualifications should undergo) ☐

9.Do you agree with the following statement:

If all qualification certificates leading to doctor/architect professional status clearly that the holder has access to the practice of the profession in the home country in line with the Directive requirements, then there would be no need for the notification procedure

Strongly Disagree ☐ Disagree ☐ No Opinion ☐ Agree ☐ Strongly Agree ☐

Please provide any additional comments below:

[free text box]

10. Has the General System under the Directive been applied by your organisation?

Yes ☐ No ☐

Section 4: The General System

4.1: Recognition Procedure under the General System

The following questions relate to the General System for the recognition of professional qualifications for all professions listed under Question 1

11. How important is the following information for deciding on the recognition of the foreign qualification? *[check boxes]*

	Very important	Quite important	Useful, but not essential	Not relevant
Education and Training				
The duration of the training programme				
Titles of subjects taught as part of the qualification				
Content of subjects taught (curriculum, description of training content)				
Types of learning activity undertaken (e.g. theoretical, practical etc)				
A description of learning outcomes (knowledge, skills and competence)				
Qualification level according to Article 11 of Directive 2005/36/EC				
Level according to the national qualifications system or European qualifications framework				
The type of assessment and the methods used (final examination, practical assignment, thesis etc)				
Accreditation of the qualification by a professional body				
Professional Experience				
The professional experience of the applicant				
Evidence that the applicant has undertaken continuing professional development				
The scope of activity of the profession in the home Member State				

If the profession is not regulated in the country where the qualification was awarded to the applicant, how important is the following?

	Very important	Quite important	Useful, but not essential	Not relevant
The fact that the qualification is recognised by a relevant professional organisation in the country where the qualification was awarded				
The fact that the education/training institution which awarded the qualification is quality assured at national level (accreditation, quality assurance certificate)				
The fact that the qualification is included in the national qualifications framework, or in a national register of qualifications				

12. The Directive states that applicants should attest a level of professional qualification at least equivalent to the level immediately below that required in the host member state (referring to the five levels set out in Article 11 of the Directive).

Do you use the 5 levels when you examine an application for recognition?

Yes ☐	No ☐

Have you seen any examples of applicants attesting more than one level out?

Yes ☐	No ☐

Do you consider useful to maintain a system of levels?

Yes ☐	No ☐

13. How frequently are difficulties in relation to the recognition of foreign qualifications linked to the following issues?

	Frequently	Occasionally	Rarely	Never
In the country where it was awarded, the foreign qualification corresponds to a profession that does not exist in our country at all				
In the country where it was awarded, the foreign qualification corresponds to a profession that is much narrower than the profession in our country (i.e. the professionals are able to do fewer activities/tasks than in our country)				
In the country where it was awarded, the foreign qualification corresponds to a profession that is much broader than the profession in our country				
In the country where the foreign qualification was awarded, the proportion of practical/theoretical education/ training is very different				
The theoretical knowledge covered by the qualification is different (i.e. subjects covered are different)				
In the country where the foreign qualification was awarded, the level of the education/ training under the directive is very different				

Are there any additional difficulties that you would like to describe? Please do so below:

[free text box]

14. In approximately what percentage of cases are you required to contact the Competent Authority in the country where the qualification was awarded for further information about the <u>content or structure</u> of an applicant's qualification?

70%-100% ☐	30%-69% ☐	1%-29% ☐	Never (0%) ☐

How has the frequency of the need to contact other Competent Authorities changed over the last two/three years?	*[Drop-down list]* It has increased It has remained fairly constant It has decreased

15. Are there agreements in place with other countries ('mutual recognition') that mean individuals from these countries do not go through the full recognition procedure, or which

mean that applications from some countries are, in effect, automatically recognised?

Yes ☐ No ☐

If yes, please tick all countries with which there are agreements: *[check box – multiple answers]*

Austria ☐	Belgium ☐	Bulgaria ☐	Cyprus ☐	Czech Republic ☐
Denmark ☐	Estonia ☐	Finland ☐	France ☐	Germany ☐
Greece ☐	Hungary ☐	Iceland ☐	Ireland ☐	Italy ☐
Latvia ☐	Liechtenstein ☐	Lithuania ☐	Luxembourg ☐	Malta ☐
Netherlands ☐	Norway ☐	Poland ☐	Portugal ☐	Romania ☐
Slovakia ☐	Slovenia ☐	Spain ☐	Sweden ☐	Switzerland ☐
United Kingdom ☐				

If yes, for which of the professions listed below:

Accountants ☐	Architects ☐	Biomedical / medical laboratory technicians ☐
Civil engineers ☐	Doctors ☐	Opticians ☐
Pharmaceutical technicians /pharmaceutical assistants ☐	Physiotherapists ☐	Primary school teachers ☐
Psychologists ☐	Radiographers/radiotherapists ☐	Real estate agents ☐
Second level nurses ☐	Secondary school teachers ☐	Social workers ☐
Surveyors ☐	Tourist guides ☐	

If yes, do you agree / disagree with the following statements regarding what underpins these agreements? *[check box]*

The qualification system in the other country is very similar to ours	Agree ☐	Disagree ☐
The qualification content in the other country is very similar to ours	Agree ☐	Disagree ☐
There are large flows of people between our countries and we know how the qualifications compare	Agree ☐	Disagree ☐
We have trust in the quality of the awarding institutions in the other country	Agree ☐	Disagree ☐
The way in which the profession is regulated is very similar in the other country	Agree ☐	Disagree ☐

Please add any additional comments:	

4.2: The Impact of Educational Reforms on Recognition Procedures	
16. Has the consistency and comparability of qualifications content between EU countries improved in recent years due to educational reforms (Bologna, ECTS, EQF)?	Yes No Don't know Not applicable
17. Have any changes to qualifications or education systems in your own country (e.g. introduction of 2/3 cycle systems, ECTS, learning outcomes) led you to adapt or simplify the recognition procedure?	Yes No Don't know
If yes, please explain:	

18. Which elements, linked to the implementation of recent educational reforms facilitate recognition procedures? To what extent?

	No Use	Limited Use	Useful	Very Useful	Don't Know
Information provided by the applicant on the level of the qualification (according to the Bologna 3 levels)					
Information provided by the applicant on the level of the qualification (according to the NQF/EQF)					
Use of ECTS transcripts of record					
Use of the Diploma Supplement presenting information about qualification content					

4.3: Reflections on the Comparability of Professional Qualifications at EU Level

19. To what extent are professional qualifications in your sector comparable in terms of the typical required length of study?

Highly comparable / consistent in terms of the duration of study	☐
Reasonably comparable / consistent in terms of the duration of study	☐
Reasonably comparable / consistent with the exception of small number of countries	☐
Significantly different systems are apparent in a large number of countries	☐
Don't know	☐

If you are a Competent Authority for multiple professions in the scope of this survey and particular professions do not fit the general picture above, please specify any exceptions below:

20. To what extent are professional qualifications in your sector comparable at EU level in terms of the level at which the qualification is regulated in different countries (e.g. secondary school level, university level)?

Highly comparable / consistent in terms of the level of qualifications	☐
Reasonably comparable / consistent in terms of the level of qualifications	☐
Reasonably comparable / consistent with the exception of small number of countries	☐
Significantly different systems are apparent in a large number of countries	☐
Don't know	☐

If you are a Competent Authority for multiple professions in the scope of this survey and particular professions do not fit the general picture above, please specify any exceptions below:

21. To what extent are professional qualifications in your sector comparable in terms of the subject areas covered by professional qualifications from other EU countries? *[check box]*

Highly comparable / consistent in terms of the subject areas covered	☐
Reasonably comparable / consistent in terms of the subject areas covered	☐
Reasonably comparable / consistent with the exception of small number of countries	☐
Significant differences in subject areas are apparent in a large number of countries	☐
Don't know	☐

If you are a Competent Authority for multiple professions in the scope of this survey and particular professions do not fit the general picture above, please specify any exceptions below:

22. To what extent are professional qualifications in your sector comparable in terms of scope of activities covered by professional qualifications from other EU countries?

Highly comparable / consistent in terms of the scope of activities covered	☐
Reasonably comparable / consistent in terms of the scope of activities covered	☐
Reasonably comparable / consistent with the exception of small number of countries	☐
Significant differences in the scope of activities are apparent in a large number of countries	☐
Don't know	☐

If you are a Competent Authority for multiple professions in the scope of this survey and particular professions do not fit the general picture above, please specify any exceptions below:

23. What are your views on any of these possible options to improve the comparability of professional qualifications for regulated professions in your sector?

Automatic recognition could be achieved if there were common minimum requirements in terms of qualification content:	Agree Disagree
These minimum requirements should be set in terms of... (select one):	
...taught subjects (as it is currently the case for certain qualifications in the automatic recognition procedure)	☐
...broadly formulated knowledge, skills and competences (as it is, for example, in the case for architects)	☐
...detailed definitions of knowledge, skills and competences	☐
Automatic recognition could be achieved if there were common minimum requirements in terms of duration of training programmes:	Agree Disagree Partially agree (duration should be combined with harmonised qualifications content)
If you 'agree'....(select one):	
...minimum duration should be defined in terms of years	☐
...minimum duration should be defined in terms of hours	☐
...minimum duration should be defined in terms of years and hours	☐
...workload should be defined in terms of ECTS	☐

Please add any additional comments:

[free text box]

24. Do you have any additional comments on ways to improve the comparability of professional qualifications in your sector?	

Section 4.4: Scenarios

25. If all qualifications were described using learning outcomes (i.e. what the applicant is able to do in a professional context), would you:

Refer to the learning outcomes / competences descriptions to identify equivalence with the qualification from your country	Highly probable Possible Unlikely
Still take into account the content of education and training programmes (subjects taught; curricula)	Yes No Don't know
Still take into account the duration and level of the studies	Yes No Don't know
Find it difficult to recognise qualifications based on learning outcomes / competences only and would require evidence that the learning outcomes / competences have actually been achieved (i.e. proof of assessment results, evidence about the assessment methods used)	Yes No Don't know

26. In your view which of these three systems would facilitate better recognition of qualifications for competent authorities and respectively for citizens:

A system based on levels that are defined in terms of inputs as in Article 11 of the Directive (five levels), the duration of studies, and the level and type of institution where the studies take place (higher education etc)?	
A system based on levels that are defined in terms of knowledge, skills and competence whereby higher levels express greater complexity, breadth of knowledge, higher proficiency, greater responsibility and autonomy etc, as in the European Qualifications Framework (eight levels)?	
A system without any defined levels?	

Please explain why the selected system better facilitates recognition:

[free text box]

27. Would you agree to recognise a foreign qualification for the same profession automatically (without any compensatory measures) if the EQF level of the qualification is the same than the EQF level of the national qualification?

Yes		No	

Please explain:	

Thank you for taking the time to complete the survey. Please click 'submit' to send your answers to GHK.

A2.3 Case study topic guide

A2.3.1 Topic Guide: Competent Authorities (General System)

Introduction

NOTE to interviewers: As relevant, refer to the interviewee organisation's response to the online survey of competent authorities in preparation for these interviews.

As part of an introduction to the interview, ensure that we have a good understanding of the following contextual information as appropriate to the interviewee:

- The interviewee's and the organisation's role and responsibilities in relation to the profession and the recognition process specifically.
- The division of responsibility for professional standards and professional recognition in the national context (how the organisation's role relates to other organisations).
- The current situation in terms of demand for professional recognition.
- Overall familiarity with the educational reforms that we are considering as part of the study (particularly the Bologna Process and the EQF).Introduction

Study Area A (Bologna Process) – Topic A (Convergence under Bologna)

The Three-Cycle Structure

1. How familiar are you with the three-cycle structure in the context of higher education qualifications?

   Explain, as necessary, that the Bologna Process establishes a three-cycle structure (bachelor-master-doctorate), the first cycle of which should be minimum of three years and the second cycle of which should range from 60-120 ECTS credits.

2. Have you dealt with applications for recognition that are presented in terms of the applicant having a qualification relating to the Bologna cycles (bachelor-master-Doctorate)?

   If yes, how common is it for applicants to present their qualifications in these terms and from which Member State? Attempt to quantify by asking the interviewee to indicate this as an approximate proportion of all cases over the last two years (e.g. less than 10%?).

3. Do you consider that the use of the Bologna cycles has improved the comparability of qualifications?

   a) With regard to the duration of studies *Please explain why or why not using specific examples.*

   b) With regard to the level of studies *Please explain why or why not using specific examples*

   b) With regard to the content of training courses *Please explain why or why not using specific examples.*

4. Have you encountered any difficulties when the duration of the bachelor or master is different from the duration of these cycles in your Member State?

5. Have you received applications from professionals having undertaken a bachelor in a Member State and a master in another Member State? *If yes, does this situation raise any difficulties in the recognition process?*

6. Has the three-cycle structure introduced under the Bologna Process made the recognition of professional qualifications easier or quicker? *If yes, explain why? If not, why not?*

7. Has the three-cycle structure led in any cases to the "automatic" recognition of professional qualifications? *If yes, explain why? If not, why not?*

8. Do you anticipate that the three-cycle structure will be increasingly used by applicants for recognition to present their learning achievements in future? *If yes, explain why? If not, why not?*

ECTS

9. How familiar are you with the European Credit Transfer and Accumulation System, known as ECTS?

> *Explain, as necessary, that ECTS is a credit system incorporated under the Bologna process that defines qualification components at a given level in terms of overall student workload, e.g. lectures, seminars, projects, practical work, self-study etc (rather than just contact hours).*
>
> *Credit allocation to educational components (sometimes defined as modules) is based on their weight in terms of the workload needed by students to achieving the learning aims for that component.*

10. Have you dealt with applications for the recognition of professional qualifications where the training followed by the professional is presented in terms of ECTS credits? *If yes, how common is it for applicants to present their qualifications in these terms and from which Member State?*
11. Are you satisfied with the notion of ECTS being allocated according to the student workload (and not only according to teaching hours)? Does this notion - student workload - provide useful evidence for the recognition procedure, in particular when comparing qualifications and assessing possible substantial differences in the training programmes?
12. Are you confident that ECTS points are allocated to training programmes in the different Member States in accordance with the Bologna rules (one credit stands for around 25 to 30 working hours)?
13. Have you already encountered situations where it is not the case (different practices in the estimation of the student workload and in the allocation of ECTS)? If yes, how many times?
14. Would you be more confident if the allocation of ECTS points would be checked by an external body in the Member States?
15. Do you consider that the use of ECTS creates more transparency on the qualification obtained in another Member State; in particular, is it or would it be easier to compare qualifications using ECTS than using years/teaching hours? *Please explain why or why not using specific examples*
16. Has the use of ECTS in the context of the Bologna process (*in which the first and second cycle higher education qualifications include common credit ranges based on 60 ECTS credits being attached to a full-time academic year of formal learning*) made the recognition of professional qualifications easier or quicker? *If yes, explain why? If not, why not? Please give concrete examples*
17. Has the use of ECTS led to the "automatic" recognition of professional qualifications? *If yes, explain why? If not, why not? Please give concrete examples*
18. Do you anticipate that ECTS credits will be increasingly used within recognition applications in future? *If yes, explain why? If not, why not?*

Learning Outcomes

19. How familiar are you with the concept of learning outcomes, which forms part of the Bo*logna Reforms and the development of N*ational Qualifications Frameworks linked to the EQF?

