



European
Commission

European Business Forum on Vocational Training

Challenges and trends in continuing development of skills
and career development of the European workforce

Survey Report

A report submitted by Danish Technological Institute in association with GHK, Technopolis Limited, 3s Unternehmensberatung GmbH

Education
and Training

Contents

1	Introduction.....	3
1.1	Methodology	3
1.2	The respondents in the survey	4
2	Challenges to competence development in European Businesses	6
2.1	Systemic challenges	6
2.2	Specific challenges related to professional skills.....	8
2.3	Sector-specific professional skills challenges.....	9
2.4	Challenges concerning transversal skills.....	10
2.5	Addressing the supply of skilled labour	12
2.6	Interim summary	13
3	Detecting skill needs.....	15
3.1	Individual level	15
3.2	Department level.....	16
3.3	Strategic level	17
3.4	Use of external sources and resources	18
3.5	Key persons taking part in competence assessment	19
3.6	Interim summary	20
4	Formal learning approaches.....	22
4.1	Hire talent or invest in competence development?.....	22
4.2	How do companies develop competences?	23
4.3	Formal career development programmes and talent management.....	26
4.4	Interim summary	28
5	Work-based learning approaches.....	29
5.1	In-job training	30
5.2	Peer learning	31
5.3	Mentoring, coaching and shadowing	32
5.4	Interim summary	34
6	External cooperation and public support	36
6.1	Utilisation of external partners and networks for competence development	36
6.2	Partnerships with external education providers.....	42
6.3	Use of public support.....	43
6.4	Interim conclusion.....	44
7	The role of EU in supporting competence development	47
7.1	European-level organisational responses	47
7.2	Enterprise responses	47
7.3	Sector-level responses	49
7.4	Geographical Trends.....	50
7.5	Interim conclusion.....	50
8	Main conclusions from the survey	53
	Annex 1: List of respondents	56
	Annex 2: Interview guide.....	59

1 Introduction

The present survey analysis summarizes the findings of 93 interviews conducted among large European enterprises (81) and a number of labour- and business associations (12) on challenges and practices related to competence development. The survey is part of the preparation for the first European Business Forum to be held in Brussels on 7 – 8 June 2012 under the heading: “Challenges and trends in continuing development of skills and career development of the European workforce”.

Context of the European Business Forum on Vocational Training

In December 2010, the European Ministers for Vocational Education and Training (VET), the European Social Partners, and the European Commission agreed that the European Commission should set up a EU-level *VET/Business Forum* (this title was later changed to European Business Forum on Vocational Training). The purpose of the Forum is to provide a high-level platform for exchanges between the education and training sector, businesses and policy makers on a wide range of topics related to excellence, attractiveness, and relevance of skills to labour market needs. Also, the platform will serve to promote partnerships between VET and employers.

The Forum will be a recurring event, where executives responsible for strategic HR in large European enterprises will meet with high-level national and European policy makers and stakeholders in the field of education and training to explore strategic opportunities and to discuss and exchange ideas and practices related to challenges of skills, innovation, entrepreneurship and other topics of mutual interest.

Purpose of the survey

The survey whose results are presented in this report is a central milestone in the preparations for the first upcoming European Business Forum on Vocational Training and serves multiple purposes:

- It serves as an important knowledge base for drawing up the agenda and identifying suitable speakers for the Forum,
- it provides the basis for identifying the Forum workshop topics,
- it provides input for the background notes which will serve to steer the debate on the most pressing issues related to competence development in workshops at the Forum, and
- together with the Forum conclusions it will provide important input for a final assessment of challenges, trends, solutions and best practices in the area of competence development in large European enterprises.

This survey analysis is one of three deliverables contained in the Interim Report, the others being: three workshop background notes; and a draft Forum agenda.

1.1 Methodology

The target group for the survey included three groups:

1. Large European enterprises with particularly interesting or innovative practices to internal competence development
2. Sector organisations representing sectors of key strategic importance to Europe headed into the future
3. Labour and industry associations providing views on the competence development issue from both the employer and employee side

The respondents were identified utilizing a three-dimensional respondent selection matrix developed to ensure proper balance according to geography, sector, and size. A long-list of 602 potential respondents was created and prioritised according to the above criteria. Subsequently, the team contacted the respondents in order of priority. Contact was initially made through an e-mail briefly describing the background and content of the interview and containing an accreditation letter from the European Commission. The respondent was free to pick a suitable date and time for an interview. In case of no response, two rounds of follow-up e-mails were sent, and in some high-priority cases, a phone-call was also placed to ensure that the person had received the request for an interview.

Prior to each interview, the respondents received by email the nine questions to be covered. The semi-structured interview guide ensured on the one hand that the same themes and questions were covered, while on the other hand leaving room for exploratory investigation of arising topics. The interviews were scheduled to last around 20 minutes, but a majority of them ended up lasting 25-30 minutes.

During each interview, notes were taken by the interviewer and entered directly into a template in a database system, which was shared across the consortium. This allowed for standardisation of the interviewing procedure and on-going knowledge sharing across the four-partner consortium. Following the completion of the interviews, database queries were used to generate ten survey response reports (one report per question containing all responses to that question plus a report containing general comments on the topic of competence development).

The interviews were carried out in the period from mid-December 2011 to mid-February 2012.

1.2 The respondents in the survey

The survey consisted of 93 qualitative interviews with high level representatives from large enterprises, sector organisations and labour- and industry organisations. Table 1.1 shows the distribution of interviewees across organisation types:

Table 1.1 Distribution, organisation types

Organisation type	Number
Large enterprises	81
Sector organisations	9
Labour and industry associations	3
Total	93

Ensuring proper geographical balance among the interviewed enterprises was of key importance. But instead of including companies from each of the 27 member states, the member countries were divided into ten groups based on their similarity on a number of different parameters, hereunder size, economy, education system, date of acceptance into the EU, etc. A target number of interviews were then assigned to each country group based on size and importance in a VET/business context and the interviews were carried out accordingly. Table 1.2 illustrates the spread of interviews across country groups:

Table 1.2 Distribution, country group (enterprises only)

Country group	Countries	Number
Germany	DE	14
Italy	IT	9
Scandinavia	DK, SE, FI	9
Benelux	NL, BE, LU	9

France	FR	7
UK	UK	7
Iberia	PT, ES	6
Large, new MS	RO, PL, HU	6
Baltic countries	EE, LV, LT	4
Small, old MS	AT, IE, GR	4
Mediterr. islands	CY, MT	2
Small Cen. Eur. countries	CZ, SK	2
Small, new MS	SI, BG	2
Total		81

The enterprises were selected among large European organisations known for their innovative and sophisticated human resource development practices. The identification of the respondents was partly done on the basis of recommendations from national authorities, industry organisations and the European Commission and partly via the networks of the consortium partners. The companies as well as the sector-, labour- and industry associations were chosen with an eye to covering the sectors, which are considered as strategically important to Europe headed in the future. Table 1.3 illustrates the spread of interviews across sectors:

Table 1.3 Distribution, sector (enterprises only)

Sector	Number
Advanced manufacturing	16
Banking and commerce	15
Automotive	11
Energy	9
Knowledge intensive business	6
ICT	6
Construction	5
Biomedical	4
Other	4
New materials	3
Steel	1
Creative industries	1
Total	81

2 Challenges to competence development in European Businesses

When asked to describe challenges with consequences for the skills situation in companies, the large majority of respondents pointed to current megatrends which in different ways present challenges to companies. These challenges are reflected in changes in the skill requirements at different levels of the organisation. The concrete impact on skill composition and particular skill requirements vary according to factors such as sector, size, whether the company is national or multinational, position in value chains etc.

Below, we first briefly introduce the current trends that the HR managers have identified as crucial drivers of the skill related challenges that companies are facing. Subsequently, we present and discuss the HR managers' views on the ramifications for skill needs and skill gaps of these challenges, and finally, we present and discuss the views of the HR managers on the supply of skills.

2.1 Systemic challenges

The grand challenges for companies that the HR managers identified fall under six categories: 1) globalisation; 2) the economic/financial crisis; 3) the ageing workforce; 4) rapid technological developments, 5) climate change, and 6) an accelerating rate of change.

2.1.1 Globalisation present a variety of challenges to companies' skill composition

Globalisation is often said to be a double-edged phenomenon which can have both an enabling and a constraining effect. Both views were expressed in the interviews with some respondents expressing that globalization has brought increased competition from especially the new economies, which threatens the European enterprises. However, a clear majority expressed the enabling view, that globalization primarily brings benefits such as new potential markets and lowered costs of production.

Exploiting globalisation requires an effort from the enterprises and especially their employees, who currently lack a number of skills needed for the enterprise to be able to properly exploit the advantages of working in a smaller world. Among these shortcomings are skills related to language and culture, which are of great importance – not only to multinational companies but to all large enterprises working across national borders. There is today a growing need for staff with a flair for international cooperation and effective communication across borders. There is also an increased focus among companies on creating an international organisational culture, which many consider a prerequisite for creating a natural sphere for the internationalisation.

Naturally, language is a key component in promoting international interaction, but the cultural aspect is probably even more important. A representative from a large ICT-enterprise explains:

'The language is often not the biggest problem, but to organize projects working together with other cultures can be quite a challenge. Many different cultures get together, Americans, Germans, Asians, and it can be difficult to integrate all the different approaches'

Finally, globalisation raises the need for internal mobility within the company to fully exploit the advantages of working on a global scale. Some respondents highlighted the need for European employees to be willing and able to be transferred to non-European offices. Others mainly stressed the importance of being able to better utilize the skills already existing in the non-European branches.

2.1.2 The financial crisis squeezes resources for competence development

The current crisis presents a number of challenges to almost every European company these years. The extent and significance of its impact does, however, vary across countries and sectors, resulting in different competence development approaches among companies for meeting these challenges.

One of the most frequent mentioned effects of the crisis is that it raises the need for a better understanding among employees of the business processes itself. With the enterprises experiencing lower turnovers, the staff member's ability to design and accomplish efficiency improvements on the job is appointed increasing importance. Another example is the ability to think innovatively about the production mode and the business area in general in order to adjust the company to the new demands and conditions.

The crisis also poses a more direct threat to competence development in that it has increased the focus on the bottom-line and the short-term achievements. According to the HR managers in a few enterprises, corporate management tend to be more oriented towards performance than towards development. A representative from an automobile manufacturing company said:

'The crisis has in the recent years been responsible for low investments in training. We've paid more attention to identifying potential savings, but here we have to change our strategy in the coming years for sure.'

The focus on savings rather than at the expense of development can pose a threat to the continuing education of staff. The resulting competence gaps can prove particularly critical in times of crisis, as the crisis in itself raise a number of new skills related requirements, or in the future recovery phase following the crisis. The need to reconsider and raise the attention towards competence development might already be urgent in certain sectors and geographical areas. A number of enterprises operating in Southern and Eastern Europe have already experienced the tendency of 'brain drain', where the most qualified employees leave for more popular Western European countries, which only makes training and competence development even more important.

2.1.3 An ageing workforce means pressure on recruitment and a need to retain knowledge

The ageing workforce that most European enterprises are witnessing these years raises two specific challenges. One is simply the shortage of supply resulting from the phenomenon of small younger birth cohorts replacing large older cohorts. To dampen a developing gap, many enterprises have already implemented strategies for attracting younger people. In addition to this quantitative matter, there are also a number of developing qualitative gaps, which will be elaborated in the following sections (2.2 and 2.4) describing specific skills-related challenges.

The other challenge relates to the generational shift which many enterprises are currently challenged by. For the generational shift to happen as smooth and painless as possible the process of handing over experience-based knowledge is pivotal. A clear challenge in this regard is that much of the important know-how is based on tacit knowledge, which per se is difficult to explicitate and communicate. Communication is generally an area that several companies mention as a challenge for intergenerational exchange. A German company describes this in the following way:

'Communication is also an important challenge in the context of generational change. Different generations are used to different types of communication, generation Y is for example used to be active in networks etc., which is more challenging for the older generation.'

An ageing workforce working in a constantly changing environment also raises a need for new kinds of training material. According to the HR managers, especially the digital and technical

progress pose a challenge for the senior generations, and several respondents expressed that special consideration should be shown for this group whose knowledge and huge experience is important to maintain and exploit.

2.1.4 Technological developments call for continuous upgrading of skills

The constant and dramatic technological developments taking place across all sectors puts constant pressure on the European enterprises. Not only do they open doors to new relevant products and services, they can also play a central role in making internal processes more efficient. The speed and efficiency in which the companies adjust to the new technological developments is a substantial competition parameter on the market. If the enterprise is not prepared or flexible enough to be able adjust its products, services or internal processes at a quick pace it risks losing ground to international competitors who are.

The tendency is seen across all sectors and countries but is primarily found in ICT companies and in manufacturing companies. The companies are challenged both in relation to recruiting new staff with the right types and levels of skills and in relation to developing the skills of the existing staff to accommodate these technological developments.

The ability to embrace new technologies and incorporate them into the everyday activities of the enterprise is hard to teach through traditional training measures. It is rather a mind-set that must be taught from a very early age and must be sustained through dynamic and forward-oriented leadership in the organisation. Some enterprises found it to be a challenge to promote this mind-set among senior employees.

2.1.5 Climate change presents new product, process and PR opportunities

The current climate changes have caused a general concern for the environment and an increased demand among customers for products promoting CO² neutral living such as hybrid cars, products made of disposable materials, products stemming from green production, etc.

Many enterprises have had to adjust to these new demands by promoting a green agenda in the organization and by developing a green mind-set among their staff members.

Apart from an actual adjustment in products and processes, enterprises also utilize greening to promote their image in the business.