> *Explain, as necessary, that learning outcomes are verifiable statements of what a learner is expected to know, understand and be able to do (knowledge, skills and competence)*

after successful completion of a process of learning (a programme or its components). Statements of learning outcomes should be accompanied by appropriate assessment criteria for awarding purposes.

The 'outcomes-based approach' may be contrasted with input-based approaches describing qualifications in terms of the subject-specific knowledge provided as part of a process of learning together with the duration of study.

Competence under the Bologna framework is defined in a broad sense, as part of the overall results of learning under the Qualifications Framework for the EHEA. The framework is based on generic statements (based on the Dublin Descriptors) of typical expectations or competence levels of achievement associated with each Bologna cycle (allowing for gradation of abilities or skills). Under the EQF, competence is described in terms of responsibility and autonomy and understood as the capacity to transfer knowledge into practice.

20. Have you seen applications for recognition that are presented in terms of the applicant achieving particular learning outcomes through successful completion of a programme of study? *If yes, how common is it for applicants to present their qualifications in these terms and from which Member State?*

21. Do you consider that the use of learning outcomes creates more transparency on the qualification obtained in another Member State?

22. Is it or would it be easier to compare qualifications described in terms of learning outcomes than qualifications described in terms of subjects studied? In particular, could the use of learning outcomes facilitate the identification of substantial differences between training programmes? Please explain why or why not using examples.

23. Has the introduction of learning outcomes made the recognition of professional qualifications easier or quicker? *If yes, explain why? If not, why not? Please give concrete examples*

24. Has the introduction of learning outcomes led to the "automatic" recognition of professional qualifications? *If yes, explain why? If not, why not? Please give concrete examples*

25. If the qualification in your country was based on training defined in terms of content and duration, what would happen if an application was received from an individual who attained his/her qualification in a Member State which defined its training content in terms of learning outcomes (without any indication of duration)?

    How this would impact on the assessment of the individual's qualifications as part of the recognition process,

    What the Competent Authority's response would be,

    What specific issues it would present,

    What the likely outcome would be (all other things being equal).

26. Under the reverse scenario, if the qualification in your country was based on training content defined by learning outcomes, what would happen if an application was received for an individual who attained his/her qualification in a Member State which defined its training content in terms of content and duration? *Explore:*

    How this would impact on the assessment of the individual's qualifications as part of the recognition process,

    What the Competent Authority's response would be,

    What specific issues it would present,

    What the likely outcome would be (all other things being equal).

27. Do you anticipate that learning outcomes will be increasingly used within recognition applications in future? *If yes, explain why? If not, why not?*

How the Bologna Process could better support recognition

28. What evidence or examples can you provide to explain the difference that the Bologna reforms have (or have not) made to the recognition process?

    If possible, please illustrate by comparing the situation pre-Bologna, the current Bologna system (as you understand it) and a future Bologna System (fully established, if this is not yet the case).

29. Are additional mechanisms and procedures needed under the Bologna Process to make quicker, easier or even automatic recognition happen in future?

    If yes which ones? Why? Who should be involved?

30. Which role could the Internal Market and its policies play?

Towards convergence of training contents

31. Reflecting on the applications you receive from individuals who qualified in other EU Member States, do you perceive that over time there has been convergence in training contents between qualifications that prepare for entry to the profession / enable access to the profession? *Explore in relation to:*

    The level/degree of convergence observed

    How widespread this convergence is perceived to be (e.g. across most/all EU Member States or among groups of Member States)

    What have been the drivers for this convergence (e.g. the Bologna Process or other sectoral activity)

32. If yes, please provide examples of the types of convergence that have been observed? *For example, whether this relates to overall programmes or the inclusion of specific subject areas*.

33. Do you think that further action is required to support convergence in training contents across qualifications in different countries that prepare for entry to the profession / enable access to the profession? If yes, what action is required? If not, why not?

Study Area A (Bologna Process) – Topic C (Other methods to achieve convergence)

Other approaches to facilitate the recognition of qualifications

34. Which of the following approaches would better facilitate the re*cognition of professional qualifications:*

- the convergence of training contents (that could be supported by transparent quality assurance arrangements),
- or agreed definitions of learning outcomes (that could be supported by transparent quality assurance arrangements)?

  Explain the reason for your answer, including the perceived advantages and disadvantages of each approach.

  Please provide examples of how your preferred approach could support recognition in practice in comparison with the other option.

35. In both cases, what would you understand by the idea of 'transparent quality arrangements'? *What constitutes an approach to quality assuring learning that would make a difference to the recognition of qualifications?*

Study Area B (Levels) – Topic G (Five, eight or no level systems)

36. *Refer to the Competent Authority's response to the online survey question on which system of levels would better facilitate the recognition of qualifications (five levels; eight*

levels; no levels). Verify the response provided and explore, as necessary, the reason for the response.

37. How are the five levels in Article 11 used in the current recognition procedure? Do they constrain the recognition process in any way? *Please explain.*
38. For your profession, is the relevant qualification in your country part of a National Qualifications Framework (NQF) and referenced to the EQF? If yes, at which level?
39. For this profession, have you dealt with applications for the recognition of professional qualifications where the EQF level is clearly stated (or level in a NQF)?

    If yes, how common is it for applicants to present their qualifications in these terms and from which Member State? If yes, is the EQF level of the "foreign" qualifications the same as the EQF level of the qualification in your country? Have you encountered cases where there are major differences in the EQF levels of qualifications leading to the same profession (more than one level below/above)? Please give concrete examples.
40. Is the indication of the EQF/NQF level valuable information to understand and compare qualifications, in particular to assess possible substantial differences between the training programmes?
41. What are the strengths and weaknesses – in terms of facilitating the free movement of professionals - of a system based on levels defined in terms of inputs (*e.g. Article 11 - duration of studies and the type of institution where the learning takes place*) compared to a system based on learning outcomes (*e.g. EQF – where level donates complexity, breadth of knowledge, proficiency, autonomy etc*)?
42. How common is the situation where an applicant is qualified to practice in his/her home country but at a different qualification level to that required in your country?
43. Is referral to levels necessary as part of the recognition process? *Explore in relation to following:*

    The added value of the current system of levels (Directive Article 11) in the context of the requirement to recognise qualifications at the same or the preceding level

    The ease or difficulty of referencing applications to levels under the current system

    Whether the different duration of the bachelor and master introduced in the context of Bologna makes the use of the levels in Article 11 problematic

<u>Study Area B (Levels) – Topic H (Recognising older qualifications under the EQF system)</u>

44. If a recognition system of eight levels based on learning outcomes was felt to be the most appropriate approach to facilitating recognition, how should qualifications awarded before the introduction of national qualifications frameworks (and not referenced to the EQF) be dealt with as part of the recognition process in future?

    What impact would this have on the transparency and simplicity of the recognition process in comparison with the current system?

A2.3.2 Topic Guide: Other Stakeholders – Ministries and Professional / Training Bodies (General System)

Introduction

As part of an introduction to the interview, ensure that we have a good understanding of the following contextual information as appropriate to the interviewee:

- The interviewee's and the organisation's role and responsibilities in relation to the profession and the recognition process specifically.
- The division of responsibility for professional standards and professional recognition in the national context (how the organisation's role relates to other organisations).
- The current situation in terms of demand for professional recognition.
- Overall familiarity with the educational reforms that we are considering as part of the study (particularly the Bologna Process and the EQF).Introduction

Study Area A (Bologna Process) – Topic A (Convergence under Bologna)

The questions in this section are aimed at competent ministries for the profession and professional bodies

1. Do you think that the Bologna Process (three cycles; ECTS; learning outcomes) has had an impact on convergence of training programmes at EU level?

   Explain, as necessary, that the Bologna reforms relate to the introduction of the three-cycle structure (bachelor-master-doctorate), the use of ECTS credit and the development of learning outcomes.

2. Do you think that the three-cycle structure has increased comparability of qualifications?
3. Do you think that qualifications would be more comparable if each cycle attested the same number of years of studies in all Member States?
4. Are you satisfied with the notion of ECTS being allocated according to the student workload (and not only according to teaching hours)?
5. Are you confident that ECTS points are allocated to training programmes in the different Member States in accordance with the Bologna rules (one credit stands for around 25 to 30 working hours)?

   Explain, as necessary, that ECTS is a credit system incorporated under the Bologna process that defines qualification components at a given level in terms of overall student workload, e.g. lectures, seminars, projects, practical work, self-study etc (rather than just contact hours).

   Credit allocation to educational components (sometimes defined as modules) is based on their weight in terms of the workload needed by students to achieving the learning aims for that component.

6. Would you be more confident if the allocation of ECTS points would be checked by an external body in the Member States?

The questions below are primarily aimed at competent ministries for the profession

7. For the ministry, is it an objective or intention that training contents are adapted to achieve a greater convergence at EU level?

   What would be the benefits of this and how achievable are these benefits?

   Is this an area where further action is required?

8. From what the interviewee knows, is this an ambition that is shared across bodies with an interest in the profession, such as the higher education sector (universities), professional bodies and regional authorities, where relevant? Discuss in relation to:

Relative roles and objectives of different organisations

The level of autonomy to develop qualifications and professional standards

The existence of common or competing demands with regard to the ambition of improved recognition

The questions below are aimed at professional bodies

9. Do you consider that the use of the Bologna three cycles structure has improved the transparency of qualifications on the labour market?
10. Do you think there should be greater convergence of training programmes within the EU?

The questions below are aimed at training bodies

11. Have the Bologna reforms (particularly the three cycles, ECTS and learning outcomes) influenced the setting of standards for training or the accreditation of training? In what way?
12. Is there any evidence that the providers of training are more influenced by the structure and content of training in other countries as a result of the introduction of the three cycles or learning outcomes? What is the nature of this influence? Has this led to greater convergence of training programmes?

Study Area A (Bologna Process) – Topic B (Priority professions to 2020 and 2030)

The questions in this section are primarily aimed at professional bodies

13. How important is it to employers in your sector to achieve quicker, easier or automatic recognition of qualifications for the profession in order to attract, recruit and employ professionals from other EU countries? *Please explain.*

    Explore in relation to current labour market needs.

14. Do you anticipate that the demand for the services of professionals from other countries will change in future? *Please explain.*

    In what way (e.g. is it expected to increase or decrease?)?

    What are the implications for the recognition of professional qualifications?

    Explore in relation to future labour market needs.

15. What evidence is available to support the analysis provided of current and future labour market needs?

    Specifically, are there forecasts at national level of future labour needs for the profession (or in the context of a wider sector)?

    What does this evidence suggest over the medium and long-term (e.g. up to 2020 and beyond – possibly up to 2030)?

Study Area A (Bologna Process) – Topic C (Other methods to achieve convergence)

The questions in this section are primarily aimed at professional / training bodies

16. Apart from the approach of harmonising training requirements at EU level as used for some professions in the past, which other methods or approaches would best support convergence in training contents to achieve automatic recognition of the profession? *Explore the perceived viability of and barriers to automatic recognition.*
17. Is there a common view at national level about what constitutes the basic professional standards for the profession (in terms of the required skills, knowledge etc)? *Explore:*

    How basic professional standards are defined (what criteria are used, how this is 'measured')?

How basic professional standards relate to national requirements for professional registration and to the skills and qualifications landscape

18. Do you think that this view is shared by professional bodies and employers in other EU countries? Is there something approaching an EU-wide consensus on the basic standards required for the profession? *Explore:*

    How this is evolving over time?

    What are the key drivers of and barriers to consensus in this area?

    What is considered to be the effective mechanism for building such a consensus in future, especially with regard to qualifications and training linked to the profession?

19. Is it reasonable to assume that these qualifications should be comparable across different countries where the qualifications are preparing individuals for the same profession (other than where substantial knowledge of the national legal context is required)? *Explore:*

    Are qualifications comparable (in terms of training contents / subject areas)?

    Summarise any current differences between countries, as you understand them (in terms of subject areas, learning activities undertaken etc).

    To what extent do current differences relate to varying 'definitions' of the profession in different countries (e.g. what the role entails) and to what extent do they relate to the structure and content of training?

Study Area B (Levels) – Topic G (Five, eight or no level systems)

The questions in this section are primarily aimed at professional / training bodies

20. What are the strengths and weaknesses – in terms of facilitating the free movement of professionals - of a system based on levels defined in terms of inputs compared to a system based on learning outcomes?

Explain that in the context of the study, inputs relate to looking at subject-specific knowledge provided alongside the duration of studies and the type of institution where the learning takes place (this is the current Directive system, Article 11 of which sets out five levels for the purposes of recognition).

Learning outcomes relate to what a learner is expected to know, understand and be able to do (knowledge, skills and competence) after successful completion of a process of learning. Level, in this context, relates complexity, breadth of knowledge, proficiency, autonomy etc (this is the approach within the EQF, which sets out eight levels that could be used for the purposes of recognition).

A2.3.3 Topic Guide: Doctors - Competent Authorities, Ministries and National Professional Associations

Introduction

NOTE to interviewers: When interviewing competent authorities, refer to the interviewee organisation's response to the online survey of competent authorities in preparation for these interviews.

As part of an introduction to the interview, ensure that we have a good understanding of the following contextual information as appropriate to the interviewee:

- The interviewee's and the organisation's role and responsibilities in relation to the profession and the recognition process specifically.
- The division of responsibility for professional standards and professional recognition in the national context (how the organisation's role relates to other organisations).
- The current situation in terms of demand for professional recognition.
- Overall familiarity with the educational reforms that we are considering as part of the study (particularly the Bologna Process and the EQF).Introduction

Study Area A (Bologna) – Topic D (Three cycle structure and Doctors)

1. Does the three-cycle structure introduced under the Bologna Process (bachelor-master-doctorate) provide any advantages in supporting the free movement of doctors in the context of the profession already benefiting from automatic recognition when compared with the integrated cycle?

   Please explain why or why not?

   Please provide illustrative examples in relation to any current barriers to the free movement of doctors and how the three-cycles might be relevant on this basis.

Study Area A (Bologna) – Topic E (Calculation the duration of training for Doctors)

2. How familiar are you with the European Credit Transfer and Accumulation System, known as ECTS?

   Explain, as necessary, that ECTS is a credit system incorporated under the Bologna process that defines qualification components at a given level in terms of overall student workload, e.g. lectures, seminars, projects, practical work, self-study etc (rather than just contact hours).

   Credit allocation to educational components (sometimes defined as modules) is based on their weight in terms of the workload needed by students to achieving the learning aims for that component.

3. Would the free movement of doctors be facilitated by having automatic recognition based on duration of study defined in terms of ECTS credits rather than teaching hours (the current system)? *Please explain why or why not?*

4. Are any of the following elements of the ECTS system supportive of or a barrier to the free movement of doctors under the harmonised training system based on automatic recognition? *Please explain and provide evidence for your answer. Explore the potential benefits of having a measure of duration of study that is:*

   Based on workload rather than teaching time

   Inclusive of non-teaching elements as part of an overall assessment of workload, such as placements, independent study, examination, etc

   Showing workload for specific modules

   Linked to the learning outcomes (at a given level) expected from that study

5. Would you be confident that ECTS points are allocated to training programs in the different Member States in accordance with the Bologna rules (one credit stands for around 25 to 30 working hours)?
6. Would a common assessment method for the allocation of ECTS points increase confidence in the ECTS system?
7. Would you be more confident if the allocation of ECTS points would be checked by an external body in the Member States?
8. Would you have confidence in the credit system where 1 ECTS point can refer to a number of hours of workload with a spread between 25 and 30 working hours or would you be more confident if one credit would stand for a minimum fix number of hours?
9. What additional measures, if any, would be required to provide sufficient confidence in the credit system for it to provide advantages for the free movement of doctors?

Study Area A (Bologna) – Topic F (Harmonised content/duration vs learning outcomes)

10. The current Directive bases automatic recognition on the harmonisation of minimum training content and duration. Does such approach inspire more confidence than a system of recognition based on learning outcomes only (without taking duration into account)? *Please explain why / why not?*
11. Would you have more confidence if, in addition to learning outcomes, the system of recognition was based on harmonised minimum training duration defined in years and ECTS credits? *Please explain why / why not?*
12. If the minimum training and content requirements would be replaced by learning outcomes, should these learning outcomes be formulated rather broadly or at a more detailed (i.e. harmonisation of the scope of activity)? What would you prefer and for what reasons?
13. What are the relative strengths and weaknesses of the two approaches (harmonisation of content and duration; learning outcomes) in comparison with each other?
14. Would you have more confidence if there was an obligation to assess learning outcomes through one or several examinations? *If yes explain which form such examination(s) could take and when it/they should take place?*

A2.4 Trends in recognition topic guide

The purpose of the interviews is to explore in more depth the national or international position of sectors expected to experience significant demand for labour up to 2020. This is in order to understand:

- The factors that are driving growth
- Which professions in particular are expected to grow up to 2020
- The interplay between the demand and supply of labour of professionals, and where this will lead to labour shortages
- What would be the potential impact of European mobility of addressing these labour shortages

These interviews are to be carried out with representatives of national and European professional bodies and groups (such as industry associations and major employer associations). These individuals should have a good understanding of labour supply and demand within their particular sector.

Interviews are to be undertaken by telephone and are expected to last in the region of 45 minutes to1 hour.

1) Current labour shortages

In which professions is your sector currently experiencing shortages in recruiting appropriately trained staff? Explore the national (or Europe-wide) picture but also any issues pertinent to particular sub regions or cities.

What are the factors that influence these labour shortages? Discuss the reasons behind these labour shortages, and particularly if they are due to:

- Skills mismatch, where there is a lack of suitably skilled labour to fill vacancies (which may be due to changes in the skills profile of particular professions)
- A small labour reserve for employers to draw on to fill vacancies (which may possibly be due to high employment)
- Economic, social and institutional conditions such as a high cost of living in the locality which reduces interest in particular professions

2) Current impact of mobility on alleviating labour shortages

Are there any professions in your sector which currently benefit significantly from a high level of inward migration? For each profession, identify roughly what proportion is from trans-European migration and what proportion is from non EU migration.

As relevant, what has been the impact of the Professional Qualifications Directive in facilitating the mobility of EU workers in the sector?

Are there any professions where the employment of workers educated/trained in other Member States is less common? Explore the interviewee's views on the factors behind this, particularly whether it is due to:

- A lack of applicants from other EU countries with the suitable skills and experiences
- Potential workers have a lack of country specific knowledge (for example, where professionals trained in another EU country are not familiar with the techniques, practices and legislation of the host country)
- Potential workers with a lack of wider skills (for example, a lack of language, literacy and numeracy skills) necessary to conduct the role at a high level of competence.
- Employers face difficulties in interpreting the level of competence reached by individuals that have qualified in other Member States

3) Projected changes to the sector

What evidence is available to explain current trends and to project future trends in the demand for labour across key professions? What are the key information sources? *Discuss the availability of quantitative labour market information and more qualitative labour market*

intelligence. Ask for the interviewee's assistance in gathering any publicly available and relevant literature/research.

From any national research undertaken within your country/sector/profession, what changes are expected to take place to the size of the sector up to 2020 and 2030 (is it expected to stay the same, grow or decrease)?

Are there expected to be any future changes to the composition of the labour market for the sector? Explore in particular:

- New job roles that are expected to be created
- Job roles that are expected to increase
- Job roles that are expected to decrease
- Job roles that are expected to change significantly

What are the factors that are expected to influence this change? Explore the interplay of factors, including, for example, regulation, socio-economic shifts in the national economy, global market changes or any other factors.

Are there any sectors that are expected to experience a particularly high level of replacement demand up to 2020?

4) Projected labour shortages

Are there any particular professions expected to experience significant labour shortages up to 2020? Build on the answers to the earlier questions to explore:

- Professions where there is expected to be labour shortages due to growth as demand exceeds supply
- Professions where current labour shortages are expected to continue and worsen up to 2020.
- Professions where there is expected to experience labour shortages due to replacement demand

5) The potential impact of greater mobility on alleviating labour shortages

To what extent do you believe that greater labour mobility can help the sector to alleviate current labour/ skills shortages? Is it anticipated that labour mobility will play an increasingly significant role in meeting the demand for labour in future?

What are the barriers to achieving greater mobility? Could easier or quicker (or even automatic recognition) of qualifications play a significant role in helping employers to meet the anticipated demand for labour in future? Why / why not?

Thank you for your time

Annex 3 Stakeholders interviewed during the scoping phase

EU stakeholders:

- European Parliament - Committee on the Internal Market and Consumer Protection;
- European Commission, DG Education and Culture C-1 Higher Education / Erasmus
- European Commission, DG Education and Culture Policy Co-ordination Unit & Europe 2020
- European University Association (EUA)
- UNESCO European Centre for Higher Education (CEPES)

European professional bodies / groups:

- European Council of Civil Engineers (ECCE)
- European Federation of National Engineering Associations (FEANI)
- Federation of European Accountants (FEE)
- European Union of Medical Specialists (UEMS)
- Pharmaceutical Group of the European Union (PGEU)
- European Association of Real Estate Professionals (CEPI)
- Business Europe

National professional bodies / groups:

- Germany: Bundesverband der Freien Berufe (BFB)
- UK: United Kingdom Inter Professional Group (UKIPG)
- UK: Architects Registration Board (ARB)

National co-ordinators for Directive 2005/36/EC:

- Denmark: Agency for International Education
- Germany: Bundesminsterium fur Wirtschaft und Technologie
- Ireland: Department for Education and Science, Qualifications Unit
- Spain: Ministerio de Educacion

Annex 4 Education ministry interviews per Member State

Member State	Bologna Interview	EQF Interview
Austria	✓	✓
Belgium (FR)	✓	✓✓
Belgium (NL)	✓	
Bulgaria	✓	✓
Cyprus	✓	✓
Czech Republic	✓	
Denmark	✓	✓
Estonia	✓	✓
Finland	✓	✓
France	✓	✓✓✓
Germany	✓	
Greece		
Hungary		✓
Ireland	✓✓	✓
Italy	✓	✓✓
Latvia		
Lithuania	✓	
Luxembourg	✓	✓
Malta		
Netherlands	✓	
Poland	✓	
Portugal		
Romania		
Slovakia	✓	✓
Slovenia	✓	✓
Spain		
Sweden	✓	✓
United Kingdom (E/W/NI)	✓	✓
United Kingdom (Scotland)	✓	✓
Total	**44**	

Annex 5 The online survey sample and respondents

Contact details for competent authorities were initially gathered from the professional qualifications database. This information was verified with the national co-ordinators for Directive 2005/36/EC. The national co-ordinators in 22 Member States provided updated / verified information for competent authorities[171].

Table A5.1 below shows the number of competent authorities in each country for the 17 professions in scope of the survey, noting that not all professions are regulated in all countries. It shows that the total sample for the survey was 312 organisations. Note that the number of competent authorities varies considerably by Member State:

- Table A5.2 below shows where the recognition of professional qualifications takes place at sub-national level, effectively multiplying the number of competent authorities for some professions.
- Conversely, where the competent authority is the ministry, there may be a single contact in relation to multiple professions. This reduces the overall number of competent authorities.

Where there are a large number of competent authorities for the same profession within a particular country (e.g. tourist guides in Spain), we did not require or expect a large number of these authorities to respond to the survey. Partly this reflects that the more localised the recognition procedure is, the less likely it is that there will be sufficient volume of applications for authorities to make a meaningful survey response.

Also, it would have meant that analysis undertaken on the basis of the number of respondents is skewed by a disproportionate number of responses for a given profession in one Member State. This has not proven to be a problem in practice on the basis of the spread of responses received.

Rather than simply looking at the overall number of competent authorities, it is possible to calculate the total number of professions (out of the selected 17 professions) regulated in all Member States. This provides a more meaningful benchmark for looking at the coverage of survey responses.

Coincidentally, there are a total of **313 national-level professions in scope** on this basis, which is almost identical to the total number of competent authorities for the 17 professions. The incidence of single competent authorities covering multiple professions in many countries almost precisely counterbalances the situations in which there are multiple competent authorities for the same profession at national level.

[171] The countries that did not respond were: Luxembourg; Spain; Slovakia; Portugal; and Estonia. For these countries, the original information contained in the professional qualifications database was used to develop the sample. This information was of variable quality and, consequently, the number of responses from these countries tended to be lower. However, Luxembourg, Spain and Portugal were all included in the later case study sample and information from competent authorities in these countries was therefore gathered through that complementary task.

Table A5.1 Number of competent authorities for the 17 selected professions

Country	Number of Competent Authorities	Country	Number of Competent Authorities
Austria	17	Latvia	9
Belgium	13	Lithuania	6
Bulgaria	4	Luxembourg	4
Cyprus	16	Malta	9
Czech Republic	10	Netherlands	7
Denmark	9	Poland	11
Estonia	3	Portugal	7
Finland	2	Romania	9
France	10	Slovakia	3
Germany	82	Slovenia	8
Greece	3	Spain	23
Hungary	5	Sweden	4
Ireland	13	United Kingdom	21
Italy	4		
Total			**312**

Table A5.2 Professions for which recognition is at sub-national level

Country	Profession	Type of division
Austria	Secondary school teacher, Primary school teacher	Administrative divisions (states / *Bundesländer*)
Belgium	Primary school teacher, Secondary school teacher	French, Dutch and German speaking ministries
Germany	Architect, Medical/Biomedical laboratory technician, Optician (dispensing optician), Pharmaceutical technician/Pharmaceutical assistant, Physiotherapist, Primary school teacher, Radiographer / Radiotherapist, Second level nurse, Social worker	Administrative divisions (states / *Bundesländer*)
Spain	Tourist Guide	Administrative divisions - Autonomous Communities (*Comunidades Autónomas*) / Provinces (*Provincias*)
United Kingdom	Accountant/auditor, Primary school teacher, Secondary school teacher, Social worker	National administrative divisions – countries (England, Scotland, Wales, Northern Ireland)

A total of 132 completed survey responses were received, 129 of which were valid responses. The remaining three responses were excluded from the analysis either because they did not relate to competent authorities (e.g. an EU professional body; a NARIC centre) or because they explicitly related only to a profession outside of the scope of the task. A total of 88 respondents reported being competent authority for a single profession within our sample, while 41 respondents covered multiple professions (typically, within the health professions). A simple overview of the number of responses relating to each of the 17 professions is provided in Table A5.3 below.

Table A5.3 Total number of survey responses by profession

Profession	Number of responses
"Accountants"	13
"Architects"	14
"Biomedical / medical laboratory technicians"	17
"Civil engineers"	14
"Doctors"	18
"Opticians"	17
"Pharmaceutical technicians / pharmaceutical assistants"	15
"Physiotherapists"	19
"Primary school teachers"	17
"Psychologists"	9
"Radiographers/radiotherapists"	14
"Real estate agents"	11
"Second level nurses"	17
"Secondary school teachers"	25
"Social workers"	19
"Surveyors"	11
"Tourist guides "	12

For the purposes of analysis, it is important to look at the spread of responses as well as the overall volume of responses. The 129 valid responses related to **178 national-level professions regulated according to the professional qualifications database, out of a total of 313 national-level professions in scope (a response rate of 57%).**

Table A5.4 below groups Member States by the percentage of regulated professions at national level for which a response was received. Given than some competent authorities declined to respond to the survey because they had limited experience of applying the Directive (no applications), the coverage per country is partly linked to country size. Furthermore, many of the countries with a low percentage of professions responding are those that regulate very few professions (Bulgaria, Latvia and Romania). Only one country failed to provide a single survey response.

Table A5.4 % of regulated professions responding to the survey

% of professions responding	Member States
81%-100%	Austria; Belgium; Czech Republic; Finland; Germany; Greece
61%-80%	Denmark; France; Ireland; Poland; UK
41%-60%	Cyprus; Estonia; Hungary; Malta; Slovenia
21%-40%	Italy; Lithuania; Portugal; Slovakia; Spain; Sweden
1%-20%	Bulgaria; Latvia; Netherlands; Romania
0	Luxembourg

Table A5.5 below provides an analysis of the responses in terms of the coverage of Member States and professions. It shows which professions are regulated at national level according to the professional qualifications database. Professions that are not regulated are highlighted 'green' under each country column. This provides for a total number of regulating Member States per profession and total number of regulated professions (from the sample of 17 professions included in the survey), which are also shown in the table.

The number of responses received per country/profession is indicated in the table. Where there are multiple responses per profession this either meant that there were multiple competent authorities or, in a small number of cases, that different individuals from the same competent authority responded.

Survey responses were also received relating to professions that are not regulated according to the professional qualifications database. Each response relating to a profession that is not regulated (according to the database) is highlighted in the table with an 'X' in the green shaded box. This typically reflected where competent authorities selected multiple professions in its response and including professions that that it has responsibility for – but which are not regulated in the context of the Directive. The analysis by profession has been checked to ensure that the inclusion of these responses does not significantly alter the response.

The table shows the number of Member States regulating the profession (according to the professional qualifications database) from which at least one response was received. It also shows the number of regulated professions from which at least one response was received within each Member States. This allows us to show survey coverage (as a % of total regulated professions) per country and profession. At this stage, we do not include in this calculation responses received where the database suggests that the profession is not regulated, partly because the validity of those responses for specific professions has not yet been verified and partly in order to have a consistent measure of survey coverage.

This measure of survey coverage suggests a fairly consistent response per profession. At least half of all Member States regulating each profession have responded to the survey – with the exception of psychologists.