2.1.6 Companies experience an accelerating rate of change

The above mentioned trends and challenges have resulted in the enterprises facing an accelerating rate change. Operating in a rapidly changing environment is a common and challenging condition mentioned by many HR managers. The constant changes in both product and service demand, regulatory and financial framework conditions, financial conjunctures, demographic changes etc. raise an urgent need for adjustability among staff members in all organisations. They must increasingly be able to manoeuvre in various contexts and keep developing their competencies to keep up with the acceleration in the business environment. It also poses a challenge at the corporate management level, as the companies must be highly aware of new tendencies, which should be accounted for in the future.

2.2 Specific challenges related to professional skills

The systemic challenges described above presents a number of specific skills-related challenges at company level. Some of these challenges relate to professional skills and will be described below, while others refer to generic skills such as leadership, communication,

business-orientation, etc. These will be described in section 2.4.¹

2.2.1 Companies are generally satisfied with the professional skills of their staff

When asked if the current staff of the company possesses the right type and level of skills to meet current and future challenges, the most common answer from respondents was affirmative. A key reason for this is that a large number of enterprises have kept a close eye on business and skill developments and have been successful in adjusting their skill-composition accordingly. A representative from a large enterprise in the banking sector explains:

'We generally have a satisfying level of professional competences. Competence development is not about filling out gaps. It requires constant attention to the level of competences and the development of measures to avoid gaps from growing.'

Although some enterprises did indeed express a need for filling substantial competence gaps, the overall picture is that the enterprises generally have what they need. However, it must be kept in mind that the interviewed enterprises were handpicked among the HR pioneers in Europe for having particularly interesting practices or innovative approaches to competence development. Thus, the findings are not surprising and one should be careful about expecting that this picture is representative for the European industry in general.

The challenge of skill utilisation

Most enterprises agreed that the overall level of skills in their organisation is currently sufficient. One Scandinavian enterprise even stated that their number one challenge is to fully exploit the huge potential and talent already present in the company.

The explanation given was that the enterprise has benefited from the increased supply of highly qualified labour created by the many layoffs in competing enterprises and now finds itself challenged by an oversupply of skills. The respondent stressed that the oversupply raises a need for good leadership, the ability to spot out and develop the individual talent and secure a steady development for the talented personnel.

2.3 Sector-specific professional skills challenges

In companies operating in the fields of advanced manufacturing, energy, construction and new materials where the current level of professional skills we not fully satisfying, a number of the challenges seem to be concentrated on engineering-related skills. They arise due to a number of factors of which the two most important are the emergence of new technologies and the increased interest in greening the production mode and the products. New technologies pose a challenge both to the development of existing staff as well as to recruitment:

'We find it challenging to keep up with the fast moving and evolving technology, and it requires a strong focus to keep track of the emerging technologies.'

Related to engineering, many enterprises saw a clear gap between the curricula taught in educational institutions and what is needed in the enterprises. As a consequence, a number of companies explained that they have to recruit employees without the right qualifications and

¹ Although respondents used a variety of expressions to describe these skills (occupational skills, technical skills, etc.) the term, "professional skills" will be used in the present analysis to describe skills needed for an individual to effectively function in his/her specific profession.

then carry out enterprise-specific training in order to build up the required skills and competences.

The green orientation is also an issue that is relevant for the automobile sector, where there is an increasing demand for CO₂-neutral and hybrid cars. In order for companies to switch to new technologies, new skills are required in fields such as electric engineering, fuels, engine construction and light materials. Enterprises from other sectors, especially in Northern and Western Europe also expressed the green agenda as being relevant in relation to greening their production mode as a way of securing a 'green image' for the enterprise.

Of the companies experiencing holes in their professional competences are also a number of banks. Most of them expressed that changes in legislation constantly raise a number of new skills requirements, which in part is a consequence of the financial crisis. This in turn has also challenged the consultancy and law-based companies working with the banking sector, which find themselves in new situations and difficulties. Some banks additionally face a lack of staff with specific skills related to financial risk management.

Also the biomedical industry is challenged by changing regulations as the sector is strictly regulated. It therefore requires much effort to keep track of the evolving demands and to develop corresponding competences and skills of the staff.

The ICT sector seems to be challenged by a lack of highly specific professional skills in areas such as ICT security, cloud computing and daily management of operations. Even though the enterprises have highly qualified staff which often holds master and Ph.D. degrees, far from everyone hold an ICT-oriented degree, which inevitably creates a shortage of specific e-competences. In addition, the ICT-sector seems to be one of the more challenged sectors when it comes to the demographic ageing as the business still faces a clear image problem and thus have difficulties attracting young talents.

2.4 Challenges concerning transversal skills

Whereas companies are generally satisfied with their in-house professional skills, the picture is far from the same when it comes to transversal skills². A majority of respondents noted considerable challenges concerning management and leadership skills, interpersonal skills, business development skills, and skills related to language and communication. These challenges will be further described below.

2.4.1 The nature of management and leadership skills is changing

The skill challenge which is mentioned by most companies across sectors and countries concerns the development of management and leadership skills. Several HR managers emphasised that we live and work in a constantly changing environment, and as a result, enterprises will in the following years require executives and managers with strong change management skills. The need to improve the flexibility of the company and to steer the organisation out of the crisis is among the most frequently mentioned needs related to change management.

A common view is that skills required for leadership functions have undergone important changes during recent years. A Scandinavian respondent describes this tendency:

'Traditionally, leadership was primarily about cost-controlling. Now there is more focus on being able to lead people efficiently - getting the most out of people's resources. Leading and driving performance while at the same time running a healthy business is what leadership is about.'

² Although respondents and current literature apply a long range of different terms (general skills, cross-cutting skills, soft-skills, overall skills, etc.), the term "transversal skills" will be used in the present analysis to describe skills that are not specifically related to one's occupation and thus could be equally relevant in other jobs as well.

The challenge is thus to adapt to this new trend at corporate level and adjust the skill sets of the leaders in the organisation to be more innovative and up to date.

Another leadership related challenge is the development of the management skills of senior staff recruited from technical staff. Many enterprises struggle with combining the highly specialised professional skills of for example senior technicians with the ability to lead a department or team. Frequently, the respondents observe that while technical expertise is present at a very high level, more personal or general skills are lacking among managers at the lower levels of the organisation.

Another frequently mentioned skill need was the ability to manage networks and projects – ways of working which are becoming increasingly common. Finally, the effect of globalisation can also be said to influence the leadership dimension, as it increases the need to promote and manage a multi-cultural working environment.

2.4.2 Interpersonal skills

Another challenge frequently mentioned by HR managers is a lack of interpersonal skills such as presentational and communications skills and the ability to teamwork. Next after the lack of appropriate leadership skills described above, this was the most frequently mentioned challenge. One of the reasons for this seems to be that most graduates hired by the companies are well-educated and hold high academic degrees but often lack the ability to work effectively in an organisation and function in a team. This is particularly (although not exclusively), a challenge for enterprises operating in Southern and Eastern Europe. The relevance of possessing both professional and interpersonal skills and their interdependence was mentioned by a substantial number of respondents. One representative from a sector organisation said:

‘The ability to use technical skills to create added value simply requires solid transversal skills. The ability to combine the two skills is really the key (to success).’

2.4.3 Business-related skills and adjustability

Lack of business orientation among the enterprises’ employees and in the labour market was highlighted as a major challenge by respondents across all sectors and countries. The specific skill needs are quite diverse and sector-specific, but include:

- understanding of the organisation, its’ structure, purpose and surroundings
- understanding of the market context in which the enterprise operates
- the ability to think innovatively about products and procedures;
- customer orientation;
- ability to anticipate future demands and skill needs; and
- the ability to adjust to new demands.

The latter is particularly important, regardless of whether new demands are created by legislation and regulation or by new or changing market demands. The ability to adapt to an ever-changing business environment is seen by respondents to be of paramount importance at corporate as well as individual level, and many respondents said that the staff’s flexibility and openness to change is a prerequisite for working in a large enterprise today.

Why are transversal skills a bigger challenge than technical skills?

The survey points to a clear conclusion: With only a few exceptions, HR managers generally feel that their company does quite well when it comes to professional skills,

whereas transversal skills are generally lacking. But why is that?

An HR manager from a German manufacturing company provided an explanation noting that they are continuously on the lookout for technical skills, meaning that the demand and supply of these skills is constantly monitored and that early action is taken to avoid gaps.

Hence, while boards and executives view the core professional skills of their company as obvious prerequisites for a productive business, transversal skills tend to be down-prioritized and only receive attention when a gap is imminent or has already materialised.

2.4.4 Language and communication skills

The internationalisation aspect was a recurring theme in the interviews, although not mentioned as frequently as the preceding topics. It was generally believed that internationalisation increases the importance of staff possessing high levels of relevant language skills. The interviews demonstrated that particularly Eastern and Southern European countries tend to lack sufficient English and German language skills. Whereas most respondents from Northern or Western European enterprises did not appear to perceive insufficient language skills as a general problem, one French company mentioned that they are facing new kinds of language skill requirements associated with expansion of their business:

'Today English is not sufficient when operating on a global scale. We need to develop new language competences in our staff. In countries such as China and Russia it is difficult to enter the market if you do not know the language.'

In addition to the foreign language skills another issue is intercultural communication, which is of increasing importance in companies operating on a global scale. A number of HR managers described how working in teams across borders as well as tasks related to expanding business into new markets affect the need of cultural understanding. The staff as well as the company as such must thus be able to cooperate with and communicate to partners and potential clients in countries around the world with different cultural values.

Finally, the HR managers stressed that the provision of general communication skills such as presentational skills, internal communication and problem solving, external communication skills and customer approach is insufficient. The lack is particularly related to the hiring of new personnel and many graduates do not possess the general skills, which in many instances is developed on the job.

To sum up, there should be no doubt that the general skills are most often the pending gaps in the enterprises, who broadly speaking though are satisfied with the level and types of skills currently present in their organisations. Among the potential gaps the leadership dimension and what we have labelled interpersonal skills are of the greatest importance to the enterprises.

2.5 Addressing the supply of skilled labour

Having analysed the overall trends in the challenges faced by the large European enterprise one question still needs to be addressed; namely how do the companies perceive the supply of skills required to avoid future competence gaps or to remedy existing gaps? As mentioned above, there is a quantitative as well as a qualitative supply gap, which are both introduced below. In addition, there is also the issue of retaining existing staff.

2.5.1 Quantitative shortages in supply

The quantitative supply gap stems from a discrepancy between the size of the retiring and the newly educated generations. As the European population is ageing and the smaller young cohorts are replacing the larger senior cohorts the enterprises engage in a fierce competition for qualified labour. In this competition the image of a sector or a specific company is increasingly important.

Many companies and sector organisations have therefore taken active PR measures towards attracting younger people. Particularly enterprises relying on competences in maths and science face a challenge in this regard, since educations centred around these subjects have experienced decreased popularity in recent years. Among the enterprises in the ICT sector, several of the interviewed companies expressed that the image of the sector (driven by geeks, isolated work, cables and hard drives, male-dominated, etc.) creates difficulties in attracting young people and especially younger women.

2.5.2 Qualitative shortages in supply

The second and qualitative dimension of the supply-issue relates to shortcomings in competences and employability of the labour force, including newly graduated students from VET schools and universities. As already mentioned, several companies express that many graduates lack transversal skills – in particular interpersonal skills, team skills, and communication and presentation skills.

In addition, some respondents and a couple of sector organisations highlighted a general mismatch between what the graduates are taught and what they need when entering a job. The cause, according to a representative from a sector organisation, is that the education providers have a hard time keeping up with the pace of the industry, and therefore tend to educate the graduates of tomorrow in the skills needed in the industry yesterday. Another frequently mentioned cause was mentioned to be the lack of collaboration between the business world and the education institutions. Some expressed the view that many education institutions have their own views on what their graduates should be able to do in the future but do little to actually ask their future employers. On the other hand, only a few of the interviewed enterprises seemed to engage in deep-rooted and on-going collaboration with education institutions on developing curricula, communicating future competence needs or similar measures.

2.5.3 Retention of staff as a solution to labour and skill shortages

Although the companies place a clear focus on attracting new employees with the right sets of skills and competences, a pressing issue among them is also about retaining existing staff. Retention was primarily mentioned to be an issue among Southern European enterprises struggling to accommodate the financial demands of the employees and thus searching for new and non-financial ways of retaining their staff.

Globalisation and the increased competition stemming from it has also created a fierce competition in certain industries for the most qualified staff, and has in some companies led to a 'brain drain' at the higher levels of the organisation.

2.6 Interim summary

The preceding analysis has presented the perception of the current skill status and skill related challenges among a large number of large European enterprises and relevant sector organisations. The respondents' insight in skill supply and demand was generally most acute with respect to the managerial and higher technical staff, whereas their insights concerning 'shop floor' skill challenges was limited, as recruitment and skill development at these levels are usually the responsibility of line managers at lower levels.

With this caveat, the survey clearly indicates that the companies are generally satisfied that they have access to the right levels and types of professional skills. The survey indicates that large European enterprises view competence development to be an on-going process where the focus should be upon constant monitoring to ensure that skills match job requirements - rather than filling out gaps.

The responses however also strongly suggest that a large share of companies experience insufficient transversal skills in their staff. In particular, the respondents pointed to management and leadership skills, business-related skills and language and communication skills as the most urgent challenges.

3 Detecting skill needs

Companies, and in particular large companies, recognise the asset that staff skills and competences constitute for their business and its growth. Skills and competences matter at all levels of a company structure, from workers through middle-management to leadership. Even though, the process through which skills gaps are identified and the measures in place to address the gaps can differ depending on ones' position in the company structure as will be shown in the below analysis.

The companies surveyed were questioned about their approaches to identify current and future skills needs, the extent to which they used external sources or support to do so and whether and how information on needs gathered fed into development strategies.

The analysis shows that the issue of identifying skills needs can be looked at from three different angles:

- At the level of the individual: What a given person needs to improve in order to do his/her job better?
- At the level of a department or another form of operational unit (e.g. office/branch): What are the skills and competences missing in order for this entity to meet its targets? and
- At a more strategic level: How can new skills/competences contribute to meeting strategic objectives, developing new products or markets or maintaining ones' position in the market?

After the discussion of these three levels of intervention, this section discusses the use of external courses in the process of skills identification and the different roles and types of staff who intervene in the process of skills identification.

3.1 Individual level

A vast majority of the companies interviewed had a process in place through which skills needs at individual level were regularly reviewed. This was either part of an annual (or semestral) appraisal process or of an employee development interview process. Some interviewees distinguished between the actual appraisal process which is focused on reviewing performance and the employee development interviews specifically focused on mapping individual's skills and competences and identifying areas for improvement. However, in all companies these two aspects (review of performance and competence needs) are clearly linked and in most cases they take place during the same discussion. In some companies these are part of the same process of a so-called 360degree review process that comprises setting objectives, taking action, collecting evidence and reviewing whether these were met (including in the area of competence development). A few interviewees mentioned that this process begins at induction when the person is recruited and continues throughout their whole career in the firm.

The individual appraisal processes typically involves managers or line managers and rarely the HR team. Several interviewees underlined the importance of self-assessment in this process. Through self-assessment, the appraisal becomes a learning process in itself as the person is encouraged to critically reflect on his/her own strengths and also limitations and to become aware of these.

A key tool in the review process is the use of tools such as job descriptions, competence frameworks or post profiles. Though these tools may have different names and the type of information they contain certainly differs, the majority of companies note that they have developed skills and competence descriptions for specific positions or groups of positions. These are used for all: recruitment, promotion but also for competence development once a person is in the position. In some companies these competence descriptions are accompanied with an ICT system which enables the organisation to map the competences of a given person but also to compile information at a higher level – that of a department or the company – and to use it for further analysis (see below).

Interestingly, interviewees from several multinational companies noted that job descriptions are common across the company/group. This may indicate a growing harmonisation of work organisation with the development of multinationals and possibly also an increasing uniformity in skills needs and requirements across countries.

Some of the interviews seem to indicate that there is possibly a difference between the way in which skills needs identification is carried out for blue collar workers and for higher levels of staff. For example one interviewee from a manufacturing production firm noted that the skills needs for blue collar workers are monitored predominantly based on levels of productivity and with the focus on creating efficiency. Skills needs are identified for groups of blue collar workers and these are linked to a change in production method, materials, etc. The individualised process of regular appraisals seems to be dedicated to staff in middle-management positions or above. On the other hand, in service companies interviewed, the use of individualised interview processes seems much more common for all levels of staff.

In some cases competence development path of managers or staff identified as 'high potential' follows a somewhat different process than the rest of staff. Longer terms (around three years) personal development plans are drawn based on analysis of one's skills with a clear view to progress further.

Depending on the sector and the nature of the service or product the company delivers, in some companies it seems that the career progression opportunities are often built into the individual appraisal and competence development process and there is continuity between competences needed for staff at different levels. This is in particular the case in firms in the banking sector or knowledge intensive services (such as consulting/advisory or other service providers). While in other firms, in particular those which have large industrial production plants employing large numbers of blue collar workers, the competence needs for blue collar workers are mainly focused on making sure they satisfy their current jobs, while those with management responsibilities are more expected to build a future career perspective and progression into their personal development plans.

Career domains rather than job descriptions

A large enterprise in the field of energy decided not to use job-specific competence and task descriptions but to develop a matrix of career domains and roles instead. This approach is seen as enabling greater flexibility for using personalised development plans. Career progression opportunities are a key element of this approach. While most companies rate their staff against their current positions, this company rates staff based on evolution aspirations.

Another strategy to identify needs and appropriate training/learning activities employed in many firms, in particular in the service sectors, is to also leave some space for individual initiative. Several companies indicated that staff can (and does) make suggestions to the HR department/team about future training needs. Such suggestions are then reviewed by a manager and/or HR to see whether they are relevant for the position of the person and depending on the result, the company can invest in such training. This bottom-up mechanism for skills needs identification also indicates that persons themselves have responsibility for their own career development and learning and need to be proactive in keeping themselves up to date with the business needs.

3.2 Department level

Information about skills/competence needs of a given individual is obviously of importance for the development of that specific person and less directly also of his/her immediate colleagues. However, there is also need to compile information at a higher level in order to develop a training strategy and to plan the provision.

According to most interviews middle-managers and managers have a key role in this process. Most companies have a process in place through which managers define the training needs of the teams they are in charge of. This information is conveyed to the HR teams which on this basis design the training offer. This can take the form of annual meetings but it can also be part of companies' annual plan and as such reviewed at highest levels, such as board meetings.

Three-step process to identify skills needs

A major French automotive company described an approach whereby current and future skills needs are identified based on a combination of three steps of actions:

- Firstly, top management in each company division identifies the competences needed for the different jobs;
- Secondly, the company identifies, together with a national-level sectoral observatory, the evolutions in demand for different jobs. This is used to develop a workforce grid; and
- Thirdly, the grid is used by each local unit to assess the state of play of current workforce.

Another channel to compile information from individual level to a higher level is through carrying out employee surveys. A few of the interviewees mentioned that such surveys were regularly implemented in their company by the HR team or in cooperation with a consulting firm. These help to identify how staff perceive their training needs as well as to explore interest in potential training offerings.

Those companies that use online appraisal system also use information gathered and recorded through this channel at the level of the individual to feed into department or company level training strategies. In some cases such information is used to produce competence matrices of the different departments (regarding the existing workforce) and to identify gaps. A minority of interviewees mentioned that it is also used to benchmark teams and staff.

In addition to these internal sources of information on skills needs, the demand for training can also be coming from the outside. In particular changes such as new or changing regulations or introduction of new procedures and tools immediately create a need for new knowledge and skills. It is frequently the role of managers to identify such changes in regulatory environment and their impact on ones' business but some companies also have staff whose role it is to ensure continuous compliance, including through identifying training needs.

3.3 Strategic level

Most of the above discussed solutions are used to identify skills needs in order for a company to continue running its existing business 'as usual'. In other words they are mainly based on the assumption that the staff (at different levels) in the company know what skills and competences are expected to deliver the planned outputs. The strategy to identify skills needs is hence seen as a reactive measure (it is reactive compared to the existing business needs) to support company running and growth. However, other strategies are needed to ensure that the company has the skills and competence to innovate, adapt and remain in touch with the evolving market.

Several interviews noted that in their companies there was a continuing process to identify future business developments and challenges and to keep the pace with the market and in-house skills are part of the response. They also noted that skills development strategies are part of their mid-term strategic planning.

Different means were mentioned for companies to try to assess future skills needs:

- Market information is a key source of knowledge on future trends. Companies gather and analyse data on the evolution of their business demand, arising and declining products or service offers and try to consequently adjust their skills sets. However, as one of the

- interviewees noted, the markets are changing rapidly and it is hard to ensure that training is provided just on time and in a most timely manner;
- Putting in place a technology watch function is another approach. Some of the companies interviewed need to make sure that they remain leaders in a certain market, others need to consolidate their positions as challengers whilst others are rather niche players. In any case for many of them – be it in the industrial production sector or service sector – keeping abreast with changes in technology is key to their business strategies. Depending on the company approach, different types of staff are required to observe new trends that can affect the business: for some it is R&D teams, for others this responsibility lies with managers and in one example ‘trend-spotting’ is a specific function in each team.
 - Customer or supplier feedback is a third source of information. Customer feedback is expected to identify areas for improvement from which the HR teams can identify competence development measures. While most companies use surveys to gather customer feedback, some also gather information from client facing staff. In one of the companies interviewed, customers provide feedback on industrial production by carrying out audits of the production plants. Similarly suppliers can be important source of information on future skills needs. For example in the construction sector they are aware of arising materials and products which engineers or other construction staff need to become acquainted with.

Trends-spotting as part of jobs descriptions

The link between strategic planning and skills needs was described in the following manner in a Danish biomedical firm:

- All business divisions are required to follow developments outside the company in areas such as regulation or technology;
- HR follows information on demographic trends in the company as well as talent clusters;
- HR carries out a review of all divisions each year. This review consists of analysis of the market trends identified and their implications for current and future skills base of the company.
- In each division there is staff responsible for spotting new trends. These are top level leaders but also other key staff. The key staff is clearly appointed to carry out trend-spotting and they also receive training on how to do so.
- An internal virtual network has been developed to enable trend-spotters to exchange but also to maintain the momentum among staff concerned.

Very often, HR teams are associated in the process of identifying future skills needs once the strategic decisions and business plans have been taken. Their role is to identify whether these new objectives can be met with existing skills, what training and development is needed and where recruitment is required. Given that in most cases it is the managers who have a much more ‘hands-on’ experience, the HR teams facilitate the process to identify what skills are needed and where in the company while the information in reality comes from the managers.

3.4 Use of external sources and resources

The majority of companies interviewed relied predominantly on their internal sources and resources to identify skills needs as presented above. However, some interviewees also noted the role of external sources of information in this process (other than customer and supplier feedback as discussed above). The following actors were noted (in no specific order and most were only mentioned once):

- National sector organisations which have an observatory function on skills and qualifications needs and evolutions in a given sector. This information is used to compare the situation in

one company to the broader national situation but also to identify changes in demand and supply on a specific market. It seems that this information provides the broader context for the company specific data on market positioning and evolution and is not used alone but in comparison with company's own data;

- Representatives of employers in a given sector and their working groups on HR issues. Several HR professionals noted that they participate in such networking activities which enable them to get a good understanding of what is happening in competing firms;
- Experts and researchers, in particular from universities with solid reputation. Information from these people is often part of the technology or business observatory function;
- Information from competitors is another source. A few of the interviewees mentioned regional cooperation in HR and skills development with main competitors – including learning from each other. However, such open cooperation seems rather rare as ultimately these firms compete for the same talents whom they want to recruit and retain.

With the exception of the EU-level umbrella organisations interviewed, none of the companies mentioned EU-level sources of data.

3.5 Key persons taking part in competence assessment

The above analysis shows that there are three main persons/actors involved in identifying skills needs of companies:

- The employees themselves;
- Managers who have a crucial role in supporting the process of skills identification at different levels; and
- Human Resource professionals.

As noted above, individuals are expected to take responsibility for their own career management, including identifying areas where they need future improvement. This takes place through a formal process of self-assessment or less formally by people taking the initiative to indicate their learning needs. In production sectors this is in particular the case for people in positions of middle management and above but in other sectors where all staff have development opportunities this is expected from all staff. It is less clear from the interviews to what extent large companies expect blue collar workers to show initiative in this area.

Undoubtedly managers and middle managers (persons overseeing operational teams) are key persons in identifying companies' learning and development needs. They have the proximity with staff and a very good understanding of their everyday jobs. Therefore they are in a good position to depict needs. They are also expected to be well aware of or in some cases contributing to the development of business strategies. They often have the responsibilities to make sure that their teams are well prepared to adapt to strategic changes and evolutions. Managers are also key in providing constructive feedback to staff, creating opportunities for mentoring and learning. Therefore, as some interviewees noted, people management (including learning needs identification and facilitation) are part of their job description and competences they need to develop. At the same time, they are obviously expected to be active in shaping their own careers as said above.

Importance of proximity between management and staff in order to correctly identify skills need

Two companies interviewed explicitly noted that the fact that managers were relatively closely involved in the production/service delivery enabled them to have a good overview of existing skills needs:

- In the construction field for example, managers are regularly on-site and in contact with workers at different levels. They are also in direct contact with customers and suppliers.

Therefore, they have a direct knowledge of their teams' skills needs and of upcoming evolutions.

- A German advanced manufacturing firm noted that they keep teams at a manageable size on purpose. The company believes that only if teams are of the size which enable proximity between management and other staff, is it possible to effectively identify talent and to develop measures that will promote it.

Finally, human resources professionals typically have the following roles in this process:

- They develop procedures and systems to make sure skills needs are identified at the different levels: individual, department and company strategy. They also ensure that these procedures are implemented;
- Together with managers they analyse the needs and decide on training strategies (see below);
- They design and update job descriptions and competence profiles which are used as part of the skills needs identification process;

In addition to these core actors a few of the interviewees mentioned the roles of employee representatives/ trade unions in particular in the process of job description definition.

As indicated above, in some cases external support is brought in either in the form of expertise on market development and needs or in the form of consulting interventions to design processes through which internal (colleagues) or external (customers) feedback is collected.

3.6 Interim summary

While all companies interviewed used at least one of the strategies described above to gather information on skills needs, most combine approaches at several levels. In particular, many companies combine results of the appraisal process with information at department level from managers. This is the simplest model of combining information on skills needs and it does not require too much additional resources.

Some companies combine information from the three levels as described in the box below. The information about current needs based on individuals' feedback and appraisals is consolidated at department level. This is compared with the strategic planning and its skills implications helping to assess the workforce and to design plans in terms of recruitment and/or development.

Having a formalised observatory function is less common than the other strategies. However, it is rather common in those fields where knowledge intensity is particularly high. Those companies that indicated that they had dedicated staff to carry out such observatory functions also indicated that there is a need to make sure that such efforts are effective. Though not discussed at length in the interviews, it seems that the key challenge is to identify which changes will be having a longer-term impact on the company and to translate these trends into a training offer.

Combining different sources

A UK advanced manufacturing firm described a process whereby the following are combined:

- All employees carry out a self-evaluation of their performance annually;
- Their leaders compare these results to the job descriptions and from this create a skills overview of the department;
- At a higher level, management formulates a skills matrix for each department. This is based on company's strategic plan planning and the mid-term (three years) business plan.

The comparison between these sources is used as basis for assessment of future needs.