Table A5.5 Overview of survey responses by profession and Member State

	AT	BE	BG	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK	No. MS responding[172]	No. MS regulating[173]	% coverage[174]
Accountants and auditors	2	1			2					1	1	1	1					1	1	X							1	10	20	50%
Architects	2	1	1	1	1					2	1		1			1		1						1			1	12	24	50%
Biomedical lab. technicians	2	2			1	2		1	1	2	1		1					1		1	2							12	19	63%
Civil engineers	2	X		1	2	1					1			X				X		1				XX			1	7	11	64%
Doctors	1	2			1	2	1	1	1	3	1		1		1				1						1		1	14	27	52%
Opticians	1	2		1	3	2		1	1	1	1	X								1					1		1	12	16	75%
Pharmaceutical technicians		2		X	1		1	1	1	2	1				X	1				1	2							10	17	59%
Physiotherapists	1	2		1	1	2		1	1	3	2		1					1		1	1				1			14	25	56%
Primary school teachers	2	1					X	2		1	1	1	2	1									1	1		1	2	12	22	55%
Psychologists		2			3	2		1			1																	5	21	24%
Radiographers / radiotherapists	1	1			1	2		1	1	2	1		1					1		1	1							12	21	57%
Real estate agents	1	1			XX	1					X	X								1			1	1		1		7	10	70%
Second level nurses	1	2		X	1	2		1	1	5	1				X												1	9	14	64%
Secondary school teachers	3	3		1	1		1	2		2	1	1	2							1		1	1	1		1	3	16	25	64%
Social workers	1	X		X	2			2	1	2	1	X		1		1				1				1			3	11	18	61%
Surveyors				X		1		X	1		X	X		1						1				2			1	6	10	60%
Tourist guides	1	X		1	XX				1		1	1						1		1	1			1				9	13	69%
Number of professions responding	14	13	1	6	13	10	3	11	10	12	15	4	8	3	1	3	0	6	2	11	5	1	3	7	3	3	10	178	313	57%
Total number of professions regulated in the MS	15	14	7	11	15	14	5	11	15	13	15	9	12	14	5	8	11	12	10	15	13	7	12	13	14	9	14			
% coverage of regulated professions in the MS	93 %	93 %	14 %	55 %	87 %	71 %	60 %	10 0%	67 %	92 %	100 %	44 %	67 %	21 %	20 %	38 %	0%	50 %	20 %	73 %	38 %	14 %	25 %	54 %	21 %	33 %	71 %			
Total number of responses per MS	11	6	1	8	10	7	2	3	4	17	2	1	8	2	3	3	0	4	2	8	4	1	1	5	1	2	13	**129**		

[172] Number of Member States regulating the profession (according the professional qualifications database) from which a survey response was received

[173] Total number of Member States regulating the profession (according to the professional qualifications database)

[174] The coverage (in percentage) of Member States regulating the profession within the survey response

Annex 6 List of organisations interviewed for the case studies

A6.1 Accountants

Competent Authorities	
Austria	Kammer der Wirtschaftstreuhänder
Cyprus	Institute of Certified Public Accountants of Cyprus (ICPAC)
Czech Republic	Ministry of Industry and Trade
Denmark	The Danish Commerce and Companies Agency (Erhvervs- og Selskabsstyrelsen)
Hungary	Educational Authority, Hungarian Equivalence and Information Centre
Italy	Ministry of Justice
Luxembourg	Ministere des Classes Moyennes et du Tourisme
Netherlands	Nederlandse Beroepsorganisatie van Accountants (NBA)
Poland	Ministry of Finance
Portugal	Ordem dos Tecnicos Officias de Contas
Spain	Ministry of Economy and Finance
Sweden	(Supervisory Board of Public Accountants (Revisornamden
UK	ACCA
UK	Institute of Chartered Accountants
Other stakeholders	
Belgium	Federal Ministry (FPS) of Economy, SMEs, Self-employed and Energy
Hungary	Chamber of Hungarian Auditors/ Financial & Accountancy Dept. (Corvinus University)
Ireland	Chartered Accountants Ireland
Ireland	Institute of Certified Public Accountants in Ireland
Italy	National Council of Accountants and Auditors
Spain	Instituto de Censores Jurados de Cuentas de España (ICJCE)
UK	The Chartered Institute of Public Finance and Accountancy
International	Leiden University, Netherlands (Common Content Project)

A6.2 Biomedical/Medical Laboratory Technicians

Competent Authorities	
Austria	Bundesministerium für Gesundheit
Belgium	Federal ministry of Health, Food Chain Safety and Environment
Czech Republic	Ministry of Health Care
Denmark	National Board of Health (Sundhedsstyrelsen)
Denmark	The National Board of Health
France	Ministry of Health, Bureau de la démographie et des formations initiales (RH1)
Germany	Landesamt für Soziales, Jugend und Versorgung
Ireland	Academy of Medical Laboratory Science
Italy	Ministry of Health
Poland	Ministry of Health
Portugal	Administração Central do Sistema de Saúde, I.P. (ACSS) - Ministério da Saúde
Sweden	The National Board of Health and Welfare (Socialstyrelsen)
UK	Health Professions Council
Other stakeholders	

Austria	University of Applied Sciences Campus Wien
Belgium	BVLT/ABTL
Czech Republic	Institute for post gradual education in health care
Czech Republic	Ministry of Health Care
Denmark	Danish Association of Biomedical Lab Technicians
Ireland	Department of Health and Children
Ireland	Health and Social Care Professionals Council
Italy	National Federaion of Medical radiology technicians
Netherlands	NVML
Netherlands	Radboud Universiteit Nijmegen, NVML, EPSB
Portugal	Associação Portuguesa de Licenciados em Farmácia
Sweden	Karolinska Instituttet
Sweden	Swedish National Agency for Higher Education
Sweden	Swedish National Agency for Higher Education
UK	Institute of Biomedical Scientists
International	European Association for Professions in Biomedical Science

A6.3 Civil Engineers

Competent Authorities	
Austria	Federal Section of Chartered Engineering Consultants
Cyprus	Cyprus Scientific and Technical Chamber (ETEK)
Czech Republic	Czech Chamber of Authorised Engineers and Technicians
Denmark	The Danish Society of Engineers, IDA
Italy	Ministry of Justice
Luxembourg	Ministere des Classes Moyennes et du Tourisme
Portugal	Ordem dos Engenheiros
Spain	Ministry of Development (Ministerio de Fomento)
UK	Institute of Civil Engineers
Other Stakeholders	
Austria	Bundesministerium für Wirtschaft, Familie und Jugend
Cyprus	Cyprus Council of Civil Engineers (SPOLMIK)
Czech Republic	CKAIT
Ireland	Engineers Ireland
Italy	National Council of Engineers
Luxembourg	Association Luxembourgeoise des Ingénieurs (ALI)
Luxembourg	Ordre des Architectes et Ingenieurs-conseils (OAI)
Portugal	Dept. of Civil Engineering, Instituto Superior Técnico
Spain	Colegio de Ingenieros de Caminos, Canales y Puertos: Collegue of Engineers RCP
Spain	Colegio de Ingenieros Tecnicos de Obras Publicas- College of Engineers Public Works
UK	Chartered Engineering Council
International	EUCEET - European Civil Engineering Education and Training
International	European Federation of National Engineering Associations

A6.4 Doctors

Competent Authorities

Austria	Österreichische Ärztekammer (Austrian Medical Association)
Belgium	Federal ministry of Health, Food Chain Safety and Environment
Cyprus	Medical Council, Ministry of Health
Czech Republic	Ministry of Health Care
France	Conseil National de l'Ordre des Médecins (Medical Council)
Germany	Bundesärztekammer, Arbeitsgemeinschaft der deutschen Ärztekammern
Hungary	Migration and Monitoring Dept., Office of Health Authorisation & Admin. Procedures
Ireland	Medical Council Ireland
Italy	Ministry of Heath - Office for recognition of degrees
Luxembourg	Ministere de la Sante
Netherlands	CBGV/CIBG/Ministry of Health, Well-being and Sport
Poland	Ministry of Health
Portugal	Ordem dos Médicos
Spain	Ministry of Health, Social Affairs and Equality
Sweden	The National Board of Health and Welfare (Socialstyrelsen)
UK	General Medical Council
Other stakeholders	
Austria	Bundesministerium für Wissenschaft und Forschung
Belgium	Clinique
France	Direction générale de l'offre de soins (DGOS)
Germany	Behörde für Gesundheit und Verbraucherschutz
Hungary	Hungarian Doctors' Chamber
Hungary	Semmelweis University
Italy	Federation of the Order of Sugeants and Dentists
Netherlands	KNMG
Netherlands	Ministry of Health, Well-being and Sport
Spain	Consejo General de Colegios Oficiales de Médicos (CGCOM)
Spain	Ministry of Health, Social Affairs and Equality
Sweden	Karolinska Instituttet
Sweden	The Swedish Medical Association
UK	British medical association
UK	Department of Health
UK	Joint Royal Colleges of Physicians' Training Board (JRCPTB)
UK	Medical Schools Council
International	Bologna Secretariat
International	EURASHE
International	European University Association
International	Tuning Project (Medicine): University of Edinburgh

A6.5 Pharmaceutical Technicians

Competent Authorities	
Belgium	Federal ministry of Health, Food Chain Safety and Environment
Czech Republic	Ministry of Health Care
Denmark	Laegemiddelstyrelsen
France	ANPPH

Germany	Bezirksregierung Düsseldorf
Germany	Landesamt für Gesundheit und Soziales des Landes Berlin
Germany	LANDESAMT FÜR SOZIALES, JUGEND UND VERSORGUNG
Hungary	Migration and Monitoring Dept., Office of Health Authorisation & Admin. Procedures
Netherlands	CBGV (ministry related see separate text and beneath)
Poland	Ministry of Health
Portugal	Administração Central do Sistema de Saúde, I.P. (ACSS, I.P.) - Ministério da Saúde
Sweden	The National Board of Health and Welfare (Socialstyrelsen)
UK	General Pharmaceutical Council
Other Stakeholders	
Belgium	Algemene Pharmaceutische Bond (APB)
Czech Republic	Institute for post gradual education in health care
Czech Republic	Ministry of Health Care
Denmark	Danish Association of Pharmaconomists
Denmark	Pharmakon
France	Commission Nationale Paritaire Pharmacie d'Officine
Hungary	Hungarian Chamber of Health Care Employees
Hungary	Institute of Basic and Continuing Education of Health Workers
Hungary	Ministry of National Resources, Health Department
Portugal	Associação Portuguesa de Licenciados em Farmácia
Sweden	Farmacevtforbundet
Sweden	Swedish National Agency for Higher Education
Sweden	Swedish National Agency for Higher Education
Sweden	Umeå Universitet
UK	National Pharmacy Association
International	Pharmaceutical Group of the European Union (PGEU)

A6.6 Physiotherapists

Competent Authorities	
Austria	Bundesministerium für Gesundheit
Belgium	Federal ministry of Health, Food Chain Safety and Environment
Cyprus	Physiotherapy Registration Council
Czech Republic	Ministry of Health Care
France	Conseil national de l'Ordre des Masseurs-Kinésithérapeutes
Hungary	Migration and Monitoring Dept., Office of Health Authorisation & Admin. Procedures
Italy	Ministry of Health
Luxembourg	Ministere de la Sante
Netherlands	CBGV/CIBG/Ministry of Health, Well-being and Sport
Poland	Ministry of Health
Portugal	Administração Central do Sistema de Saúde, I.P. (ACSS, I.P.) - Ministério da Saúde
Spain	Ministry of Health and Social Policy (Ministerio de Sanidad y Politica Social)
Sweden	The National Board of Health and Welfare (Socialstyrelsen)
UK	Health Professions Council
Other Stakeholders	
Belgium	Axxon, Physical Therapy in belgium vzw

Belgium	Catholic University of Louvain
Belgium	Katholieke Universiteit Leuven (KUL)
Czech Republic	Institute for post gradual education in health care
Czech Republic	Ministry of Health Care
France	Direction générale de l'offre de soins (DGOS)
Germany	ZVK - Central Association of Physiotherapists
Hungary	Hungarian Chamber of Health Care Employees
Hungary	Ministry of National Resources, Health Department
Hungary	Semmelweis University, Health Science Department
Ireland	Department of Health and Children
Ireland	Health and Social Care Professionals Council
Italy	Associazione Italiana di Fisioterapisti - natinal federation
Luxembourg	Association Luxembourgeoise des Kinésithérapeutes (ALK)
Netherlands	Hogeschool Zuyd
Spain	Spanish General Council of Colleges of Physiotherapists (CGCFE)
Sweden	Karolinska Instituttet
Sweden	Swedish Association of Registered Physiotherapists
Sweden	Swedish National Agency for Higher Education
Sweden	Swedish National Agency for Higher Education
UK	Department of Health
UK	Royal Society of Physiotherapists
International	World Confederation for Physical Therapy

A6.7 Real Estate Agents

Competent Authorities	
Austria	Bundesminsterium für Wirtschaft, Familie und Jugend
Austria	Fachverband Immobilien- u. Vermögenstreuhänder, Wirtschaftskammer Österreich
Belgium	IPI (Institut Professionnel des Agents Immobiliers
Cyprus	Board for the Registration of Real Estate Agents
Denmark	Danish Enterprise and Construction Authority
Hungary	Educational Authority, Hungarian Equivalence and Information Centre
Poland	Ministry of infrastructure
Portugal	Intituto Nacional da Construccao et do Imobiliario
Sweden	The Swedish Board of Supervision of Estate Agents (Fastighetsmarklarnamden
Other Stakeholders	
Austria	Fachverband Immobilien- u. Vermögenstreuhänder, Wirtschaftskammer Österreich
Denmark	Lillebaelt Academy of Higher Education
Denmark	The Danish Association of Chartered Estate Agents
Ireland	Property Services Regulatory Authority
International	European Association of Real Estate Professionals (CEPI)

A6.8 Social Workers

Competent Authorities	
Austria	Amt für Jugend und Familie, Wiener Landesregierung
Cyprus	Council of Registration of Social Workers

Czech Republic	Ministry of Labour and Social Affairs
France	Ministry of Employment and Social Affairs DGCS - Bureau des professions sociales
Germany	Hochschule für Angewandte Wissenschaften, Hamburg
Hungary	Educational Authority, Hungarian Equivalence and Information Centre
Ireland	Social Workers Registration Board (Health and Social Care Professionals Council)
Italy	Ministry of Justice
Luxembourg	Ministere de la Sante (Competent Authority)
Spain	Ministry of Health and Social Policy (Ministerio de Sanidad y Politica Social)
UK	General Social Care Council
UK	NI Social Care Council
Other Stakeholders	
Cyprus	Cyprus Association of Social Workers
Hungary	Association for the Education of Hungarian Social Workers
Hungary	Semmelweis University, Institute of Mental Health
Ireland	Department of Health and Children
Italy	National Council of the Order of Social workers
Spain	Consejo General del Trabajo Social
UK	British Association of Social Workers - Scotland
UK	British Association of Social Workers (BASW)
UK	International Committee Social Workers (BASW)
International	European Association of Schools of Social Work (EASSW)
International	Tuning (Social Work) - European Platform for Worldwide Social Work - University of Parma

A6.9 General / other sector

Belgium	Flemish Ministry of Education and Training - Higher education
France	Conseil supérieur de l'Ordre des Experts-comptables
Germany	Zentralstelle für Ausländisches Bildungswesen
Germany	Ministerium für Arbeit und Sozialordning, Familie, Frauen und Senioren (BW)
International	Federation of Veterinarians in Europe
International	Tuning (Nursing) - University of Southampton

Annex 7 Interviewees for the professional trends research

Country	Organisation
Austria	Austrian Institute for Economic Research
Belgium	Flemish Ministry of Education and Training
Czech Republic	National Observatory of Employment and Training (NOZV)
Denmark	Department for Labour Mobility (Arbejderbevægelsens Erhvervsråd)
Estonia	Estonian Education Forum
Estonia	Ministry of Economic Affairs and Communications
Estonia	Tourism and Recreation Sectoral Council
Estonia	Statistics Estonia
EU	European Renewable Energies Federation
Finland	National Authority of Medicologal Affairs
Finland	Finnish Ministry of Education and Culture (MINEDU) – Forecasting department
France	Observatory for Information Technology and Engineering (Observatoire Paritaire des Métiers de l'Informatique, de l'Ingénierie, des Etudes et du Conseil)
France	Professional Assocation of IT Professionals (Association Professionelle des Informaticiens)
France	National Observatory of Jobs and Occupations relating to the Green Economy (Observatoire national des emplois et métiers liés à l'économie verte)
Germany	Institute for Work and Employment Research (Institut fuer Arbeits- und Berufsforschung)
Greece	Employment Observatory Greece (PAEP SA)
Hungary	National Employment Service
Ireland	Expert Group on Future Skill Needs
Ireland	Irish Vocational Education Association (IVEA)
Italy	National Tourism Observatory
Lithuania	Lithuanian Labour Exchange Office
Netherlands	The Secondary Education Council (VO-Raad)
Netherlands	Education Sector Employment Board (Sectorbestuur Onderwijsarbeidsmarkt-SBO)
Netherlands	ECABO (Centre of Expertise on Vocational Education, Training and Labour Market' for the economic/administrative, ICT and security professions
Netherlands	PMLF
Poland	Department for Economic analysis and Forecasts Ministry of Labour and Social Policy
Portugal	National Education Council (Conselho Nacional de Educação -CNE)
Portugal	Observatory of Employment and Vocational Training (Observatório do Emprego e Formação Profissional -OEFP)

Romania	National Institute on Labour and Social Protection
Spain	Automobile industry Observatory (Observatorios industriales - Sector de Fabricantes de Automóviles y Camiones)
Spain	State Board of Education (Consejo Escolar del Estado)
Sweden	Statistics Sweden (Statistika Centralbyrå)
Sweden	National Board of Health and Welfare
Sweden	Swedish Construction Federation (Sveriges Byggindustrier)
UK	Skills for Health
UK	e-skills UK
UK	People 1st

Annex 8 Decisions on applications for recognition by country

The tables below present the number of decisions on applications for recognition under Directive 2005/36/EC 2007-2009 from other Member States per country for the case study professions.