4 Formal learning approaches

Companies were asked “if you identify skill gaps in your workforce, what is your main approach to solve them?” Companies spoke about whether they invest in the competence development of current staff within the company to fill these gaps or pursue a recruitment strategy to hire in the skills needed. As concluded in section 2, a number of enterprises commented that competence development is not necessarily about filling skills gaps, but more about paying constant attention to the level of competences and the development of approaches to avoid a gap from emerging. Whether companies take action to tackle skills gaps or prevent them in the first place, often there is an element of formal learning when describing competence development approaches which this section examines.

The section begins by examining whether companies choose to hire talent into the company or invest in their current employees in order to fill or prevent skill gaps (4.1). Following on from this, the formal learning approaches companies take to developing the competences of staff are explored (4.2). This includes an examination of whether formal learning takes place within the company or through external provision, which skills are addressed by which approach and the role of e-learning. The section concludes with a discussion of the formal learning elements of career development and talent management programmes (4.3).

4.1 Hire talent or invest in competence development?

4.1.1 Competence development is the main approach to fill skill gaps:

The vast majority of large enterprises address skill gaps by developing the competence of existing staff. This does not mean that companies do not recruit, however, recruitment to fill skill gaps is almost exclusively when companies are looking for highly specialised competences which they do not possess in the current workforce.

Overwhelmingly, the approach of large enterprises is to develop the competences of their current staff and recruitment is commonly reserved for specific talent or a very particular skill set that the company is seeking to hire. There is some evidence from the interviews conducted that this is an emerging trend since 2000, and that in previous decades the approach of companies had been much more focused on hiring externally to fill any gaps.

A reason mentioned to explain this shift, is the current economic crisis has meant that recruitment is now more costly and difficult than up-skilling current staff. A further possible reason for this approach of competence development rather than external recruiting lies in the nature of these companies. As an interviewee at the European level suggests, large enterprises have more capacity and greater resources to develop the competences of existing staff, whereas small and medium sized enterprises more often, due to a lack in these resources, have to recruit to address any competency gaps.

Developing the competences of staff rather than recruiting new talent is argued to be a more sustainable approach. Companies are reluctant to engage in a ‘hire and fire’ strategy where staff are replaced with new employees when they no longer have all the skills the company seeks. The opinion expressed by a number of enterprises is that it is not economical to have to recruit new people to meet the needs of the company. The emphasis is on hiring people into entry level positions and fostering their growth within the company during their entire career to meet the needs of the company.

4.1.2 There is a preference to recruit over competence development in some cases:

In particular sectors, such as construction, ICT and biomedical industries, there is evidence of less investment in competence development and more emphasis on recruiting to fill skill gaps. This is often due to the specific technical skills needed in these markets that companies argue can only be achieved through hiring.

Although companies almost exclusively choose to develop the competencies of their staff rather than recruit to fill any skills gaps, there are some distinct exceptions to this trend. The first is that particular sectors are more prone to hiring than competence development. Many of those in the construction sector and some in the biomedical and ICT sector spoke of recruiting new employees with relevant skills as opposed to competence development. The logic given is that, although these companies do invest in some competence development of their employees, specific technical skills that the company requires which are particular to these sectors can only be achieved through hiring. Another reason cited by a construction company is that the company finds it easier to recruit workers with the right sets of skills rather than developing the skills of existing staff.

However, recruitment as a strategy to fill skills gaps has identifiable limits, such as how attractive and well positioned the company is to attract new talent. One company mentioned that its characteristics of being located in a small town in a small Baltic country means that the recruitment strategy is not effective and therefore they primarily develop the competences of their current staff.

4.2 How do companies develop competences?

4.2.1 Blended approaches and the preference for internal learning:

Companies nearly always use a combination of approaches to competence development by providing training for employees both internally and through external provision in conjunction with on the job coaching, mentoring, training groups, e-learning, seminars etc. The approach taken, or combination of approaches taken by the company to develop competences depends on the needs of the company, the capacity of the company to carry out internal training and the availability of external training to meet the needs of companies.

In terms of the different methods of competence development, primarily companies take a blended approach to competence development utilising both internal and external formal training alongside e-learning, coaching, job shadowing and mentoring depending on the needs of the company. Companies often endeavour to find a balance between formal learning, informal learning and implementation of this learning in the daily jobs of employees.

Whilst this section discusses the formal approaches to competence development in large European enterprises, it should be highlighted that formal training is quite often the smallest part of the competence development approach. Formal learning that is used to develop competences is predominantly combined with informal learning to develop the competences of employees. Furthermore, preference is often giving to more informal methods of competence development and therefore formal training constitutes the smallest percentage of efforts to improve competences. Many companies mention that they take the 70-20-10³ approach where only 10 percent of competence development is formal training.

In terms of whether companies conduct this training internally within the company or utilise external providers, the general trend is that companies are increasingly providing internal training than they did in the past, with a decline in formal training sourced from external companies or institutions. This move towards internal competence development is often connected with the need to develop competences particular to the industry or the company and the need for training courses to be repeated on a regular basis.

Going against the trend of internal training

An interesting case which is an exception to the trend of increasingly providing internal

³ The 70-20-10 Model is a learning and development model which is based on research by Lombardo and Eichinger where 70% is on-the job learning, 20% from feedback and 10% from training. Lombardo, Michael M. and Robert W. Eichinger (1996) *The Career Architect Development Planner*.

training is found in a company in Sweden. This company is currently making the move towards more externally provided formal learning as opposed to internal provision. In their experience, it is becoming more and more difficult to retain their teachers and trainers within the company. Courses are frequently repeated within the company and the most highly qualified teachers and trainers prefer more variation in their work. The company also felt that buying external formal training is now resulting in higher quality and gives the company flexibility on costs.

4.2.2 Preference for internal or external provision:

Companies often organise internal competence development if it is economically reasonable and pursue external provision if it does not make financial sense to provide the training in-house. Furthermore, companies often buy in specific training as they cannot provide it themselves due to a lack of knowledge or expertise on the topic which is often the case when discussing highly specialised technical skills.

Companies often find that the training they require for their staff is unavailable on the external market. On this basis, companies often decide to provide formal training internally (and develop that training in the first place) because the necessary specific knowledge that is required by the company doesn't exist outside on the formal training market.

Conversely, the preference of a minority companies for external formal training provision rather than formal internal training was often the result of a lack of internal knowledge, expertise, resources or capacity in the company to carry out formal internal training. Maintaining the knowledge and training expertise required to deliver formal training in-house is deemed too expensive by some companies.

Utilising external training can also be as a result of the need for internationally recognised and certified training of employees and due to the credibility of some external providers over non-credited internal provision. This is particularly important to multinational corporations, where a common standard across country borders is required in order to benchmark the existing skills in the enterprise. In some sectors, such as manufacturing and ICT, suppliers of products used by the company provide the necessary external competence training for employees who are using these products in their work and therefore enterprises take advantage of this external provision.

Taking a competitive approach to sourcing external provision

An interesting approach to sourcing appropriate external training was mentioned by a Hungarian company in the Energy sector who held a two day long training fair. The company invited 36 training providers to present their training offers around four thematic key areas. The areas were identified to address the challenges the company has to face in the coming years. The fair was viewed by the company as very successful and gave the company an overview of the available training models and courses on the market.

Although some companies use a competitive approach, External formal training is often provided to companies through established partnerships which companies have fostered with external providers who not only have good relations with the company, but understand their particular competence development needs. These partnerships are with a variety of stakeholders including training companies, schools, universities and training centres.

Establishing partnerships between companies and external providers

An ICT enterprise seeks inputs from university professors on how to construct their

competence development training programmes.

An automotive company has developed partnerships with local business school in their region to offer training programmes for their employees.

A similar approach is taken by another automotive company who cooperate with vocational schools to develop training specifically targeted to the needs of the company, such as welding and electromechanics courses.

4.2.3 Developing technical skills and generic competences:

External training is often utilised by companies to develop the more general and behavioural competences of employees and technical competences are improved through internal provision. As large companies with greater resources, many have their own training units and departments which develop the necessary technical training.

As mentioned, companies are frequently providing formal training within the company rather than sourcing training externally. Furthermore, there is a distinction between the type of competence development that is provided internally and why companies source external provision. For the majority of companies, technical competences are developed through formal internal training and more generic competencies are developed through external provision. Given that the scope of the study is large enterprises, these companies have the capacity to develop their own training departments and academies which specifically focus on highly specialised competences.

Technical competence development is most commonly provided for employees' in-company, often through company specific training centres or departments. Some companies, primarily in France and Belgium, have developed or are in the process of establishing their own corporate universities which create and deliver tailor made formal further education programmes. The courses provided by the corporate university, as is the case in an automotive company in France, are linked to the development strategy of the company and its career development programme. The courses are delivered often on both a 'classroom' and 'e-learning' basis.

Why do some companies establish formal internal training units?

An advanced manufacturing company explained their logic for establishing an internal training academy. Competence development was initially purely the responsibility of the human resources department. However, the company found that the HR department was limited to developing key competences in the managerial area and did not have the capacity to develop more technical competences. Therefore, they established a training academy in order to deliver formal training.

The benefit of these types of approaches (either internal training centres or corporate universities) is that staff competences are updated and developed according to the strategic plans of the company and meet the specific needs of the company. Interviewees describe a process whereby core business units are consulted by the training units in order to ensure that the internal department/university develops formal training that meets their particular needs.

External providers are most commonly utilised by companies to carry out general competence development such as language training, computer software training and personal and behavioural training. It is often easier to find well-developed training provision for these general competences on the training market, and this is often more cost-effective rather than each company developing their own formal training in these areas. Many companies buy existing training programmes, or work with providers to adapt the training to their particular needs.

Although the majority of companies take the approach of providing internal training for the development of technical competences whilst sourcing external providers for more general competence development, there is a significant minority of companies who take the opposite approach. One reason for this opposite approach is that quite often training is required for very specialised technical skills that the company is not able to provide internally (due to a lack of expertise or resources) and therefore necessitates the use of external providers. Characteristically, frequently these companies do not have internal training departments or well developed internal programmes to deliver the necessary training.

When you don't have the resources for an internal training unit

An interesting approach to develop internal training tailored to the needs of the company, whilst not having the resources to develop a full internal formal training department was mentioned in an advanced manufacturing enterprise. The company employs what is known as 'knowledge workers'. These workers have training qualifications and competences and provide the necessary internal technical training, but they also have operational competences and are involved in production in the company.

4.2.4 The role of e-learning:

Formal learning is taking place more and more through e-learning as opposed to traditional classroom settings. The approach is attractive due to its flexibility, however there are drawbacks due to difficulties incentivising employees to take part.

E-learning is mentioned as a useful approach to competence development by a significant group of enterprises, especially due to its flexibility as a learning tool. Companies develop their own e-learning modules, launch calls for tender for e-learning modules to fit their needs or buy externally provided packages of pre-existing e-learning.

Despite the benefits and flexibility of e-learning, there are some identifiable issues with this approach to competence development. Often, e-learning is only available in a particular language (frequently English), which can limit its availability to workers who lack these language skills. Another drawback mentioned is the difficulty some companies have in getting employees to invest in this type of training and the preference of employees to engage in the more 'social' classroom learning. An approach by some companies is to make a certain amount of e-learning a requisite part of their job. However, this does not tackle the issue of implementing e-learning among less educated employees who lack skilled-reading competences that would enable them to benefit from e-learning which was an issue highlighted by a Hungarian company.

No matter what type of formal learning is utilised by companies to develop staff competences, one company emphasised the point that enterprises face a major obstacle in engaging people as employees often face a lack of incentives to participate in these formal programmes. Often, companies assess employees based on their performance rather than their development, and employees gain rewards for this performance rather than their participation in learning programmes. Although participation in formal programmes can lead to increased performance, this link is not always obvious to employees without incentives to take part.

4.3 Formal career development programmes and talent management

4.3.1 Formal career development and talent management programmes are often targeted:

Those identified as having future management or leadership potential, particularly new and young employees are frequently those who are recruited for career and talent management programmes. Formal programmes often have clearly defined tracks, though they often vary in length and content.

There are very few cases among the large enterprises interviewed where competence development or talent management programmes involve formal training or a formalised programme. Programmes often combine both formal and informal training elements. Packages of training are delivered within certain timeframes, though the length of these programmes varies by company from 6 months up to 3 years. Where there are formalised programmes in place, quite often these are limited to specific careers or age groups of employees.

Most often, career development or talent management programmes are aimed towards employees that companies identify as having future management or leadership potential. In order to foster this potential, formal training programmes are developed for this identified group. Even more specifically, these programmes are often designed for young management potential. This was often described as a fast track for young people demonstrating high potential.

Despite the common focus on the development of management potential, some programmes do focus on a number of specific areas within the company, such as offering a programme for those working in finance, another for those working in research and development etc. In other cases, this approach involves the programmes being divided according to those working in technical positions and those working in administrative areas. Programmes are also sometimes divided into various tracks targeting the various career levels. An example of this is found in the automotive sector in Luxembourg where the career development programme contains three tracks; one for new hires, another for identified early high potential and a third track for high potential.

In terms of the selection process as to who takes part in these formalised career development and talent management programmes, primarily high potential candidates are selected by more senior management and are recruited into the programme. Often, it is through an annual review process, appraisal system or annual evaluation, talents are identified and nominated to participate in a talent management programme.

Creating future company leaders who understand the company

One management trainee programme in the banking sector hires trainees each year who have recently graduated but lack work experience. The company trains these new recruits for 6 months across all the various sectors of the company and the trainees are involved in projects and gain practical experience within the company. These trainees present their opinions on the problems they identify and what could be improved at the end of the programme period. The aim of the programme is to lay the foundation for these trainees to become highly trained and specialised managers in 2-3 years. These types of programmes aim to train future leaders who have in-depth overview of the operation of the company and understand all the different branches and functions.

4.3.2 Emerging trends in career development and talent management programmes:

Though most programmes for career development and talent management have specific tracks and paths for certain groups of identified employees, more inclusive approaches are becoming more commonplace.

There is evidence of a shift from programmes with clearly identifiable tracks for different degrees of 'talent' to a more inclusive talent management approach. In companies now implementing this strategy, they commented that this has come about as a result of recognition that all employees have talent that should be fostered, and not separated into separate tracks.

Opening up programmes to all employees

Some companies are opening up their career development and talent management

programmes to all staff, or all ages at all career levels as opposed to limiting these programmes to young potential. An advanced manufacturing company found the 'track' approach unsuccessful when they assessed the outcomes of the programme with the original targets of the approach and therefore took the decision to create a more inclusive programme.

A company in the banking sector, invites all those interested in following a path to becoming an 'executive' to attend a 'potential assessment centre'. Those who are assessed as showing potential are supported through the programme regardless of their age or entry to the company.

In another particular case in Hungary, the company employs a combination of general and targeted programmes. The first programme has no age restrictions and is open to all staff. The company runs this programme in conjunction with two other specialised development programmes, the first of which aims to train the future generation of management and the second trains the top levels of management.

Career development or talent management programmes in some companies take the form of a master's degree in cooperation with a university or through the corporate university of the company. Cooperation also takes place between companies and higher education technical institutions to deliver career development programmes. In the case of an ICT company, formal learning is incentivised by paying bonuses to employees who complete courses in further education. A company in Cyprus also supports staff to attend university courses in order to obtain postgraduate degrees in areas identified by the company as priority areas. Support takes the form of half the tuition fees being paid by the company.

An identified advantage of career development and talent management programmes is that they allow the company to follow individuals with recognised high-potential and ensure they are retained within the workforce in the longer-term. Furthermore, the programmes described by the companies often foster a combination of knowledge about the company and developing particular skills (such as management, leadership). The graduates of these programmes then not only possess the right competences to become top management in the company, but also understand the various business units and how all departments of the company function.

However, a set-back when implementing career development programmes noted by one company is that in the current economic climate, the company loses people who have been through career development and are ready to be promoted but the company does not have a position to offer them.

4.4 Interim summary

In summary, companies do invest in the competence development of their staff as this is identified by some as the most sustainable and economical approach to addressing any skill gaps in the workforce. Internal training is often preferred when it is financially feasible as this type of provision is tailor made by the company to meet their specific needs and often this provision is simply unavailable on the external market. External provision is primarily utilised to deliver training in generic skill areas such as languages, presentations skills and training on software. Formal learning as part of career development and talent management programmes is often reserved for particular targeted groups, frequently young potential identified by the company. However, programmes are increasingly opening up to recognise the potential of all employees. Formal learning and training often comprises the smallest element of the company investment in competence development and is primarily used in conjunction with other non-formal approaches. Given the emphasis on the informal learning approach, the following section discusses the various methods used by companies to develop staff skills through informal learning practices.

5 Work-based learning approaches

As already noted, most of the companies that we talked to tend to exploit a varied array of approaches to seeing that the skills of their staff is up-to-date in view of current and future challenges.

Among the main approaches to competence development, we find *work based learning* in different shapes to play a crucial role in a most of the companies.

‘Work based learning’ is an umbrella term encompassing a wide range of approaches to and methods for creating learning situations, which directly link in with functions, operations, and processes in the workplace. Hence, in our understanding of the term, work-based learning include competence development activities that are directly linked to the work situation and job functions of the employee, including not only technical skills, but also job-related behaviour and attitudes. For example, the activity of a sales manager giving feedback to a salesperson on his/her plans is considered here as work based learning, as is a training of a group of salespersons in using company procedures. In contrast, a general sales course taught by a trainer from outside the company, but taking place in the workplace is not considered work-based learning.

The ‘70-20-10-model’

A few companies refer to the ‘70-20-10’-model⁴ which was interpreted by one respondent like this: 70% of learning takes place in the daily activities performed by the employees; 20% of learning takes place through coaching and mentoring; the remaining 10% takes place through actual training. The respondent from same company (a large Danish advanced manufacturing company) even went as far as stating that they aim at making the entire working time into a continuous learning process. At the opposite end of the scale, a trade association in the financial sector indicated that informal learning is not considered a fruitful approach in the sector.

Respondents were free to describe the approaches employed by their company. Subsequently, we have clustered the responses and identified the following main approaches to work-based learning:

- In-job training;
- Peer learning;
- Mentoring, coaching and shadowing;
- Job rotation; and finally
- Work based learning activities not included in any of the above categories.

In the sections below, we will describe in more details the approaches used by the companies.

⁴ The model is based on research by Michael M. Lombardo and Robert W. Eichinger, who stated that learning occurs from different sources, and that the relative weight of these sources are: about 70% from on-the-job experiences, tasks, and problem solving; about 20% from feedback and from working around good or bad examples of a need; and about 10% from courses and reading. <http://www.princeton.edu/hr/learning/philosophy/>

5.1 In-job training

5.1.1 In-job training serves mainly to develop operational skills

In-job training appears not to be so widely used as other work-based learning approaches, but this may conceivably be the result of less involvement of HR at corporate level in this type of training activities. Some companies do however have a quite well developed concepts for in-company training.

The heading 'in-job training' is used here on purpose, as the more commonly used 'on-the-job-training' is frequently used for training courses which happen to be located in (a meeting room on) the companies' premises, but separate from the workplace where actual job functions are performed. Although borders are blurred, this approach can tentatively be distinguished from other work-based approaches like peer learning and coaching. While the latter two approaches tend to address the entire work situation of individual employees, in-the-job training tends to be more focused on the achievement of a particular set of skills and will frequently involve a group of employees.

Some of the companies themselves referred to their approach as on-the-job-training:

"Staff members who need special know-how will receive a special training on the job along with the general training"

- Representative of large company in the energy sector

6., but the approaches they described were clearly in-job training, as they exploited the work place as a learning environment. Judging from the responses (taking into account that the number is low), this type of training, which utilises the work place and work processes as vehicles for learning appears to be mainly associated with occupational skills of an operational and/or technical nature.

Companies, who indicate that they use this type of approach tend to also use formal training approaches, but at the same time recognising that formal training courses alone are inadequate in developing occupationally specific competences. Hence, the respondents made statements to the effect that skill development requires that a mix is found between lectures and the implementation in the daily practice; or that there is a need to integrate tuition with the practical reality of the staff in order to secure "action learning".

The responses of some of the companies indicate that they apply a quite systematic approach to in-job-training.

Training in a new position

A large German company in the automotive sector employs a specific routine when employees are being shifted from one position to another. In that case, the former employee in the 'new' position spends a day with the new employee to transfer operational knowledge and skills. The HR department is closely involved, supply support documentation and training if necessary, just like they monitor the change of position carefully to assess if the employee is ready to fully take up the new position.

Finally, a few companies indicate that they have developed specific in-job training programmes for blue collar workers or for students.

It should be borne in mind, however, that such approaches may in reality be much more widespread, as the responsibility for their implementation is frequently located at the more operational levels of the organisation.

5.2 Peer learning

5.2.1 Peer learning is among the most widespread approaches to staff development in large enterprises

In many companies, peer learning in the sense where experienced colleagues train new or less experienced staff is the main approach to staff development. But it is executed in quite different ways, and the support of the HR department to the process varies considerably, as do the links to other staff development activities.

Peer learning approaches emphasises the knowledge transfer between more experienced colleagues and newcomers to an occupation or job function. This approach is quite popular among the enterprises. About a fifth of the companies, representing different sectors and from all parts of Europe have described such approaches as important components of their staff development strategy. It is notable, that several respondents see this approach as increasing in importance, the reason being that it is seen to have considerable advantages over training provided by bodies or persons outside the company itself. Respondents identified the following benefits of using this type of learning:

- It is considered to be cost effective (cheaper than buying training or having trainers come in from outside). This is mentioned by a small number of respondents.
- The close relationship between colleagues mean that learning can take place continuously and that
- Peer learning strengthens relationships between colleagues (and hence, conceivably, the social cohesion and social capital of the company)
- The experienced colleagues learn just as much as the younger ones by being forced to reflect on their own practice and communicate those reflections to others.

Most of the interviewed companies employ peer learning in a way in which more experienced colleagues develop and teach short, informal courses for colleagues. Several respondents described this approach. The extent to which the companies have developed concepts around this kind of peer learning does however vary quite considerably. In some companies, a point is made of the fact that you learn by teaching, i.e. the skills of experienced colleagues/managers are purposively developed by asking of them that they communicate their experience and insights to younger colleagues. Hence, the reflection on one's own practice is as valuable as the lessons taught to the colleagues.

The degree to which peer learning is supported by procedures and standards varies considerably between the enterprises.

- In enterprises with a skills management system, the HR department keeps record of individual skills, and hence, the HR department is able to identify within the organisation employees with specific expertise needed to introduce younger colleagues to specific fields of operation in the company.
- In other enterprises, records are kept of staff who have attended specific external training courses, and these employees are then tasked with disseminating their knowledge from the course to other staff.

A few enterprises rely on external assistance to enhance the quality of peer learning.

- In a UK company within new materials, consultants assist in identifying skill needs in the sales staff. On the basis of the identified needs, experienced staff undertake training of less experienced colleagues.
- A few companies from different countries and sectors have consultants train experienced staff in pedagogics and training methods in order to improve the quality of internal training.

Finally some enterprises express that experienced staff teach less experienced staff, but this appears more ad-hoc and less systematised than the approaches described above.

5.3 Mentoring, coaching and shadowing

5.3.1 Mentoring and coaching are popular approaches

Mentoring and coaching is mentioned by several companies as a central approach to competence development – yet few appear to employ a systematic and structures approach to the use of these methods.

The concepts of mentoring/coaching/shadowing tend to get muddled. In the current context,

- *Mentoring* involves procedures that assign a more experienced colleague to a newly recruited or newly promoted colleague with a view to passing on to the 'rookie' the insights and tricks of the trade of the older colleague in an informal setting.
- *Coaching* involves goal-oriented dialogues between an employee and a coach, who may or may not be a colleague. The international coach federation defines coaching as '...partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential'.⁵
- *Job shadowing* entails the 'rookie' following and observing the experienced colleague: Learning by watching.

Out of these three related concepts, mentoring and coaching have become popular approaches over the last decade. It comes as no surprise, therefore, that they appear as the most popular work-based approaches mentioned by respondents, and that some respondents indicate, that they want to exploit these approaches more in the future. It is also no surprise that activities, which would otherwise be called 'peer learning', are articulated in a mentoring or coaching terminology. For example, one company respondent describes the company's approach to the dissemination of technical skills in this way: The staff is *mentored* (meaning that they are taught the technical skills) through a programme run by business unit managers, and in turn, the business unit managers are *mentored* by their superiors.

Generally, however, the nature of mentoring and coaching as well as their potential benefits appear to be well understood by the companies and the approaches appear to be used in a way, which is balanced with other approaches to staff development. But the responses show considerable variation in the frameworks developed by the HR departments in order to exploit the benefits of mentoring / coaching / shadowing. Some frameworks and approaches are quite elaborate, while other appear to be more ad-hoc and superficial, as indicated by the descriptions below.

Mentoring

Concerning mentoring, few companies appear to have really well-developed procedures for this, which is a bit surprising taking into account the hype surrounding the concept for some decades already. One respondent (in the electronics industry) indicated that his company has adopted a comprehensive mentoring programme covering all staff levels from blue collar workers to top managers, but this appears to be exceptional.

⁵ See <http://www.coachfederation.org/about-icf/overview/>

A differentiated mentoring approach

A company in the chemical industry has adopted an elaborate approach encompassing three different types of mentoring. One is mainly technical and involves senior management mentoring more junior staff in areas of technical knowledge. The second type is the 'on-boarding' mentor whose task is to assist the young colleague in practical matters such as finding equipment and information – “almost like a buddy system”. The third type is the development mentoring, which is applied when somebody wants to develop his or her career. In that case, a middle or senior management is appointed as a mentor responsible for delivering advice relevant for the desired development objective.

Another company has developed a four-month long 'mentoring programme' especially targeted at employees who are identified as having the potential to advance to the next level in the company. The programmes conclude with a test indicating the aptitude of the participants in relation to advancing to a higher career level in the company.

Coaching

Coaching – and in particular individual coaching and access to external certified coaches - appears mainly to be offered to staff at managerial levels with the exception of a few companies who offer group coaching also to operational staff, and one company who also offers individual coaching to all staff.

Three companies explicitly refer to coaching as one of their main approaches to competence developments. They belong to different, albeit all knowledge intensive, sectors: One is a biomedical company, one is a bank, and the third is a knowledge intensive business service company.

A layered coaching strategy

In a German bank, coaching has been strongly supported. Three different coaching approaches are used:

1. The bank employs three certified systemic⁶ coaches. They offer personal coaching in-house under strict rules of confidence. If a staff member have career related problems, it is possible to apply for coaching sessions.
2. For small groups, group coaching is used
3. In the development of management capabilities, external coaches are employed.

Other companies also emphasise the importance of using coaching or coaching-related methods, and a couple of companies have trained a wider body of staff in coaching methods and techniques, which, according to the respondent, will allow them to better transfer their know-how to young or new colleagues.

⁶ Systemic coaching is a specific approach which draws on constructionist philosophy in inscribing the individual in a set of systems of relations and emphasising the liberating power of changing narratives. See e.g. http://www.coachingmentoring.co.nz/files/Cavanagh_%20ch11_313-354.pdf

Shadowing

Finally, shadowing was explicitly described only by one company in the financial sector as an important approach. The company uses in its sales and distribution functions a method of “tandem accompaniment” whereby an executive accompanies a staff member and gives feedback afterwards.

5.3.2 Job rotation

Job rotation was mentioned by in all four respondents, whose companies have quite different approaches to the use of this type of work based learning.

One German ICT company, each year identifies ten per cent of the staff as ‘top talents’ and offers them a rotation programme whereby they join other departments for periods of three months in order to get a feel for all aspects of the business.