Figure A8.1 Number of decisions on accountant / auditor applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
UK	21	16	19	56
Czech Republic	10	4	5	19
Germany	6	7	2	15
Denmark	1	0	0	1
Austria	0	0	0	0
Belgium	0	0	0	0
Cyprus	0	0	0	0
Hungary	0	0	0	0
Ireland	0	0	0	0
Italy	0	0	0	0
Luxembourg	0	0	0	0
Netherlands	0	0	0	0
Portugal	0	0	0	0
Spain	0	0	0	0
Sweden	0	0	0	0
% of total applications to case study countries	*100%*	*100%*	*96%*	*98%*
All Member States (Total)	**38**	**27**	**27**	**92**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.2 Number of decisions on real estate agent applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
Belgium	10	12	20	42
Austria	6	9	0	15
Poland	2	3	0	5
Sweden	2	0	0	2
Portugal	0	0	1	1
Cyprus	0	0	0	0
Denmark	0	0	0	0
France	0	0	0	0
% of total applications to case study countries	*100%*	65%	*95%*	82%
All Member States (Total)	**20**	**37**	**22**	**79**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.3 Number of decisions on civil engineer applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
UK	54	86	43	183
Czech Republic	34	0	17	51
Poland	51	0	0	51
Portugal	27	11	11	49
Austria	0	0	0	0
Cyprus	0	0	0	0
Denmark	0	0	0	0
Spain	0	0	0	0
% of all applications to case study countries	*93%*	*75%*	*72%*	*82%*
All Member States (Total)	**178**	**130**	**98**	**406**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.4 Number of decisions on social worker applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
UK	442	339	360	1,141
Ireland	0	100	89	189
France	49	50	75	174
Luxembourg	41	59	32	132
Czech Republic	1	0	0	1
Austria	0	0	0	0
Germany	0	0	0	0
Italy	0	0	0	0
Poland	0	0	0	0
Spain	0	0	0	0
% of all applications to case study countries	*98%*	*97%*	*97%*	*97%*
All Member States (Total)	**544**	**563**	**575**	**1,682**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.5 Number of decisions on physiotherapist applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
Germany	321	278	364	963
Austria	307	301	295	903
UK	151	153	405	709
Italy	122	209	0	331
Luxembourg	95	76	140	311
Denmark	43	37	25	105
Belgium	39	29	12	80
Czech Republic	35	8	18	61
Portugal	10	3	13	26
Poland	0	4	3	7
Cyprus	0	0	0	0
France	0	0	0	0
Hungary	0	0	0	0
Ireland	0	0	0	0
Netherlands	0	0	0	0
Spain	0	0	0	0
Sweden	0	0	0	0
% of all applications to case study countries	*98%*	*94%*	*98%*	*97%*
All Member States (Total)	**1150**	**1162**	**1303**	**3615**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.6 Number of decisions on pharmaceutical technician / assistant applications under the Directive 2007-2009 (regulating case study countries)

Member State	2009	2008	2007	Total (07-09)
Germany	26	12	6	44
Belgium	8	9	6	23
Denmark	1	7	4	12
Czech Republic	5	0	5	10
Portugal	3	1	4	8
Hungary	2	5	0	7
Poland	2	1	1	4
France	0	0	0	0
Netherlands	0	0	0	0
Sweden	0	0	0	0
% of all applications to case study countries	*87%*	*90%*	*87%*	*88%*
All Member States (Total)	**4**	**39**	**30**	**123**

Source: Professional Qualifications Database (accessed on 15.08.11)

Figure A8.7 Number of decisions on medical/biomedical laboratory technician applications under the Directive 2007-2009 (case study countries)

Member State	2009	2008	2007	Total (07-09)
UK	37	32	84	153
Germany	36	27	34	97
Luxembourg	12	24	34	70
Denmark	32	17	9	58
Austria	13	11	15	39
Italy	26	3	0	29
Ireland	0	23	0	23
Czech Republic	4	6	10	20
Belgium	3	1	5	9
Portugal	0	1	7	8
Poland	1	0	0	1
France	0	0	0	0
Spain	0	0	0	0
% of all applications to case study countries	96%	96%	98%	91%
All Member States (Total)	**171**	**151**	**202**	**524**

Source: Professional Qualifications Database (accessed on 15.08.11)

Annex 9 Use of learning outcomes at national level

Country	Position regarding learning outcomes
Learning outcomes already linked to higher education qualifications	
UK	Use of learning outcomes well-established across education systems (higher education; vocational training), although still variable. In England, there has only been a slow adoption of the credit system, modules and learning outcomes in the revision of higher education qualifications and the design of new higher education qualifications. It has been greatest where there has been the design of joint degrees and interest in the process by individual academics and professional networks. There is much greater use in Wales and Scotland where there has been higher education sector cooperation.
France	Training standards must be described in terms of learning outcomes to be accredited by the ministry. Further work needs to be done to strengthen the link between credit and learning outcomes, particularly for qualifications not obviously linked to the labour market or a specific occupation. It is not yet well-understood by the higher education sector.
Belgium	Learning outcomes used by all higher education institutions to define qualifications/programmes. However, use in practice as a guiding tool for defining the content of education and training programmes and for student assessment varies from one institution to another. The quality assurance agency which carries out thematic evaluations of higher education programmes (per discipline) systematically looks at how learning outcomes are being used in defining and delivering education and training programmes.
Ireland	Learning outcomes are embedded in higher education to a certain degree. High-level outcomes are set within the NQF. There is an ambition to develop greater use of learning outcomes at subject level, and further focus on embedding the use of learning outcomes is contained within Ireland's new Higher Education Strategy, published in January 2011.
Netherlands	Learning outcomes are linked to higher education qualifications and have provided greater levels of transparency. However, it is a challenge to define all levels and be precise about exactly what each of the programmes entail. The government does not prescribe the content of education and training programmes.
Czech Republic	Higher education qualifications have been defined on the basis of a graduate profile for a long time (this pre dates the Bologna process). However, the use of learning outcomes to define the content of programmes below the level of the qualification – when it comes to subjects or modules/units is still very varied and this depends on the institution itself.
Germany	Learning outcomes have been established for an estimated 3-4 years in higher education, but it needs time for the higher education sector to get used to what is new approach. There are 40,000 professors implementing the system at institutional level, plus Lander regulations, so it is difficult to judge at which point the system is firmly established.
Austria	Learning outcomes are already integral to the system and the current challenge is the quality assurance of learning outcomes, which is being focused on as part of the further development of quality assurance systems.
Sweden	The use of learning outcomes was major part of the reform package (it has been *'the biggest challenge'* and *'the biggest achievement'*). Learning outcomes were set at quite a high level. Depending on how institutions read the degree ordnance (the national system of qualifications that sets the general goals and targets students should reach when they graduate) they can make (small or major) changes.
Italy	The introduction of learning outcomes came at a time in which greater autonomy was provided to higher education institutions in defining curricula (previously curricula was defined by ministries to be provided by higher education institutions). As a result, the effective application of learning outcomes is likely to be variable. Some institutions have been quite innovative in the adoption of learning outcomes, whereas others still use the previous government-devised curricula, with the learning outcomes defined from that.
Slovenia	Learning outcomes are well-established in the Slovenian education system although it is difficult to state whether, in the context of higher education particularly, this has impacted on curriculum / teaching.

Estonia	Learning outcomes have been introduced to all higher education programmes by legislation (Standards of Higher Education Act, 2008). There is further work, in the context of NQF development, to revise VET and professional qualifications in future to ensure that they are competence-based. This is implied to involve a fundamental re-visiting of the professional qualification landscape (back to basics in defining professions, job roles and competences). The plan for this work runs to 2017.
Slovakia	Learning outcomes are linked to all programmes as legal requirement. At the level of the full qualification, each one is described in terms of learning outcomes to a certain extent (each qualification has a graduate profile that is identified). At the level of individual courses, the use of learning outcomes differs greatly. In general, the calculation of ECTS credit is not based on learning outcomes
Bulgaria	Learning outcomes have been established in higher education since 2003 for bachelor, master and more recently for professional bachelor degree (introduced in 2007). These are not detailed descriptions, but set skills, competence and knowledge at a high level, as well as the fields in which graduates completing the studies can work.
Learning outcomes still being implemented	
Poland	Learning outcomes are not fully implemented. ECTS credits will be linked to learning outcomes for all higher education programmes from October 2011, when the new Law on Higher Education is implemented. It is not known what the impact of this will be on individual universities and particular training programmes, but it may mean that whole programmes are re-developed.
Luxembourg	Learning outcomes are being introduced gradually, initially in primary education and vocational education and training. All other education levels will be based on learning outcomes in the medium term.
Lithuania	Learning Outcomes are new to higher education institutions in Lithuania. Some institutions began using learning outcomes in 2000, but most still operate on a system using inputs (teaching time). The work to get higher education institutions to move towards using Learning Outcomes is still ongoing, although it is far more prevalent in VET. There is little evidence to suggest that many changes course content to be more student centred and more focused on meeting the learning outcomes have been made at present.
Finland	Development work to embed the use of learning outcomes in higher education is ongoing. The use of learning outcomes is describing as being at an early stage. The ECTS system is linked to learning outcomes, but the quality standards in universities using learning outcomes varies, which is due to the autonomy of higher education institutions. The Finland body for Quality Assurance and the ministry for education recognise this, and have therefore have been providing a training programme “ready in 5 years” which helps higher education staff to write outcomes in a way that is understandable and clear. They also conducted a Peer Learning Activity on defining, describing and assessing learning outcomes.
Cyprus	Even though there has been significant work to introduce ECTS in Cyprus, there has not been much progress in terms of linking qualifications to learning outcomes. The concept is relatively new in the national concept and is described as something for the future.

Annex 10 Labour market trends evidence base

A10.1 Evidence gathering

1. Review of main EU level sources

The first activity was to identify the projected European growth sectors and current and future sectors where there is expected to be a demand for labour and skills that could be met through migration. This involved assessing the following:

- **The current European labour market:** Identifying a baseline for the relative sizes of sectors and the number of professions in different occupations across countries. Eurostat data was analysed to provide information on sector size within each of the Member States, which has been collected yearly since 1998, and the European Labour Force Survey to identify the number of European citizens performing different occupations. Using the analytical framework, this data can be mapped to individual professions as required and feasible.
- **Existing forecasts on employment growth and the demand for labour:** At a European level, there are a number of studies focused on medium term forecasts of labour market growth and skills needs. These use econometric models to assess the projected growth expected primarily for sectors, but in some instances occupations. This provides a *comparable* base of information to identify expected growth and change going to 2020. These reports include *Employment Outlook 2010* (OECD, 2010), *Future skill needs in Europe* (Cedefop, 2008) and *Jobs for the Future* (Accenture, 2005), as well as the EU level forecasts for 18 sectors that was conducted for DG Employ.
- **Existing research and forecasts on skills supply**. The current information available on current and future skills shortages and gaps was also analysed. This explores where supply shortages exist which are not only due to increased demand, but are influenced by other factors, such as changes in job roles, working conditions or the need to replace an aging workforce. European reports on current and future labour shortages include the *Future Skill Supply in Europe* (Cedefop 2009), *New Skills for New Jobs* (European Commission, 2008) *Skills Supply and Demand in Europe* (Cedefop 2010), *New Skills for New Jobs: Action Now* (European Commission 2010).
- **Current and future migration patterns and the flow of skilled labour between Member States.** Existing literature and data on migration patterns were reviewed in order to identify the occupations/sectors for which there is significant labour mobility and those where there is relatively little mobility. We can then cross reference this with the work above to see which occupations would benefit from a significant increase in migration to meet current and future demand for labour.

In total 74 EU level documents were reviewed in this part of the study. In addition the following data sources were reviewed:

- Eurostat Labour Force Survey (LFS), 2009.
- Eurostat population projections, 2009
- Eurostat migration data, 2011
- Professional Qualification Directive database, 2009

This task identified five sectors to be identified for further exploration at national level. This is to enable a more detailed analysis of sector level labour market research and also to explore in detail the interplay between European and national policy on key sectors.

2. Review of evidence at national level and relating to key sectors

The EU level data was complemented by more detailed analysis of existing sector evidence compiled at Member State level. The purpose of this task was to identify where countries were expected increase demand for labour and where labour shortages exist and what role mobility plays or could play in future to alleviate these labour shortages. This included reviewing appropriate research on growth projections and the demand for labour (both at a national and sector level), the current and forecast migration of skilled labour (both into and out of the country) and projected skills shortages and gaps. Within this sectoral analysis, focus was given to national research identifying critical professions

within priority sectors in order to understand the nature of future demand and how this may relate to future migration.

In addition, country-level information on early identification of skills needs was also reviewed, initially collected through the Cedefop information portal, which is classified under sector (using NACE codes) and occupations (using ISCO-88). The portal contains a wide based of information on skills needs, published by European and national organisations.

The review of national research encompassed both national and also sectoral research, with particular in-depth research conducted on the five sectors selected above.

Further documents were identified through an online search of published national information on labour forecasts, current and future labour supply and migration patterns that were conducted by national agencies or independent research organisations.

A10.2 Analysis of the evidence base

There is a wide range of European, national and regional evidence available looking into projections of labour supply and demand, and skills needs in Europe. However, the quality and usefulness of this information is variable.

Around one third of the literature collected is at a European level, with 3% at an international level. The rest of the literature is at a Member State level. Around two thirds of the literature is specific to certain sectors, with around one third covering the whole labour market.

Labour market projections

There a large amount of information available in terms of labour market projections. These are produced at a European level by Cedefop, and look at how employment is expected to grow up until 2020. This information is broken down by broad sector and occupation groups, and gives comparable information for the whole of Europe. However, these projections do not go into enough specific sectors to draw strong conclusions on the expected growth in certain professions or detailed likely skills needs in the future.