Job rotation – advantages and challenges

In a large multinational company in the food sector all employees shift to another position within three years. The respondent noted that this has many advantages, as it ensures a constant evolution of the staff and their skills and prevents stagnation. In his opinion, the system also adds to the attractiveness of the company as an employer, because it gives employees new opportunities. For the operation, the system ensures that problems and challenges are constantly perceived from new perspectives, and finally, like in the above example, employees gain a more holistic view on the business.

However, the approach also has important limitations. The respondent indicated that a change in the skills composition of jobs itself presents a challenge to the system. Increased competition with other enterprises is rising and the tasks are becoming more and more complex. To have the required skill set for each new position may require that the time used for achieving the new skills may be up to a month. Also, it is increasingly difficult for employees to become experts in their jobs within the three years, as job content becomes more complex.

In a German company in the financial sector, job rotation is not obligatory, but possible and supported by management based on the philosophy that only contented staff members are good staff members.

5.4 Interim summary

As the responses show, work based learning appears to be gaining importance at all levels in large companies due mainly to its potential for reducing costs associated with staff development, but in many cases also because some of the approaches appear to be very efficient in ensuring knowledge sharing and creating social capital in companies.

In the next section we will look at the companies’ cooperation with external stakeholders (e.g. education and training providers, public authorities, sector organisations, other companies) on skill development, and in particular examine the extent to which the companies are aware of and /or enjoy public support for the development of skills.

6 External cooperation and public support

The following chapter analyses how European enterprises utilise external partners and networks in relation to competence development. Different categories are examined: Regional vs. sector based vs. cluster based – what works, how and why? Are there partnerships with external education providers? Do companies profit from any kind of public support? In what form is this support provided? What are the advantages/disadvantages?

6.1 Utilisation of external partners and networks for competence development

The approaches to competence development are diverse and normally comprise a mixture of 'on-the-job' learning and formal training. The extent to which companies rely on internal training or utilise external training providers differs from sector to sector and depends on the size of the company and on the subject or type of skills demanded. A large company usually has its own training departments and academies. HR departments normally design, develop and implement the majority of the training activities. The different networking activities carried out by the personnel of some HR departments play an important role in the ways in which the HR activities are treated and developed.

6.1.1 Organization of education and training: internal vs. external

Training for appropriate skills is generally organised internally if this is economically reasonable. Training organised 'internally' most often takes the form of non-traditional training e.g. on-the-job-mirroring etc. (see section 5). When it comes to the provision of traditional types of training, this is often cheaper to organise externally, especially in collaboration with other companies. Public funding for this type of training helps to create networks of enterprises for external training.

A number of companies develop tailor-made training with external providers who visit the company and provide training on-site. Staff members who require special know-how normally receive special training (on-the-job) alongside general training. Many experts explained that complex technical training would be purchased from external providers. A few experts explained that training for technical skills would be developed primarily internally using more experienced staff to both design and implement the training.

An expert from the banking and commerce sector explained that the overall trend in his field is a shift from the use of external to internal providers. However, looking at all statements this assertion cannot be proven. For example, an expert in the banking sector from Sweden explained that external training would heighten the quality of training:

'We are aiming at using external providers as far as possible. [...] Earlier we have relied upon our internal training department. Our reason for the switch is, that our experiences show that it is hard to hold on to the most qualified teachers and developers in a large enterprise like ours because our size requires that the courses are frequently being repeated. The most qualified teachers prefer variation and choose to find new challenges after a while. Buying the courses and the training from external providers thus heightens the quality. It will also give us a greater flexibility on the costs, when regarded on a large scale, the external provision is not much more expensive.'

There is often a distinction made between technical and transversal skills. For transversal skills development companies usually purchase readymade training models from external providers or they develop tailor-made training with external providers. Typical training offered by external

providers on transversal skills includes courses on management and leadership, languages, or general skills such as the handling of office software. They also organise training sessions on topics such as risk management or prevention.

Typical situation for in-house or rather external training

A company from the knowledge intensive business service sector describes its usual method of training in the following way: In subjects with a high corporate reference or specifications (e.g. trainings about own products and services or procedural model in the company), training is offered in-house. When it comes to transferable or methodological skills the majority of speakers or trainers are external. There are also internal trainers when it comes to internal management tools, but development programmes are normally outsourced to external trainers.

In many cases the conclusion can be drawn that the more general skills are (such as 'media', 'software'), the more common it is to purchase tailor-made programmes from external providers. However, a few experts explain that general skills training is sometimes conducted internally, especially when the general skills are integrated into specific enterprise procedures. Other cases demonstrate that the more specific the needed skills are the more likely external providers are consulted. The approaches differ from company to company in this respect. Furthermore, the higher the competence levels of employees, the more external experts are consulted, e.g. seeking inputs from university professors. Leadership training is generally outsourced. An expert in the banking sector from Germany explained the methodical mix as followed:

'We have a kind of mix: we employ regional academies and a head academy. In this matter we follow the principle of subsidiarity. We organise things internally if it is economically reasonable. [...] In that case we send people to our own academies. [...] We have to find the mix between lectures and implementation of the daily practice. In sales and distribution we use a method of "tandem accompaniment": the executive accompanies the staff member and gives feedback afterwards. Also important for us are three trained systemic coaches. They offer personal coaching in-house, in an absolutely confidential way. If a staff member wants to know something concerning his/her career, if he/she doesn't know what to do, if he/she has a problem, then he/she is supported. We use different kinds of coachings, singular coachings and group trainings. For management trainings we use external coaches.'

Big companies often have worldwide platforms for further education, which are also frequently open to other companies. Normally standards are formulated for every level of staff and specific systems of evaluation are developed.

6.1.2 Collaboration with competitors

There is also cooperation between different enterprises/competitors and education providers, who collaborate on knowledge and competence development. A Danish company participated in setting up the Danish Advanced Manufacturing Centre alongside a number of competitors and universities on the Danish market. The representative of this company stated that while the partners shared the same challenges and all worked in the field of advanced manufacturing, they do not compete for the same costumers.

A large German automotive enterprise was applying for federal support for the development of qualification programmes. Governments proposed topics and the company suggested which qualification programmes they could develop for these topics. They developed technology-support programmes for companies and organisations that are members of the “National Electromobility” initiative. This is a German project involving the participation of companies and education providers and organizations.

A German company in the steel sector has a cooperative agreement with the federal public employment service (Bundesagentur für Arbeit). Applicants refused a place under normal processes got the chance to participate in an internship for 9 months. Participants are supervised social-pedagogically within a specific ‘learning playground’.

6.1.3 Collaboration with private customers

Contact with private customers is also seen as very important. Sometimes clients are described as the most important source of feedback for the improvement of competence development of staff. Customers are seen as very helpful instruments to make direct suggestions to companies as to new services they could offer and this subsequently leads to new trainings related to these new services. A company from Estonia in the advanced manufacturing sector organises clients’ audits, where clients visit the processing factory, conduct an audit, and present their findings. Through this process the company can identify which skills and competences are needed for the future.

‘More in general, I like to emphasize that competence development of workers is not just an issue for the companies. This needs a holistic approach with a lot of stakeholders involved.’

- Representative, large enterprise, ICT

6.1.4 Use of e-Learning

E-learning, remote communication platforms and webinars have become more and more relevant and are used for example for English training, management, or administrative skills development. In most cases representatives stated that e-learning platforms are already established and will be further developed. An ICT company from Sweden has developed its own module with virtual classrooms. In this case, a blended approach is taken, and the modules consist of online sessions with both in-person- and on demand sessions. Very few experts supposed e-learning programmes were not very popular, because the individual would not have a lot of influence on the courses he or she attends. Some participants mentioned that e-learning training face resistance because people tend to prefer traditional classroom training due to its social aspects. Advantages of online-training include the flexibility in terms of time and relatively low costs.

‘We try much via e-learning implementation, because we can reach the largest groups with that form of communication. We do know about the acceptance problems of e-learning, but we try to improve the services within e-learning constantly.’

- Academy leader and expert, large enterprise, automotive sector

‘We have recently bought an e-learning package from an external provider addressed to the white collars lacking management skills.’

- Representative, large enterprise new materials

6.1.5 Reasons for not collaborating

Some companies do not participate in any wider initiatives, because they do not have sufficient information regarding on-going activities either nationally or internationally, as was stated by representatives of the banking sector and the construction sector. Very few companies (e.g. in the biomedical sector or legal sector) felt that the environment between businesses is too competitive and tense and therefore companies would be unwilling to cooperate with each other. Some companies are partially open to collaboration, e.g. a company in the advanced manufacturing sector has "core competences" that they do not want to share with rivals, but aside from this, the company is "quite open" to cooperation.

6.1.6 Regional based cooperation

Companies operating locally mostly develop training partnerships with educational providers in the respective city and benefit from an exchange with these providers. In this sense the education provider offers training for a company's employees and in return the company accepts interns from the education provider (e.g. VET schools). This is also a good method of marketing to trainees.

'Every year we have another focus in training. Several events are taking place, also cooperation with VET providers and training networks.'

- Representative, large enterprise, ICT

'We have a close cooperation with business schools and universities all over Scandinavia.'

- Representative, large enterprise, banking and commerce

A company in the steel sector offers training capacities in the area of dual apprenticeships to other companies in the region. Other companies send their apprentices to this company in order to use its infrastructure. The further education resources in this company are available to other companies.

A German company operating in the energy sector takes part in the "Qualification Alliance" ("Qualifizierungsverbund") in the production sector. They are involved in the "Power Plant School" ("Kraftwerkerschule"), an organisation based in Essen (Germany) that awards European titles/degrees and specialises in Power Plants and Power Plants Management. The company uses appropriate training infrastructure in this Power Plant School such as computer programmes that would be much too expensive for training within a single company.

A large enterprise in the German ICT sector supports a nationwide "MINT" (Mathematics, Informatics, Natural, and Technological Science) initiative by offering internships. It also supports the national initiative "Girls' Day" by providing daily-long internships for girls.

Internships and trainee programmes help to detect high potentials

A Spanish company develops partnerships with local business schools in Cataluña to offer training programmes for employees.

The company has its own vocational training school which is accredited by the Spanish government to deliver an official diploma upon completion of a three-year study programme. The school offers vocational training in the fields which suffer from important skills deficits in the local labour market. It usually takes in about 150 students a year. Most of these students go on to work for the company.

Furthermore, they have an internship programme for students they potentially may hire. They also have a trainee programme for recent graduates with limited professional experience. Trainees spend a year in the company. During this time high potential candidates amongst them can be identified and recruited to fill management positions in the medium-term.

A company from the ICT sector in Malta mentioned the e-skills alliance,⁷ a nationwide multi-stakeholder initiative to develop ICT skills.

Due to deficits in technical competences in the Portuguese labour force, a company in the automotive sector created a training academy in 2004 in collaboration with the Portuguese Institute for Employment.⁸ The academy was created with the intention of offering training to people between 16 and 18 years-of-age, who could later go on to work for the company. This company owns 51% of the training academy. Other large companies in Portugal are also part of the partnership (promoters) and make use of training facilities for their employees.

6.1.7 Sector based cooperation

Some enterprises participate in many sorts of cooperation and networks with other enterprises, but in the majority the common denominator is not a specific sector, but a field of interest, e.g. development of technical skills, learning, etc.

The energy sector seems to be organised on a larger scale in terms of complex knowledge areas. A German expert from the energy sector identifies as a problem the fact, that in his field the training of employees and the updating of that training does not keep pace with rapid market developments. The results of this are competence gaps and the constant need for the renewal of VET provision. According to an expert a structural transformation in terms of re-engineering is taking place.

An Austrian company in the construction sector takes part in a group-internal cross-national measure known as „Qualification Boost“, where education and training models in all company plants are gathered and analysed. The results of this initiative are specific training courses that

⁷ Online: https://www.mita.gov.mt/MediaCenter/PDFs/1_eSkills%20Alliance%20Malta%20-%20Strategic%20Plan%202010-2011.pdf (2012-03-20).

⁸ Online: <http://www.atec.pt/en/promoters.html> (2012-03-20).

are offered to specific sectors, and only the members of the Association have the ability to access these training courses.

Noteworthy Approach for identifying emergent and unstable jobs

A big French company follows an interesting approach for the development of a grid of competence changes. The company has a three-step method of collecting information. Together with the assistance of the “Observatoire des Métier”⁹ it identifies stable jobs, “sunrise jobs” (new kinds of jobs that are developed/needed in the enterprises, e.g. jobs related to new environmental technologies), and “sunset jobs” (jobs that are not needed anymore in the enterprise) and consequently develops a grid of the workforce, i.e. showing which jobs are not needed anymore, which competences need to be developed, etc. Local units operating in the field report the status of their workforce according to the grid, to identify, for instance, how many people are in sunset jobs and need to find a new career path. The company offers internal training to these individuals in order to “recycle” their competences.

The European Automotive Manufacturers Association ACEA runs a project called “Our future mobility now”.¹⁰ The project brings together the mobile generation of the future and Europe’s leading vehicle manufacturers. It has built a community that imagines how the vehicles and transport we use will evolve in 21st century, and how that will affect peoples’ lives. The project is inviting Europe’s young talents to get them involved and express opinion on the big issues facing the transport industry, such as: How will we live, work and play in the future? How can cars and transport help us to build better lives and communities? The skills pillar is very important in this project. It is concerned with ensuring the right competences are put in place. A working group of HR directors is set up around the project.

Many different wider initiatives are being undertaken within in the banking sector, but the future development of such initiatives is dependent on how the European banking sector develops in relation to the financial crisis, and the form that integration will take in the future.

In Slovenia, there are 7 sector initiatives at a national level.¹¹ A respondent from the chemistry sector pointed to a successful sectoral cooperation for competence development. This initiative was launched by the chamber of commerce and industry in Slovenia. The programme is co-financed by the Structural Funds. There are 19 companies participating in the project. The companies jointly developed a training programme to address the main shortages and gaps in employee competences. The chamber of commerce and industry commissioned an external training provider to implement the training activities in line with the jointly defined programme, which includes specific techniques, soft skills and new technologies. According to the respondent, this on-going initiative has proven very useful so far.

6.1.8 Cluster based cooperation

There is also the wide use of cluster memberships and networking, for example in industry organisations. Intra-sector collaboration in terms of skills and competences development is very common, and cross-sector collaboration is well established.

‘We collaborate across our sector with other engineering companies.’

⁹ Online: <http://www.fafiec.fr/observatoiremetiers> (2012-04-27).

¹⁰ Online: <http://www.ourfuturemobilitynow.com> (2012-03-20).

¹¹ Online: <http://kocke.gzs.si/slo/projekt> (2012-03-20).

- Representative, large enterprise, automotive sector

‘There is a cooperation program in the context of mentoring – this is called “cross-company mentoring”. Several large companies participate in this program (e.g. Lufthansa, pharmaceutical companies). It offers a cross-company exchange of mentors or mentees.’

- Representative, large enterprise, banking and commerce

Sharing experiences and best practice is an important feature of these clusters. For example, a company from the automotive sector meets twice a year with companies from the airline industry in order to share best practices.

An interviewee from a Swedish company which operates in the ICT sector, explained that in most networks his company participates in, the common denominator is not the sector, but a field of interest, for example the development of technical skills.

Knowledge sharing as advantage

The importance of knowledge sharing in the age of the knowledge society is often mentioned, i.e. it is seen as an advantage to cooperate in this field (and not to compete). Input from other companies is seen as very important. Companies learn from each other by the means of international networking.

A company in the banking and commerce sector (UK) is actively involved in many cooperative activities at many levels – on a European, national and local level, but the main focus is at the local level. According to the representative of this company, in the immediate surroundings of the company there are many large enterprises in this sector, which makes it quite easy to cooperate in a kind of cluster. These companies face the same challenges, work under the same rules and regulations, and do not have to travel far to meet.

6.2 Partnerships with external education providers

On a “macro level” (from a company’s perspective) companies most often run an overall strategy of competence development by measuring where they are at present and where they want to be in the future; on a “micro level” they rely on the view of the individual employee and his/her needs. Consequently, general internal competence development strategies are put in place, but influencing educational institutions to generate sufficiently skilled candidates for jobs is also seen as an important task.

Many companies have partnerships with universities or VET schools and thereby have an impact on local university curricula (e.g. ICT sector in Malta) or on VET school curricula (e.g. energy sector in Hungary). Various research partnerships exist with universities, e.g. a French company from the construction sector engages two engineers that are allocated part-time to this task. Some companies highlighted that they operate with ISO qualified and accredited educational centres. There are also several internship agreements with university students across all sectors. Some companies consider it important to participate in so-called “jobdays”. A large Danish company (advanced manufacturing sector) cooperates with a business school in Switzerland, where directors and top managers participate in joint seminars.

‘The company feels that the cooperation with the vocational university has been very successful.’

- Representative, large enterprise, construction

A French company cooperates successfully with the European Institute for Industrial Leadership (EIL).¹² The EIL is dedicated to developing a sustainable supply of future leaders for the technology-led manufacturing industry in Europe. The EIL is committed to the continued professional development of engineers, scientists and technical professionals and to encouraging young people into careers in the technical professions. It brings firms together and provides training and encourages the sharing of good practice.

Generally, it is estimated that there is a very large payoff from the collaboration between companies and education providers. Companies seem to be aware that cooperation with VET providers is necessary to avoid or reduce skill mismatches. Many companies reported to be collaborating with education providers, but communication and cooperation seems to take place more casuistically and selectively than systematically, which points to still unused potential in the cooperation between the world of work and the world of VET.

6.3 Use of public support

Companies mostly benefit from tax exemptions or from structural funds on an EU level, wherein training is normally subsidised but not funded in its entirety. Many of the interviewees could not answer the question if public support is being used or not and commented that nowadays companies do much more training at their own initiative. Some companies even do not want to make use of public support or public training provision; they see it as their own responsibility to be engaged in this field. The European banking sector especially seems to make little use of public support.

'We don't need that. It is our job to do that. We think the most important thing is to support the schools and universities. Early intervention is especially important.'

- Representative, large enterprise, banking and commerce

A Portuguese company received European Social Fund funding for their training. They work on a smaller project with a little support in form of a grant. They can receive support for up to 25% of the training expenses incurred. An Italian expert (sector: other/"helicopters") named safety oriented publicly funded training as a form of benefit. A Belgian expert explained that there were a number of different opportunities for support depending on where the office is based. Training cheques are offered for individuals who participate in external training especially. The company is part of a labour association and each year they pay a percentage of their salary. Therefore, they have access to extensive training offers. They do not get funding for internal training, because they have not registered their internal training plan.

A French company receives support from the OPCAİM (in France), an organisation providing funds for lifelong learning in the metallurgy sector. An Austrian expert (construction sector) explained that in Austria especially there are a huge number of funded trainings, where the company uses the funding if their employees fall into the correct category (e.g. employees who are older than 45). An Estonian company in advanced manufacturing also benefits from EU social funds. Locally, the government offers social fund support and vocational schools offer free training for staff members. Other representatives mentioned practices where support for trainees who take part in training abroad is offered.

¹² Online: <http://www.eil.net/mambo/> (2012-03-20).

Representatives of companies that operate worldwide often explained that the topic of funding is often country dependent, as public support varies between nations and governments.

'This is very dependent from the country, as the public support varies a lot across the countries we operate in. We try however to formulate a policy for every country to exploit the opportunities.'

- Representative, large enterprise, ICT

A German expert commented there could be a huge variation, since in countries with a “dual system” such as Germany or in the Scandinavian countries, there is a great deal of public support, whereas in countries where no “dual systems” exists no support is allocated. Furthermore, one expert mentioned that in his opinion public support is mostly used for apprenticeships.

Reasons cited for not using public support are that the administration and bureaucracy required is very time consuming.

"This year the budget was not an issue so it was not worth it for us to invest the time in acquiring public support."

- Representative, large enterprise, biomedical sector

'To a low extent we benefit from public funds, but this is on a per mile range in relation to the overall costs of personnel development. Most often, human resource decisions are to be taken ad-hoc when there is no time for applications for public funds.'

- Representative, large enterprise, steel sector

A lack of supply from the public sector was also mentioned. According to a German expert in the ICT sector in Germany most of the public support concentrates on language programmes for migrants or competence gaps concerning computer basics. Another reason why companies do not benefit from public funding is that, most often, HR decisions are to be taken *ad hoc* when there is no time for applications for funding. An expert from the Danish bio-medical sector explained that except for very low skilled workers at the very basic level, public provision of training would not match the requirements of the company in terms of level and quality.

Hungarian experts explained that since January 1st 2012 the possible training activities financed publicly have been narrowed. An expert from the banking sector explained that requirements of structural funds for skill and competence development programmes do not suit the banking sector. They mainly target SMEs, because the programmes for large companies would have too many requirements.

6.4 Interim conclusion

To summarise, many companies from both the VET and the labour market are collaborating with other organisations in numerous different cooperative initiatives and networks. The common denominator is most often a field of interest, e.g. competence management, development of technical skills, learning, etc. The differentiation between more regional, sectoral, and cluster based external cooperation and networks in this report is a pragmatic approach, but also somehow artificial since most of the cooperation and networks in a certain way touch upon all these three “identity categories”. In this sense it is not possible to describe specific advantages and/or disadvantages to any of these categories. Nevertheless, it can be stated that the respondents from countries across Europe did only mention cooperation and

networks which have been fruitful for their companies. There were no hints on any cooperation or network that was useless or even a burden for the company.

With regards to competence development of personnel, cooperation takes place in order to share knowledge about competence management and to cooperate in IVET initiatives and the field of continuing education and training, e.g. to share training capacities and infrastructure. For most of the companies cooperation with higher education institutions and VET schools is a very common tool for the analysis of competence trends and is primarily designed to prepare graduates to work in the companies. In general, many companies strive to influence VET curricula to increase its relevance to work performed by those companies. However, it seems mainly to be the largest enterprises engaging in such activities and the lack of openness among education institutions to outside influence is perceived by companies to be a barrier to VET-business alignment.

The use of external experts primarily takes the form of either the purchase of already existing training modules from external providers, or the development of tailor-made training in conjunction with external providers. IT supported programmes or e-learning are still on the rise, although enterprises seemingly know that e-Learning is not the most effective learning method. E-learning has become a more attractive option as it is a relatively cheap form of educational provision.

Companies occasionally make use of public support, especially in relation to apprenticeships or to develop competences of employees with lower qualification achievement. Support comes from national and international programmes and schemes. The EUs role in supporting competence development will be described in the following.

7 The role of EU in supporting competence development

This section analyses the survey results in respect of the EU's role in supporting competence development in large European enterprises.

More specifically:

How could the EU most effectively support competence development in large enterprises?
How is the idea of a sector-based skill mapping being received among enterprises?
Are they generally willing to participate in this venture?

Overall the survey respondents welcomed EU support for projects that involve vocational training. The larger enterprises have concerns of EU competitiveness in the global market and feel that such projects would strengthen Europe's position.

The EU support was seen as important as it presents the opportunity for large-scale projects that can therefore work on and analyse the global situation. The EU has a more "European level" view on the problems. This is something that is not only missing at the individual company level but also on a national level. The more specific nature of the EU's actual role varied amongst the respondents.

The identification of sectoral skills needs and the development of curricula to match those skills is not the only priority for companies in terms of what the EU should do in supporting competence development. The picture is very mixed. The following sections analyse the responses looking for trends in:

- European level organisational responses
- Enterprise responses – for and against support
- Sectoral level responses
- Any national trends in responses.

This is followed by recommendations from this very varied set of responses.

7.1 European-level organisational responses

The majority (9 out of 11) of the European level organisations supported EU level support. Some were already developing schemes, such as identifying skills councils, to take such a project forward. Whether they were positive or sceptical about EU level projects, European level organisations continually stated that a focus on educational institutions was key. Such a contribution would include increasing the dialogue between businesses and universities, adjusting curricula for contemporary needs and improving life-long learning opportunities.

'I think this is very important. I do not think size matters and you need to involve big and small companies, research organisations and the public sector. It is not possible to achieve real results without input from the entire value chain'

- Representative, European sector organisation

7.2 Enterprise responses

7.2.1 Enterprises critical to EU support

Very few companies responding to the survey stated that they would not participate in a EU funded project, even if they were critical of some of the ideas. It is important to note, that although companies expressed scepticism, that scepticism did not mean that they were categorically against the idea of EU level support, nor did it mean that the company would not participate in such a project. However, many companies had reservations about the

circumstances under which they would participate and also stressed the need for the analysis of tangible benefits before committing to or investing in any external training.

The most common critique from the respondents was in the necessity for the EU to develop training for technical skills curricula (as opposed to soft skills). In many cases companies stated that it is the responsibility of the human resource departments to facilitate the delivery of technical skills. The needs of each company are very specific and therefore it is very difficult to match such skill needs amongst a group of companies- especially competitors.

Another common critique was developing training by sector.

'I don't find it that fruitful to let the sector be the common denominator, as the interest and focus can be very diverse within that sector. I think it would be better to go gather enterprises with the same interests, e.g. Technology platforms related to learning, where many enterprises are in need of knowledge at the moment.'

- Representative, ICT company

In some companies, the sector wasn't clearly defined or training wasn't feasible. For others, sectoral skill needs were strongly related to legislative, national and institutional frameworks. It would be a very difficult process to develop such a framework across Europe. On a sectoral level, many respondents voiced further doubt about matching skills and capacities across Europe. The skills shortage in the UK is not the same as the skills shortage in Malta. The respondents that were critical of EU support suggested more fruitful areas of investment, such as mobility, education, and the development of skills broader than the sectoral level.

A final reservation was the issue of sharing information with competitors. Many respondents weren't keen to work with competitors. Instead, they would like to work further with providers and gain input from their value chain and that isn't something they thought the EU could efficiently assist with. The development of sophisticated confidentiality agreements was a repeated suggestion in order to develop cooperation in sectors. Ultimately, whether a company will participate in a EU level project depends on the conditions for participation but it was quite clear that most companies would take part.

7.2.2 Enterprise in favour of EU support

The majority of companies were clearly in favour of some sort of EU level support. This support was not necessarily oriented around sectors. There were some recurring themes in terms of benefits of EU support.

Of those few that did favour EU level curriculum development, it was mainly businesses that needed similar skills and in particular soft skills. In addition, if curriculum development was mainly about softer or more general skills, there would be fewer issues encountered in terms of company confidentiality and market competitors. There was still a concern in relation to the amount of customisation that would be necessary to generate applicable training.

Currently, enterprises face a market with too many curricula making it difficult to choose the most appropriate provider - especially in relation to quality, standards and content. What the EU level projects would have in their favour is the ability to harmonise the most important learning content, set quality learning outcomes and establish minimum standards for guidance purposes that would work across Europe.

'There is clearly a lack of training on specific new technologies. It will thus be useful to create synergies between training providers in order to develop common training on new technologies.'

- HR Director, Belgian enterprise

Larger enterprises favoured EU support because it would increase employee mobility leading to developments across entire sectors. New networks can be forged through the development of EU-level projects. Most employers stated that it is important for them to form networks with universities as well as other businesses. Employers from New Member States would especially benefit from learning about best practice from *old* Europe. According to a respondent from the legal sector, having the EU involved, would increase the likelihood that competing companies will communicate, because it is a neutral organizer.

Many companies felt that EU projects in this area would be a means of keeping top talent within the EU improving competitiveness. The companies are better able to face global challenges with European leverage and financial means. Most companies did not think that they had the monetary means to analyse the changes coming within their sector. Thereby an EU level process to develop the direction of vocational training is welcome.