On a national level, the projections of expected future employment are of variable time periods. Positively, nearly all European countries produce some sort of projections of employment for the future. However, some are relatively short term, looking at employment only a couple of years in advance. Five countries were found to have short term projections (Austria, Latvia, Lithuania, the Netherlands, Slovenia and Slovakia). A larger number of countries, eleven, produce longer term projections of employment, up until 2015 – 2020 (Belgium, Cyprus, Czech Republic, Denmark , Estonia, France, Germany, Hungary, Ireland, Italy, Luxembourg, and the UK), looking up until the year 2020. Few countries project a longer time period than 2020, exceptions being Finland and Sweden, which has projections up until 2025 and 2030 respectively.

The quality of the projections is split along similar lines to the length of time periods. Generally, the projections covering a shorter time period look at the overall level of expected employment in a country, and are of less use when looking to predict growth in specific professions or sectors (the exceptions being Austria and the Netherlands, which provides projections at sector level). These give a useful starting point of which countries are going to see an oversupply or undersupply of labour at a general level, and therefore would benefit from labour movement throughout Europe. Those countries which produce longer term forecasts estimate future employment at a sector level. This allows easier identification of professions where employment growth is expected.

No employment projections were found for seven countries (Bulgaria, Greece, Malta, Poland, Romania, Portugal, Spain), and research suggests that these countries do not produce detailed projections. Most of these countries, and the countries which produce shorter term and general employment projections, are newer Member States from Eastern Europe. Possible reasons for this is the lack of availability of detailed data over a long enough time period to produce long term projections, and a lack of certainty about projecting the future of transition economies, as there is more uncertainty surrounding what will happen, particularly at a sector or occupational level.

There are some sector specific projections of future scenarios. These tend to be produced at a European (or even global) level. These projections are done by the OECD, Cedefop and the European

Commission and trade associations (the European Travel Commission). They do not always produce estimates of the level of future employment in the sector, but of growth (in terms of monetary value, or customer numbers in the case of the European Travel Commission). There is a mixture of methodologies in these projections, with some producing a detailed estimates of employment or the value of an industry from a model, with others presenting likely outcomes in different scenarios (for example in scenario A, employment is likely to fall). These projections are often coupled with discussions on how the sector is expected to evolve and an assessment of the skills which will be required in the future.

Discussions around skills

The general level projections from Cedefop include a discussion around skills needs for the future. This is concentrated around the types of qualifications which are likely to be needed in the future, rather than a discussion about the specific skills that will be required in the future.

Discussions around skills needs for the future are most often produced at a sector specific level. These are again produced on a European, national and regional level. At a European level, Cedefop, the European Commission and some Europe-wide trade bodies produce reports discussing skills needs in different sectors. At a national level, ministries (for example ministries responsible for business, the environment, education, and health), trade organisations, sector skills councils and academics all produce literature which discusses labour and skills needs at a sector level.

There are assessments for many different sectors, and provide information on both the level of qualifications which are and will be required in a sector, and general skills which are in short supply at the moment and which will be required in the future. These types of skills include management skills, ICT skills and entrepreneurship. However, no assessments went into more specific detail about the skills which will be required due to uncertainty on exactly how job roles, technology and consumption patterns will evolve over a 10 – 20 year time frame.

Labour mobility

While there is a large volume of research on labour market mobility, relatively little of this is focused on EU migration. The literature that is available suggests that labour mobility between Member States is low, but increasing; however this information is often based on data from before the most recent expansion of the EU, and therefore may be misleading. This literature is produced at a European level, although there is literature on labour mobility for Ireland and the UK, and also for certain specific sectors (for example health). A potential reason why the health sector produces this information is the highly regulated nature of the health sector. However, labour mobility studies are not produced on a regular and systematic basis.

Table A10.1 EU employment by economic activity, 2009

Economic activity	Employment (1000)	% of total employment
Manufacturing	35071.3	16.1
Human health and social work activities	21767.4	10.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	30773.4	14.1
Construction	17298.5	7.9
Education	15773.8	7.2
Public administration and defence; compulsory social security	15660.4	7.2
Transportation and storage	11153.8	5.1
Agriculture, forestry and fishing	11124.6	5.1
Professional, scientific and technical activities	10698.3	4.9
Accommodation and food service activities	9413.1	4.3
Administrative and support service activities	8203.1	3.8
Financial and insurance activities	6599.7	3.0
Information and communication	6114.2	2.8
Other service activities	5306.5	2.4
Arts, entertainment and recreation	3412.4	1.6
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	2473.5	1.1
Real estate activities	1660.6	0.8
Electricity, gas, steam and air conditioning supply	1642.5	0.8
Water supply; sewerage, waste management and remediation activities	1582.9	0.7
Mining and quarrying	848.7	0.4
Activities of extraterritorial organisations and bodies	194.2	0.1
Total	**217813.1**	

Source: Eurostat, Labour Force Survey (LFS), 2009

A10.3 Sector specific employment by member state

Table A10.2 Employment in construction by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	316.3	7.2
Bulgaria	322.5	9.9
Czech Republic	496.7	10.1
Denmark	177.7	6.4
Germany	2574.4	6.6
Estonia	58.3	9.8
Ireland	150.9	7.9
Greece	368.8	8.2
Spain	1888.3	10.0
France	1878.0	7.3
Italy	1962.3	8.5
Cyprus	44.3	11.6
Latvia	80.1	8.1
Lithuania	122.6	8.7
Luxembourg	12.3	5.7
Hungary	294.0	7.8
Malta	11.7	7.2
Netherlands	493.1	5.7
Austria	354.1	8.7
Poland	1308.0	8.2
Portugal	505.6	10.0
Romania	725.9	7.9
Slovenia	63.5	6.5
Slovakia	257.0	10.9
Finland	174.8	7.1
Sweden	293.6	6.5
United Kingdom	2363.8	8.2

Source: Eurostat LFS, 2009

Table A10.3 Employment in manufacturing by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	656.1	14.8
Bulgaria	713.9	21.9
Czech Republic	1242.7	25.2
Denmark	351.5	12.7
Germany	7897.5	20.4
Estonia	113.8	19.1
Ireland	223.0	11.6
Greece	513.4	11.4
Spain	2519.5	13.3
France	3511.8	13.7
Italy	4448.0	19.3
Cyprus	34.8	9.1
Latvia	135.9	13.8
Lithuania	226.0	16.0
Luxembourg	13.5	6.2
Hungary	792.7	21.0
Malta	23.9	14.7
Netherlands	847.5	9.9
Austria	609.4	14.9
Poland	3059.1	19.3
Portugal	851.6	16.8
Romania	1751.3	18.9
Slovenia	237.6	24.2
Slovakia	565.4	23.9
Finland	379.2	15.4
Sweden	559.3	12.4
United Kingdom	2792.6	9.7

Source: Eurostat LFS, 2009

Table A10.4 Employment in wholesale and retail by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	571.6	12.9
Bulgaria	527.9	16.2
Czech Republic	630.9	12.8
Denmark	415.4	15.0
Germany	5243.1	13.5
Estonia	83.2	14.0
Ireland	274.0	14.3
Greece	815.9	18.1
Spain	2974.7	15.7
France	3412.7	13.3
Italy	3414.1	14.8
Cyprus	71.8	18.8
Latvia	163.4	16.6
Lithuania	249.7	17.6
Luxembourg	21.0	9.7
Hungary	554.8	14.7
Malta	24.7	15.2
Netherlands	1145.7	13.3
Austria	647.2	15.9
Poland	2332.2	14.7
Portugal	762.9	15.1
Romania	1156.5	12.5
Slovenia	120.8	12.3
Slovakia	312.8	13.2
Finland	296.0	12.0
Sweden	550.1	12.2
United Kingdom	4000.4	13.8

Source: Eurostat LFS, 2009

Table A10.5 Employment in human health and social work by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	590.2	13.4
Bulgaria	164.1	5.0
Czech Republic	326.3	6.6
Denmark	505.6	18.2
Germany	4584.8	11.8
Estonia	33.0	5.5
Ireland	229.0	11.9
Greece	231.6	5.1
Spain	1323.4	7.0
France	3282.2	12.8
Italy	1653.6	7.2
Cyprus	16.2	4.2
Latvia	46.4	4.7
Lithuania	92.6	6.5
Luxembourg	22.5	10.4
Hungary	245.6	6.5
Malta	12.5	7.7
Netherlands	1378.2	16.0
Austria	389.1	9.5
Poland	880.9	5.6
Portugal	322.0	6.4
Romania	394.6	4.3
Slovenia	54.0	5.5
Slovakia	149.8	6.3
Finland	388.4	15.8
Sweden	698.6	15.5
United Kingdom	3752.2	13.0

Source: Eurostat LFS, 2009

Table A10.6 Employment in public administration and defence by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	418.5	9.5
Bulgaria	235.1	7.2
Czech Republic	321.3	6.5
Denmark	178.0	6.4
Germany	2797.9	7.2
Estonia	36.7	6.2
Ireland	106.5	5.6
Greece	375.3	8.3
Spain	1367.3	7.2
France	2617.8	10.2
Italy	1421.0	6.2
Cyprus	29.0	7.6
Latvia	69.3	7.0
Lithuania	84.9	6.0
Luxembourg	24.7	11.4
Hungary	290.7	7.7
Malta	14.4	8.9
Netherlands	567.3	6.6
Austria	276.8	6.8
Poland	1020.8	6.4
Portugal	334.7	6.6
Romania	489.9	5.3
Slovenia	60.8	6.2
Slovakia	178.5	7.5
Finland	116.1	4.7
Sweden	266.7	5.9
United Kingdom	1960.5	6.8

Source: Eurostat LFS, 2009

Table A10.7 Employment in education by member state, 2009

Country	Employment (1000)	% of total employment
Belgium	393.3	8.9
Bulgaria	191.2	5.9
Czech Republic	295.6	6.0
Denmark	223.2	8.0
Germany	2404.2	6.2
Estonia	62.5	10.5
Ireland	146.6	7.6
Greece	325.4	7.2
Spain	1160.1	6.1
France	1748.6	6.8
Italy	1576.8	6.8
Cyprus	25.2	6.6
Latvia	92.4	9.4
Lithuania	149.0	10.5
Luxembourg	18.3	8.4
Hungary	315.3	8.3
Malta	13.7	8.5
Netherlands	592.4	6.9
Austria	253.3	6.2
Poland	1226.8	7.7
Portugal	357.6	7.1
Romania	386.1	4.2
Slovenia	72.7	7.4
Slovakia	162.0	6.8
Finland	164.3	6.7
Sweden	479.0	10.6
United Kingdom	2937.9	10.2

Source: Eurostat LFS, 2009

A10.4 Data of employment trends in Europe

Table A10.8 Trends in Employment per sector (1000), 1995-2009

Sector	1995	2000	2002	2004	2005	2006	2007	2008	2009
Agriculture, forestry and fishing	7653.9	6845.7	6597.6	6199.7	9640.9	9437.6	12209.2	11323.2	11124.6
Mining and quarrying	643.2	515.6	514.1	404.7	786.6	799.8	952.5	911.8	848.7
Manufacturing	31504.8	31608.9	31120.3	29873.8	36131.3	36403.1	39577.1	37901.0	35071.3
Electricity, gas and water supply	1357.9	1190.9	1213.2	1206.0	1712.6	1758.2	1956.4	3122.1	3225.4
Construction	11642.6	12464.5	12774.9	13089.8	15661.1	16239.6	17920.7	18538.8	17298.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	22308.8	23494.1	23638	24255.9	28856.3	29176.1	31540.2	31493.0	30773.4
Transport, storage and communication	8935.9	9671.8	10025.0	10085.3	12146.9	12395.2	13347.7	17729.3	17268
Accommodation and food service activities	5663.9	6462.2	6864.8	7098.3	8228.5	8664.9	9210.6	9326.5	9413.1
Financial and insurance activities	5201.6	5392.6	5456.6	5264.9	6129.9	6281.2	6541.1	6605.0	6599.7
Real estate, renting and business activities	10368.9	13757.1	15061.2	16291.0	18755.6	19625.0	21123.0	20132.7	20562
Public administration and defence; compulsory social security	11614.2	11997.1	12302.3	12183.7	14452	14613.7	15501.5	15683.8	15660.4
Education	9782.3	10565.9	11134.6	11821.6	14180.1	14422	15052.7	15437.3	15773.8
Human health and social work activities	13439.8	15093.1	15779	17133.9	19599.9	20028.8	20849.4	21185.6	21767.4
Other community, social and personal service activities	6700.2	7413.7	7733.2	7852.4	9455.0	9714.8	10158.4	8815.1	8718.9
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	1424.6	1688.7	1741.2	2026.6	2224.7	2310.4	2468.5	2539.9	2473.5
Activities of extraterritorial organisations and bodies	133.1	151.3	116	120.9	160.8	142.6	157.4	167.1	194.2
Total	**148727.9**	**158906.5**	**162920.4**	**165423.0**	**198697.7**	**202535.2**	**219070.3**	**221673.6**	**217813.1**

Source: Eurostat LFS, 2009

Table A10.9 Percentage of employment by sector, 1995-2009

Sector	1995	2000	2002	2004	2005	2006	2007	2008	2009
Agriculture, forestry and fishing	5.1%	4.3%	4.0%	3.7%	4.9%	4.7%	5.6%	5.1%	5.1%
Mining and quarrying	0.4%	0.3%	0.3%	0.2%	0.4%	0.4%	0.4%	0.4%	0.4%
Manufacturing	21.2%	19.9%	19.1%	18.1%	18.2%	18.0%	18.1%	17.1%	16.1%
Electricity, gas and water supply	0.9%	0.7%	0.7%	0.7%	0.9%	0.9%	0.9%	1.4%	1.5%
Construction	7.8%	7.8%	7.8%	7.9%	7.9%	8.0%	8.2%	8.4%	7.9%
Wholesale and retail trade; repair of motor vehicles and motorcycles	15.0%	14.8%	14.5%	14.7%	14.5%	14.4%	14.4%	14.2%	14.1%
Transport, storage and communication	6.0%	6.1%	6.2%	6.1%	6.1%	6.1%	6.1%	8.0%	7.9%
Accommodation and food service activities	3.8%	4.1%	4.2%	4.3%	4.1%	4.3%	4.2%	4.2%	4.3%
Financial and insurance activities	3.5%	3.4%	3.3%	3.2%	3.1%	3.1%	3.0%	3.0%	3.0%
Real estate, renting and business activities	7.0%	8.7%	9.2%	9.8%	9.4%	9.7%	9.6%	9.1%	9.4%
Public administration and defence; compulsory social security	7.8%	7.5%	7.6%	7.4%	7.3%	7.2%	7.1%	7.1%	7.2%
Education	6.6%	6.6%	6.8%	7.1%	7.1%	7.1%	6.9%	7.0%	7.2%
Human health and social work activities	9.0%	9.5%	9.7%	10.4%	9.9%	9.9%	9.5%	9.6%	10.0%
Other community, social and personal service activities	4.5%	4.7%	4.7%	4.7%	4.8%	4.8%	4.6%	4.0%	4.0%
Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	1.0%	1.1%	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%
Activities of extraterritorial organisations and bodies	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

Source: Eurostat LFS, 2009

Table A10.10 Immigration from EU countries, 1998-2008

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Czech Republic	:	5590	5135	5556	19593	31893	24151	17748	12970	24960	19308
Denmark	32766	32002	32129	32726	32122	32028	33110	35618	39302	43414	39821
Germany	456384	475236	471318	468867	464843	432640	479479	446429	424115	449865	444245
Estonia	:	:	:	:	:	:	630	900	1600	2878	2733
Spain	47574	63976	102441	113355	177779	274346	287995	294340	342222	426935	227110
Italy	52032	57610	72078	69894	93212	153185	145110	115363	110890	367619	251025
Cyprus	:	:	:	:	10411	10958	15506	17805	7027	9633	7581
Latvia	1377	509	403	459	619	719	1110	1389	1559	2628	2532
Lithuania	1223	1118	895	1359	1493	1879	3998	5157	5904	6456	6713
Luxembourg	9235	9563	9790	9976	9606	10317	10383	11935	12133	13768	14863
Hungary	9101	11879	13653	15010	14350	13735	14679	21057	12429	10751	19638
Netherlands	63967	63685	66897	65173	59554	53854	55249	56401	65414	79789	95573
Austria	:	:	:	:	53124	53860	61196	60289	58833	67162	70634
Poland	7251	7134	6967	6347	6356	6592	8417	8461	9387	13580	38951
Slovenia	1212	1498	1207	1582	2017	1906	1981	3767	3506	4335	4701
Slovakia	:	:	:	1767	2027	3979	7624	6342	7398	10600	9873
Finland	8356	9240	10603	11253	11411	11718	12981	13205	13951	15328	16554
Sweden	23747	25849	28748	30771	31339	30306	30865	32353	40834	47301	48242
United Kingdom	:	:	:	:	:	:	196948	211918	218713	243287	282800

Source: Eurostat LFS, 2009

Table A10.11 Mapping regulated professions (by rank) to sectors

NACE	Profession	Rank	Number (whole period)
A Agriculture, forestry and fishing 01 – 03			
B Mining and quarrying 05 – 09			
C Manufacturing 10 – 33			
D Electricity, gas, steam and air conditioning supply 35	Electrician / senior electrician / specialised electrician Electrical equipment/appliances contractor/repairer/installer	9 39	4,732* 762
E Water supply; sewerage, waste management and remediation activities 36 – 39			
F Construction 41 – 43	Electrician / senior electrician / specialised electrician Joiner/carpenter master builder Painter-decorator Mason/Bricklayer Building engineer Plasterer Tiler Civil engineer	9 21 22 23 25 29 32 35 36	4,732* 1,557 1,503 1,485 1,470 1,147 927 892 878
G Wholesale and retail trade; repair of motor vehicles and motorcycles 45 – 47			
H Transportation and storage 49 – 53	Ship's desk officer class 1 merchant marine Fork lift truck operator Ship's deck officer class IV / 3rd mate	27 38 41	1,262 786 685
I Accommodation and food service activities 55 – 56			
J Information and communication 58 – 63			
K Financial and insurance activities 64 – 66			
L Real estate activities 68			
M Professional, scientific and technical activities 69 – 75	Engineer Surveyor	15 37	2291 878
N Administrative and support service activities 77 – 82			
O Public administration and defence; compulsory social security 84			
P Education 85	Secondary school teacher Primary school teacher Kindergarten/nursery teacher University teacher/professor University lecturer	1 6 24 28 30	31,424 8,585 1,478 1,254 1,036
Q Human health and social work activities 86 – 88	Physiotherapist Second level nurse Social worker Psychologist Occupational therapist Radiographer / radiotherapist Medical/biomedical laboratory technician Speech and language therapist Midwife	4 5 11 14 16 17 18 19 20	13,483 9,614 4,135 2,540 2,079 2,047 1,673 1,649 1,631

	Childcare worker Optician (dispensing optician) Dietician	26 34 40	1,361 904 758
R Arts, entertainment and recreation 90 – 93			
S Other service activities 94 – 96	Hairdresser / barber / wig-maker Masseur / massage therapist / spa therapist	31 33	962 921
T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use 97 – 98			
U Activities of extraterritorial organisations and bodies			

Source: Professional Qualification Database (accessed 7.7.11)

Excluding professions ranked: #2 (nurse); #3 (doctor); #7 (dentist); #8 (lawyer); #10 (vet); #12 (architect)'; #13 (pharmacist); #20 (midwife)

A10.5 Forecasts

Table A10.12 Forecasting models employed by Member States

Country	Forecast period	Forecasting system	Data sources	Responsibility	Info
Austria	2006-2012	Short term model based forecasts conducted research institutions	Employer surveys Ad hoc sectoral or occupational studies Vacancy data held by national employment organisation	Austrian public employment service	By region, skill level, sector
Belgium	No forecasts available	n/a	n/a	n/a	n/a
Bulgaria	No forecasts available	n/a	n/a	n/a	n/a
Czech Republic	2007-2016	Two national forecasting models employed, which use the E3ME and Hermin macroeconomic model	Past trends Labour Force Survey (LFS) Data on skills structure of the unemployed Data on education throughput	Forecasting led by the Ministry of Labour and Social Affairs	By skill's level
Denmark	2009-2018	Range of approaches including quantitative econometric modelling and qualitative research and modelling	Education participation data Employer survey Unemployment statistics	Conducted by national agencies (Ministry of Finance and Education) and also independent research institutions	By skill level and profession
Germany	Up to 2025	Two approaches are employed. A desegregated macro-model called INFORGE is used to provide long term labour forecasts. This is complemented by skills modelling based on KMK which rely on trend extrapolation while applying skills related variables.	Sector level forecast data GDP growth forecasts Average rates of change	Federal Labour agency, Lander ministries for education and culture	By sector, skill level and profession
Estonia	2011-2017	HERMIN model employed to provide national level data	LFS Employer data from Estonian Tax and Customs Board, Sectoral stock and flow indicators from employers' unions	Ministry of Economic Affairs and Communications	By skill level and profession
Finland	2004-2030	PT labour force model developed by the Ministry of Employment and the Economy	Population forecasts, GDP projections Trend growth in labour productivity	Ministry of Employment and the Economy	By 12 sectors and 48 subsectors and occupation level
Ireland	2005-2020	HERMES model (primarily medium term, but with some long term forecasts	Trend employment statistics National Household	Expert Group for Future Skills Network	By sector, occupation level

			Survey		
Greece	No forecast available	n/a	n/a	n/a	n/a
Spain	Short to medium term	No national forecasting system. Rather, forecasts are produced by independent observatories at a regional level	Employment trends Vacancy data	Regional observatories	By occupation level
France	2005-2015	Broad range of approaches are employed by sectoral observatories	Employer survey Expert qualitative feedback	Sectoral regional observatories	By occupation and sectoral level
Italy	5 year forecasts	ISFOL econometric model	Employer surveys Survey on short term hiring forecasts	National Institute for Vocational Training	By sector and profession
Cyprus	2010-2020	HRDA Forecasting model	Employment data Employer and social partner survey	Human Resource Development Authority (HRDA)	By sector and profession
Latvia	2009-2013	Scenario based projections, expanding from employer survey	Employer survey	Ministry of Economics	By sector and profession
Lithuania	No labour forecasts	n/a	n/a	n/a	n/a
Luxembourg	No labour forecasts	n/a	n/a	n/a	n/a
Hungary	To 2015	No national model. System is based on forecasts by employers	Employer survey	Public employment Service	By profession, sector
Malta	To 2020	No fixed model. Forecasts conducted by independent research institutions	Labour force surveys Employment data	National Statistics Office	By Sector, profession
Netherlands	2008-2013	No fixed model. Forecasts conducted by a range of organisations	Employer Surveys Expert groups on future skills needs Graduate survey	The Centre of Work and Income	By sector and occupation
Poland	No labour forecasts	n/a	n/a	n/a	n/a
Portugal	No labour forecasts	n/a	n/a	n/a	n/a
Romania	No labour forecasts	n/a	n/a	n/a	n/a
Slovakia	2010-2015	Financial Policy Institute econometric model	Employer survey Employment statistics	Financial Policy institute	By employment, sector
Slovenia	No national forecasts	n/a	n/a	n/a	n/a
Sweden	To 2030	National forecast model	Cohort analysis Employer Survey	Statistics Sweden	By educational requirements
UK	2007-2017	CE Macroeconomic model and IER occupation employment model (OCCMOD)	Trend data, Employment statistics LFS	UK Commission for Employment and Skills	By sector and occupation level

Source: EEO Autumn Review, EEO, 2008; country labour force surveys

Table A10.13 Proportion of sector workforce by age category for 2010

	Age range			
Sector	**15-24**	**25-49**	**50-64**	**65+**
Mining and quarrying	4.57%	70.17%	24.53%	0.00%
Water supply; sewerage, waste management and remediation activities	5.24%	64.36%	29.62%	0.00%
Energy	5.83%	62.98%	30.78%	0.00%
Real estate activities	5.98%	59.13%	30.56%	4.34%
Arts, entertainment and recreation	15.11%	58.80%	22.86%	3.23%
Other service activities	11.59%	61.41%	23.96%	3.03%
Information and communication	8.43%	73.84%	16.73%	1.00%
Financial and insurance activities	6.76%	69.87%	22.71%	0.65%
Administrative and support service activities	9.88%	64.39%	24.03%	1.70%
Accommodation and food service activities	20.63%	60.47%	17.43%	1.47%
Professional, scientific and technical activities	6.57%	68.49%	22.02%	2.92%
Transportation and storage	6.02%	64.90%	27.82%	1.26%
Agriculture, forestry and fishing	7.54%	50.93%	31.74%	9.79%
Public administration	5.29%	64.23%	29.78%	0.69%
Education	4.91%	62.30%	31.36%	1.43%
Construction	10.35%	65.79%	22.76%	1.11%
Human health and social work activities	7.65%	62.05%	28.87%	1.43%
Wholesale and retail trade; repair of motor vehicles and motorcycles	14.32%	64.06%	20.00%	1.62%
Manufacturing	8.18%	66.83%	24.13%	0.86%
Total - All NACE activities	9.22%	63.94%	24.98%	1.85%

Source: Eurostat Labour Force Survey, 2011

A10.6 Detailed analysis of migration patterns among occupations with a high number of applications for recognition under the general system

A10.6.1 Secondary school teachers

Somewhat surprisingly, Spain provided a high number of applicants to most European countries, with the second highest number of applications for recognition in the UK and the third highest in Germany coming from Spain. In the UK, the home country which provided the most applications for the recognition of qualifications was Poland, and in Germany neighbouring countries Austria and Poland provided the highest number of applicants in 2009. In the Netherlands neighbouring home countries provided the highest number of applications for the recognition of qualifications. However, the proportion of applications for the recognition of qualifications for secondary school teachers in Europe was generally not concentrated on certain home countries for most host countries in 2009.

An exception to this conclusion was that Romania had 89% of its applications for the recognition of qualifications from Hungary, a neighbouring home country. However, it also received no applications for recognition of qualifications from Bulgaria, its other EU neighbour (despite 198 Bulgarian secondary school teachers to applying to have their qualification recognised in other host countries).

Table A10.14 Applications to top three countries by country qualification obtained in, Secondary school teacher, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
UK	2,562	PL	970 / 38%	ES	334 / 13%	51%
DE	1,935	AT	437 / 23%	PL	346 / 18%	41%
NL	351	BE	91 / 26%	DE	81 / 23%	49%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.2 Primary School teachers

The movement of primary school teachers to the most popular host countries in Europe mainly fits into the two main categories of movement, from neighbouring home countries or migration from Eastern Europe to Western Europe. Sweden, the most popular host country for Primary School teachers, did not have a home country which provided a large proportion of the total applications. The Netherlands and Belgium receive the highest number of applications from neighbouring countries (particularly Belgium, who receive over 70% of their applications from the Netherlands and France). Italy receives a high proportion of applications from Romania and Spain.

Additionally, there is a relatively high proportion of primary school teachers' applications to Denmark from the UK (36%), which is surprising given the Danish language is not a commonly taught subject in the UK, and the lack of a land border between the countries.

Table A10.15 Applications to top four countries by country qualification obtained in, Primary school teachers, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
SE	129	DE	27 /21%	PL	18 / 14%	35%
NL	98	BE	23 / 23%	DE	20 / 20%	43%
BE	54	NL	22 / 41%	FR	17 / 31%	72%
IT	54	RO	20 / 37%	ES	18 / 33%	70%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.3 Physiotherapists

The three host countries with the highest number of applications for the recognition of qualifications for physiotherapist received most of their applications from either neighbouring countries or from Eastern European countries. In Germany, over three quarters of applications came from the Netherlands and Poland, and in Austria 81% of applicants came from Germany. There is no overall pattern of the type of home country which provides the majority of applications for recognition of qualifications in physiotherapy to the UK.

Table A10.16 Applications to top three countries by country qualification obtained in, Physiotherapist, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
DE	321	NL	170 / 53%	PL	85 / 26%	79%
AT	307	DE	248 / 81%	SK	26 / 8%	89%
UK	151	PL	44 / 29%	IE	24 / 16%	45%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.4 Second Level Nurse

The pattern of applications for recognition of qualifications for second level nurses is dominated by applications to host countries from neighbouring home countries. Belgium, Luxembourg and Denmark, the three host countries receiving the highest number of applications for recognition of qualifications, all receive the vast majority of applications from neighbouring home countries. The top two applicants represent over three quarters of the total number of applications in all of these host countries, suggesting a very high concentration of applications come from neighbouring countries.

Table A10.17 Applications to top three countries by country qualification obtained in, Primary school teachers, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
BE	152	FR	69 / 45%	NL	47 / 31%	76%
LU	124	FR	65 / 52%	DE	54 / 44%	96%
DK	106	SE	85 / 80%	DE	6 / 6%	86%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.5 Social Worker

In the UK, the host country with the largest number of applications for recognition for social workers, there is no pattern to the type of home country which provides a large proportion of the total applications made, with applications for recognition coming from 24 different countries. However, the other two host countries receiving a large number of applications for the recognition of qualifications (France and Luxembourg) receive nearly all of their applications from neighbouring home countries.

Table A10.18 Applications to top three countries by country qualification obtained in, Social Workers, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
UK	442	PL	76 / 17%	RO	64 / 14%	31%
FR	49	BE	41 / 84%	ES	2 / 4%	88%
LU	41	BE	34 / 83%	FR	3 / 7%	90%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.6 Radiographer / radiotherapist

The host countries which receive most applications for the recognition of qualifications for radiographers and radiotherapists are Germany, Italy and the UK. Germany and Italy receive the majority of their applications from Eastern Europe. There is no pattern to the type of home country which provide a large proportion of applications for recognition in the UK, with 14 different home countries making up the 27 total applications.

Table A10.19 Applications to top three countries by country qualification obtained in, Radiographers / Radiotherapists, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
DE	34	PL	22 / 65%	RO	3 / 9%	74%
IT	32	RO	17 / 53%	BG	7 / 22%	75%
UK	27	PL	5 / 19%	PT	5 / 19%	38%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.7 Medical / Biomedical Technician

The two host countries which receive the most applications for the recognition of qualifications are the UK and Germany. However, there is not a pattern to the type of home country which supplies a particularly large proportion of the total applications to the UK. Poland, a neighbouring home country, represents a large proportion of all applications to Germany (nearly half of all applications). Denmark receives the majority of its applications from neighbouring home countries, Sweden and Germany.

However, as this profession is lower down in the rankings than the professions discussed in the early sections, some of the numbers are small and therefore inconclusive.

Table A10.20 Applications to top three countries by country qualification obtained in, Medical / Biomedical Technicians, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
UK	37	PL	8 / 22%	IE	5 / 14%	36%
DE	36	PL	16 / 44%	ES	4 / 11%	55%
DK	32	SE	22 / 69%	DE	5 / 16%	75%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.8 Psychologist

In France and Belgium, the two host countries with the highest number of applications for recognition of qualifications for psychologists in 2009, the majority of applications came from neighbouring countries. For the UK, the largest proportion of applicants came from Italy (44%), a country which is not a close neighbour and does not share a language, which is surprising. However, caution is advised again as these are relatively small figures.

Table A10.21 Applications to top three countries by country qualification obtained in, Psychologists, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
FR	102	BE	69 / 68%	RO	7 / 7%	75%
BE	68	NL	24 / 35%	FR	23 / 34%	69%
UK	25	IT	11 / 44%	IE/ES/PT	2 / 8% (each)	52%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.9 Civil engineer

In the civil engineer profession, the most popular host countries receiving applications for recognition of qualifications were the UK, Poland and the Czech Republic. This profession showed some of the least expected movement. For example, the UK receives most applications from Italy and Greece, neither of which are neighbouring countries or home countries which would be expected to provide a lot of labour supply. Poland receives most applications from Ireland, which is surprising, given that Ireland is not a neighbouring country and does not share a similar language to Poland, and from Germany, a neighbouring home country. The Czech Republic receives nearly all of their applications from Slovakia, a neighbour with a similar language.

Table A10.22 Applications to top three countries by country qualification obtained in, Civil engineers, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
UK	54	IT	20 / 37%	GR	11 / 20%	57%
PL	51	IE	21 / 41%	DE	19 / 37%	78%
CZ	34	SK	32 / 94%	IT /DE	1 / 3% (each)	94%

Source: Professional Qualifications Database, accessed 05/08/2011

A10.6.10 Tourist guides

There were a small number of tourist guides applying for their qualifications to be recognised in 2009. Nearly all of the applications were made to three countries (Italy, Lithuania and Portugal); therefore some analysis could be done. This shows that applications for qualifications to be recognised in Italy came from a wide range of home countries with a small number of applicants, with no particular pattern emerging. In Lithuania, all applicants except for one came from Latvia, a neighbouring country.

Table A10.23 Applications to top two countries by country qualification obtained in, Tourist guides, 2009

Host country	Total applications	Qualification obtained in	Number / % of total	Qualification obtained in	Number / % of total	Top 2 as % of total
IT	34	HU	6 / 18%	FR	5 / 15%	33%
LT	16	LV	15 / 94%	BE	1 / 6%	100%

Source: Professional Qualifications Database, accessed 05/08/2011

Annex 11 Timeline for NQF development in Member States

	Pre 2003	2003-2004	2005-2006	2007-2008	2009-2010
Implementation					
Ireland	1999 – NQF proposed in Qualifications (Education and Training) Act 2001 - National Qualifications Authority set up.	2003 - NQF launched.	2006 - National Qualification Authority publishes criteria for inclusion of international and professional awarding body awards in the NQF.	2007 – Self-certification of the compatibility of the Irish NQF with the QF-EHEA completed	2009 – Referencing report adopted by the EQF Advisory Group (the first EU Member State to reference its national framework of qualifications to the EQF).
UK	2001 – SQCF implemented (framework in Scotland)		2006 – SQCF (framework in Scotland) is organised as a company, which is a unique solution in Europe.	2008 – The Qualifications and Credit Framework and equivalents were formally adopted (E/NI/W).	
France	2002 – Establishment of the National Committee on Vocational Qualifications.				2009 – Note sent to Prime Minister on the revision of the 5-level structure (introduced in 1969) to an 8-level structure.
Official establishment and adoption					
Lithuania			2006 – The project, Creation of the national system of qualifications of Lithuania was launched and started work on the NQF. 2006-2008 – Work undertaken to address conceptual challenges involved in setting up an NQF.	2008 – National Authority of Qualifications established to coordinate the implementation of the NQF.	2009 - National Authority of Qualifications abolished following revised priorities of the Parliament elected in 2008. 2010 – Government adopted a Decree on the QF and implementation of the NQF started.
Estonia	2001 – Estonian Qualification Authority established.			2007 – QF for higher education which reflects the principles of the European higher education area is adopted. 2008 – Amended Professions Act came into force.	2009 - Estonian Qualification Authority is designated to act as EQF national co-ordination point.

Pre 2003	2003-2004	2005-2006	2007-2008	2009-2010
Belgium – FL	2003 - A QF for higher education linked to the Bologna process is developed and implemented.			2009 – Flemish Parliament and Government in Belgium adopts an Act, introducing a comprehensive QF.
Denmark		2006 – Inter Ministerial group set up to start work on the framework.	2006-2007 – QF for higher education established.	2009 – Outline for NQF agreed by stakeholders and published by Ministry of Education. 2010 – NQF implemented.
Malta		2005 – Establishment of Malta Qualifications Council (MQC).	2007 – Consultation ends with stakeholders with the production of 4 documents on the MQF.	2009 – First member state to prepare a comprehensive report addressing the EQF and QF-EHEA. 2010 – MQC transformed to Quality Assurance and Qualification Agency
Czech Republic		2005-2008 – Projects initiated to help develop the NQF and NQS. 2006 – Act passed on the Verification and Recognition of FE results.		2009 – Project Q-Ram started to develop a QF for higher education. Development and implementation of NQF and NQS (NSK2) project started.
Portugal			2007 – Decree Law No 396/2007 adopted for the basis for development of a QF.	2009 – Outline of framework including levels and level descriptions published. 2010 – Set up of framework complete.
Consultation and testing stage				
Finland		2005 – QF for higher education in line with Bologna process developed.	2008 – Work on framework began.	2009 – Decree to regulate the framework presented to Finnish Parliament. Consultation complete. 2010 – National framework for qualifications/ competencies developed.

	Pre 2003	2003-2004	2005-2006	2007-2008	2009-2010
Germany			2005 – NQF for higher education sector established.	2007 – Preparations for the Framework started.	2009 – Proposal for NQF published. 2009-2010 -Piloting of qualifications from selected sectors to link exemplarily qualifications to the level of DQR. 2010 – Self-referencing report of the NQF for higher education to be compatible with the QF-EHEA published.
Austria				2007 – NQF development started after EQF consultation process. 2008 – Consultation and findings presented to National Steering Group.	2009 – Policy paper produced outlining the strategy for the implementation of the Austrian NQF.
Luxembourg				2008 – New Law adopted providing the basis for the NQF on vocational education and training using the learning outcomes approach.	2010 – Agreement of a set of descriptors covering all levels and types of education and training. Consultation process with main stakeholders. 2009 – First outline of NQF presented to Council of Ministers.
Greece					2010 – Consultation paper on NQF prepared and presented for open consultation. New Law on lifelong learning adopted to provide the legal framework for NQF implementation.
Conceptualisation and design					
Slovenia	2000 – National Professional Qualifications Act creates the national register of occupational standards and the register of assessment qualifications catalogues for national vocational qualifications (NVQs).	2004 - Higher Vocational Act creates register for Higher VET.	2006 – Vocational Education and Training Act creates register of national VET programmes. Decree on the introduction and use of the classifications system of education and training (Klasius) adopted by the Slovenian government,		2009-2012 - the Slovenian qualifications framework project (jointly financed by ESF) supports the developments towards an NQF.

	Pre 2003	2003-2004	2005-2006	2007-2008	2009-2010
Spain	2002 – Act on Qualifications and Vocational Training.		2006 - Act on Education; Royal Decree establishing vocational training general organisation within the education system.	2007 – Amended 2001 Universities Act; Royal Decree on establishing the organisation of official university education.	2009 - Royal Decree for the recognition of professional competences acquired through professional experience. Development work begins and The Ministry of Education presents a first draft of the NQF to stakeholders.
Italy	2003 – Work to establish a national qualifications and certifications framework begins.		2005 - Work on QF for higher education begins. 2006 – A common methodology with learning outcomes approach is taken. An inventory of regional standards of competences was prepared and method piloted in two sectors.	2008 – First draft of QF for higher education complete and consultation with the higher education sector,	2010 – Agreement between Ministry of Labour, Regions and Social Partners called Guidelines for Training in 2010. Implementation begins of reformed upper secondary education based on new levels defined by learning outcomes and reflecting EQF level descriptors. 3 pathways: general, vocational and technical.
Romania			2005 – QF for higher education in line with Bologna process and the EQF developed.		2009 – Methodology on the use of the national QF in higher education approved by the Order of the Minister of Education, providing the basis for implementation.
Belgium – FR			2006 – The French Community of Belgium starts work on a NQF linked to EQF.		2010 – Establishment of a national coordination point for EQF referencing.
Hungary			2006 – Conceptualisation of NQF begins.	2008 – Conceptualisation complete. Government decides to develop an NQF for lifelong learning and to join the EQF by 2013.	2008-2010 - First phase of NQF development taken forward
Poland				2007 – Draft proposal for QF for higher education finalised. 2008 – Work starts on NQF covering the whole education and training system.	2009 – Proposal submitted by working group examining the competences and qualifications for the labour market and developing a QF. 2010 – NQF steering committee adopts proposal as basis for designing and implementing the NQF.

Pre 2003	2003-2004	2005-2006	2007-2008	2009-2010
Slovakia			2008 - Amendment of Act No 5/2004 on employment valid since May 2008.	2009 – Government decides on EQF implementation. The Memorandum of Cooperation between the Ministry of Education and the Ministry of Labour, Social Affairs and Family signed. National steering group for referencing established and referencing process started.
Bulgaria			2008 – Ministry of Education task force set up to relate NQF to EQF.	2010 – Draft descriptors for VET levels of NQF designed – Draft NQF completed.
Netherlands				2009 – Preparations for an NQF begin and first proposal presented to Ministry of Education..
Latvia				2009 – Cabinet Ministers introduce a concept of attractiveness of VET, including linking the 5 existing qualification levels to the EQF.
Cyprus				2009 – Council of Minsters decides to create an NQF. 2010 – NQF draft and timetable for implementation prepared. Consultations take place. Law on NQF implementation is adopted.
Sweden				2009 – Government authorises the national agency for higher vocational education to develop a national QF

Source: Adapted from The Development of National Qualifications Frameworks in Europe, Cedefop (2010)

Annex 12 Next steps for NQF development in Member States

Member State	Next steps
Official establishment / adoption stage	
Belgium (FL)	In Flanders, the NQF was adopted in law since April 2010. The law makes reference to EQF. The referencing report is expected in summer 2011. There is also further work to develop education and training standards for professions based on competence profiles developed with social partners, linked to the EQF by the end of 2012.
Czech Republic	Referencing to the EQF expected to be completed in 2011 or 2012 at the latest. There is still work to develop benchmark for the fields of study in Higher Education, and the Higher Education framework has not yet been developed. It is therefore difficult to estimate when the EQF will be fully implemented.
Denmark	Establishment of the NQF almost implemented. Expected finalisation of referencing to EQF in May/June 2011. The referencing report will be published just after the final implementation date, and a national launch conference is expected to be held at the beginning of September 2011.
Estonia	Referencing to the EQF is in its final stages and adoption and referral to the EQF advisory group is expected in October 2011
Consultation and testing stage	
Austria	The next 1-2 years are crucial for the development of the NQF. Referencing to the EQF is at an early stage and is a slow process, but the EQF descriptors (based on knowledge, skills and competence) are being used as national descriptors. The final political decision on design was taken in 2009 after widespread consultation. Separate discussions took place during development: the higher education side (BA, MA and PhD programmes) and the vocational/ adult learning side. The major challenge is to avoid an NQF with parallel systems of education.
Finland	Awaiting government approval of the NQF in an educational bill. This is expected in June 2011 to enable a draft referencing report to be presented to the EQF advisory group at a similar time. However, there are elections due in April 0211, so the process may slip until the end of the year. The challenge has been implementing a reform that has required a response from higher education institutions to the centre after a period in which the thrust of educational reform has been for greater institutional autonomy and independence. There have also been debates about the extent to which learning outcomes are appropriate to the higher education sector, which has impacted on the timescales for development of the NQF (which is intended to encompass all sub-systems of learning).
Design stage	
Bulgaria	By the end of 2012, all certificates should contain reference to EQF level. The draft NQF is close to completion and national consultation will follow this (expected completion in September/October 2011). It proposes two sub-levels at each NQF level corresponding to general and vocational education. This will lead to a final draft for ministerial approval, which is expected to be presented to the EQF advisory group at the end of 2011 / start of 2012. It was initially envisaged in the context of a wider national programme to introduce a new structure to the schools system, which has been withdrawn from parliament (it is significant because it proposed to change the point at which secondary education was complete and therefore has an impact on corresponding NQF levels).
Cyprus	At an early stage of NQF development. A plan has been developed and working groups set up. The NQF development committee has accepted the eight EQF levels and the plan is for the NQF to be referenced to those levels. However, there is ongoing discussion the legal implications of the framework (whether a new law is required). The current aim is to complete the referencing report by early 2012.

Hungary	There has been a revision of the government decree relating to the development of the NQF (the grid for the NQF should have been submitted at the end of 2010 and the framework completed by the end of 2011), which has postponed the initial phase of the work by one year. Much work had already been undertaken in terms of how to map EQF levels to the Hungarian system (e.g. whether to split level 4 into two levels), but there is a hiatus while national discussions about the future direction for qualifications are ongoing.
Poland	The NQF is planned for introduction in 2012 – from the start of academic year 2012/13, following the introduction of the new Law on Higher Education in October 2011. The framework itself remains under development.
Slovenia	The public consultation on the NQF started in 2011 and will finish with a national conference in April 2011. Next steps will depend on the outcome of this consultation.
Conceptualisation stage	
Belgium (FR)	An overarching NQF covering al education sub-systems is being prepared. A concept paper is in place, to be validated by an expert group; The NQF will be referenced to the EQF. The positioning of qualifications at the different levels still remains to be done - with the exception of higher education qualifications for which it is clear that they will correspond to levels 6-7-8 of the NQF
Italy	The approach is to reference groups of qualifications directly to EQF levels. The key challenge is consistency with the Dublin Descriptors.
The Netherlands	The referencing process will formally start in the third quarter of 2010 and is expected to result in a draft referencing report to be presented to the EQF Advisory group at the end of the fourth quarter this year. It is emphasised that this referencing will be totally dependent on the introduction of a coherent set of learning outcomes-based levels covering the whole education and training system.
Slovakia	The NQF remains in development. In the context of formal qualifications, this is quite straight-forward as Slovakia has a simple qualifications system and the number of types of qualification is small. Therefore the structure of formal types of qualification can be used as the basis of referencing to eight levels. The challenge is how to introduce qualifications from outside of the formal system.
Sweden	The first phase of the NQF (including only formal qualifications) is expected to be adopted in the Autumn of 2011. If this runs to plan, the referencing to the EQF is expected by the first quarter of 2012. One of the key issues still to be resolved is whether the higher levels of the framework are going to be open to qualifications from outside of the Bologna structure.

Source: Education ministry interviews