'It is a valuable project. Since the world is changing (BRICs, etc.), companies alone are not able to face so many changes at the same time. They need to spend a considerable budget in order to analyse these changes and provide solutions (trainings, etc.). If the EU would act, with financial means and European leverage, it will enable European companies to better face these global challenges and to be more competitive.'

- Representative, large enterprise, construction

7.3 Sector-level responses

Very few firms in any of the sectors were against EU-level support. They did express scepticism about various issues or stated that they were unsure about certain aspects of the support.

The majority of automotive companies (8 out of 9) were in favour of European level training. The most common issue for automotive companies was harmonising qualifications and developing a benchmark of competences. Many respondents stated that there wasn't a coherent language in terms of qualifications. Many of the companies were hesitant to work with competitors. One company suggested that they would prefer a focus on soft skills.

The majority of advanced manufacturing companies also supported the project (10 out of 14 companies were in favour, 4 out of 14 companies were unsure about the feasibility). The most common issue that the companies brought up was a method to benchmark competences or develop standards. The respondents continually stated that they had issues of determining minimum standards amongst qualifications, especially because there is an overabundance of trainers.

Of the seven ICT companies, two were in favour of EU level support, one was unsure, and four were sceptical about support. Many raised doubts as to the feasibility of such a project. As an example, a software firm raised doubts about the feasibility of such a large-scale operation within their sector because it moves and changes at a very fast pace. The time of execution would have to be very short- if a programme is approved one year, it may be obsolete by the following year.

There was a pretty even split in the banking sector of the companies in favour of an EU-level project and those that were sceptical. Most of the companies that were sceptical thought that the project would be interesting but difficult because it could not be customised as necessary. The companies were especially keen on sharing good practice and experience. They thought that a EU level project would have a high quality of content and guidance. All companies would participate in a project depending on the conditions for participation.

All five biomedical companies were in favour of EU level support. They thought that any such support would strengthen the sector as a whole.

Of the nine companies that represented the energy sector, five were unsure about the effectiveness of EU level support and three were in favour of such support. Most stated diverging views on the reasons for scepticism, but many brought up the additional issue of communicating with educational providers. Career changing opportunities through mobility and education was especially relevant to this sector.

Finally, the majority of Knowledge Intensive Business Service companies were also in favour of EU level support (5 out of 7). They thought that such support would increase synergies and result in much needed cross-border cooperation.

7.4 Geographical Trends

The main trend amongst countries was that new Member States were much more likely to be in favour of such projects. They were also more likely to address the need for standards amongst education providers. For the new Member States, learning about good practice was a key issue- they want to learn the lessons of the older Member States where companies are much more established.

'There is a really a big gap between old Europe and the new states so it would be beneficial for them to cooperate, and what is working in other countries so that 'new states' don't make the same mistakes as 'old Europe'.

- Representative, large enterprise, banking and commerce

Sharing good practice

A key trend in the data highlights the importance of good practice exchange in the area of competence development, something which could readily be facilitated at the European level. Although sectors and countries all have different needs, the understanding of key competences and qualification frameworks were areas of common ground.

In some countries, specifically Germany and the UK, there was some scepticism about such projects because national initiatives were already in place such as skills associations. For these companies further training opportunities might not be of use as they already too far ahead in terms of training. They also supported the idea of developing higher education opportunities. Regardless, most companies in these countries stated that they would participate in a EU level project.

7.5 Interim conclusion

The recommendations can be summarised under the following themes:

Better quality trainers in Europe

First and foremost, the respondents felt that training and trainers were out of date. There should be emphasis on supporting the system as a whole, developing quality trainers as well as developing the training itself. One respondent stated that an EU project would provide access to the best trainers and that is a major reason for the company to participate.

The programmes are ok but the trainers are out of date. Therefore the emphasis should be supporting the system as a whole, how to develop trainers as well as developing the training itself.

- Representative of Latvian enterprise

Develop defined applications for the learning content

Harmonisation of learning content should be an objective for the EU. According to multiple interviewees, discussion, guidance, and observation of international trends would allow these objectives to be defined and implemented successfully.

Defining common benchmarks for competence through shared practice

The companies felt that the guidance from the EU should focus on defining a common benchmark of competences. These should be developed through shared best practice. The EU should focus on coordinating practices across countries so that Europe as a whole may be competitive. Many interviewees felt that the sector should not be the common denominator for assessing skills needs. One interviewee stated that the EU should start with defining generic competence needs common to all sectors: leadership, management, motivation, etc. and these should be the objectives for competition in the global economy. Then if necessary, and at request, the EU should identify competences necessary for specific sectors.

Better opportunities for networking between sectors and universities

There was a call for better networking between sectors and with universities. Many respondents felt that the EU would be able to facilitate the development of networks. Networks have many functions, but one of the main ones should be to raise awareness about new technologies from an early age. Curriculum development should involve universities as well as the entire value chain.

Need for English language training

English language training was a common request as many multinationals have difficulty communicating with partners from other countries or recruiting skilled individuals from other countries.

Many respondents addressed education and mobility generally when giving recommendations. Many enterprises felt that universities weren't adequately training future employees. A few interviewees did not want a singular curriculum. Instead, they stated that EU level support should focus on education and university curriculum, life-long learning, and the promotion of VET systems and cultures, especially amongst the new member states. The EU should ensure that knowledge of skills needs is being transferred to educational institutions and that they adjust accordingly. The companies are aware of their skills needs so mapping is not as much as an issue as communicating them in a productive way. Developing a dialogue between businesses and universities was a common theme of the responses.

Further development of higher education opportunities

The development of a sophisticated vocational training curriculum is not enough – objectives should include further development of higher education opportunities, including more internships, more vocational skills training within universities, standards of performance within degrees, more soft skills training within universities, life-long learning opportunities that increase the possibility of career rotation, and finally broader partnerships within universities.

University degrees should be matched up to labour market needs. The system should be more open to career changers. Broader partnerships for universities include more partnerships with business, but also more partnerships with universities across the world, especially those in India and China. One interviewee stated that there are too many university partnerships with American business schools- this develops an American business culture in Europe. They would like to see a more global vision with partnerships from Asia and elsewhere. Greater mobility

would be an output of such measures. Qualifications have to be more transparent in order to aid the mobility.

Develop IT tools for sophisticated, flexible, and organised training

A final common suggestion was to develop IT tools for sophisticated, flexible, and organised training. Some examples of IT tools for improving VET training included a virtual group to start a discussion on potential issues which can be tackled and the best way to tackle them, a contact manager for sharing details of interested parties, and a tool for evaluating the quality of the training.

8 Main conclusions from the survey

European enterprises find themselves in the midst of a number of significant systemic developments, hereunder a financial crisis, an ageing workforce, rapid technological developments, continuing globalization and an increased demand for green products, services and processes. This has led to constantly changing business environments in which the enterprises and their employees must be geared to operate.

Professional skills not the main problem

One of the more important findings of the survey was that enterprises generally feel that they have the professional skills¹³ they need to accommodate these developments. Although companies do not necessarily attribute this to the existence of well-targeted and high-level supply of skilled labour (but rather to efficient continuing competence development), they generally find their staff to be well-qualified on the technical side of the skills spectrum. In relation to professional skills, the challenge is therefore not primarily to close existing gaps, but to ensure that skills are continuously updated for the company to stay ahead in the race and keep up with changes in the market and its surroundings.

Skills in leadership, business and communication are lacking

What companies instead do mention to be lacking among their staff, are a number of key general competences— particularly leadership, business, communication and language skills. The most often mentioned reasons for this are:

- That enterprises tend to place their primary emphasis on professional skills when recruiting
- That education institutions put primary emphasis on developing professional skills when training their students
- Managers and executives are frequently promoted from a pool of specialists who have not been trained in leadership, business understanding, communication, etc.

Companies use multiple approaches to assess what they have and what they need

The companies generally seem to use a combination of a number of different measures for spotting current and potential future skill gaps in their workforce. These measures are generally identified at three levels of the organisation: the individual, department and strategic level.

The most common approach to assess existing skill needs is to combine results of the appraisal process with information at department level from managers. When it comes to detecting current and future skill needs, information is most often based on a combination of external sources (sector studies and collaboration with sector organisations), the assessment by the company executive management and by managers at lower levels.

Skill development clearly beats recruitment

Once aware of existing or potential skill gaps among their employees, companies use a mix of different approaches to try and close them. In all but a few sectors, the general strategy attaining the right skills mix is to improve the competences of existing staff rather than to recruit new staff. Recruitment is primarily a preferred option in sectors or for positions relying either heavily on highly specific and very high-level specialized competences (ICT, biomedical sector),

¹³ Also frequently termed technical or occupational skills

or for certain positions where the specific activities to be carried out are less influenced by the context or the specific company in which the employee works (construction sector).

Work-based learning on the rise

The enterprises generally use a combination of formal and informal approaches to competence development. Which path is chosen, depends on the learning goals they wish to achieve. Formal approaches, hereunder training sessions, workshops, courses, etc. are primarily used to add to the employee's professional toolbox and for bringing in an external perspective. Informal approaches are primarily used to demonstrate how the tools can be applied in the specific working context.

Formal training usually only makes up a small part of the total competence development and companies clearly state that the share is gradually getting even smaller. The reason for the increased relative popularity of informal training such as shadowing and mentoring, is that 1) it is considered to provide competences that are better targeted towards the specific goals of the organisation, 2) it is cheaper, 3) both parties learn from it, and 4) it increases social capital and promotes a more widespread appreciation of the entire business (job rotation in particular).

Companies increasingly handle competence development themselves

When talking about use of internal vs. external training provision, there is a clear tendency among companies in taking on as much of their competence development internally as they possibly can. If done smart, it is both cheaper and better tailored to the organizational context, making it an attractive option for companies having the resources to invest in setting up an internal training department.

Although internal training experiences increased popularity, companies still use both external and internal training providers. What they chose when facing a given challenge is primarily a matter of:

- What is cheapest?
- What is the availability of training solutions from recognised and reliable external providers
- Which skills do they seek to promote?

External training provision is primarily used when companies seek to promote highly specialised professional skills, whereas broader professional skills are most often provided internally. When it comes to provision of general skills (e.g. language training, computer software training, personal and behavioural training), a large number of companies used to prefer to outsource this task to external providers. Today, such training is also increasingly being handled internally through established internal training departments, which a large majority of large enterprises have.

External collaboration on competence development is effective but hard

Most companies engage in some form of collaboration with external stakeholders on competence development, and all consider it to be highly effective. Sharing practices, discussing trends and getting external perspectives on one's training activities is considered to be a substantial asset. Companies primarily cooperate with universities and VET providers, but some also engage in collaboration with other companies and customers. Such cooperation takes place at either regional, sector or cluster level. Sector and cluster-based collaboration with other companies and relevant training institutions were considered to be particularly valuable, but companies experienced a number of significant barriers to participation related to administration, logistics, fear of disclosing competitive advantages, etc.

Companies do not profit substantially from public support

Only few companies (and primarily in Southern and Eastern Europe) state that public financial support plays a substantial role in promoting their competence development activities. Although some enterprises receive structural funds support or benefit from tax exemptions for training, financially supporting competence development is generally perceived to be an internal matter. An important parenthesis in this regard is that this information is only based on information from HR departments, which are not always aware of the full and particularly indirect public support the company benefits from.

The EU could play an important role

Apart from some financial support through structural funds, the EU was also generally viewed as a party which could potentially play an important role in promoting competence development in large enterprises. Companies generally supported the proposed idea of the EU supporting projects where each sector identifies and communicates its current and future skill needs to education providers. Almost all companies would also potentially be willing to participate in such projects.

However, a number of respondents added, that the projects should be made very specific and perhaps targeted at sub-sector rather than sector level. Some also added that EU resources could probably be spent wiser, particularly in areas such as:

- Ensuring better quality trainers in Europe
- Developing defined applications for learning content
- Defining common benchmarks for competence through shared practice
- Creating better opportunities for networking between sectors and universities
- Promoting English language training
- Further developing higher education opportunities
- Developing IT tools for sophisticated, flexible, and organised training

Discussing challenges and practices: The European Business Forum on Vocational Training

Efficient and well-targeted competence development holds the key to the future competitiveness of European enterprises headed into the future. The European workforce must possess the right mix of professional and general competences combined with a profound ability to adjust to constantly changing business and working environments. The upcoming European Business Forum on Vocational Training will provide a much needed platform for discussing how competence development in European enterprises across all sectors can be further improved and supported to reach this goal.

The Forum will be held in Brussels on 7-8 June 2012. A final report including the Forum conclusions and a final synthesis of findings will be released in the fall of 2012.

Annex 1: List of respondents

Enterprise

4GL
 ABB Process Solutions
 Abertis Infraestructuras, S.A
 AgustaWestland
 AIRBUS Germany
 AIRLIQUIDE
 ALSTOM
 Altitude Software
 Altran Belux
 Astaldi SpA
 Autoeuropa-Automoveis Ida-Volkswagen
 Automobili Lamborghini S.p.a.
 Banca Sella
 Banca Transilvania
 Banco Espirito Santo
 Bertelsmann AG
 BMW AG
 BNP PARIBAS
 BNP Paribas Fortis
 Brose Fahrzeugsteile GmbH
 CAPGEMINI
 Citadele Bank
 Coloplast S.P.A.
 Comau
 Crimsonwing Malta Limited
 Cyprus Trading Corporation
 Danfoss
 DATEV eG
 Deloitte Services and Investments
 Deutsche Bank AG
 Dortmunder Stadtwerke, DSW21
 E2v Technologies

Organisation

Alfonso Carrasco Segado
 Silvia Parma
 Joan Rafel
 Stefano Biagini
 Uwe Neuhaus
 Annika Bergman
 Nicolas Jacqmin
 Rodrigo Prazeres
 Marie Dupuy
 Andrej Porru
 Manuel Santos Cabral
 Beatrice Malfatti
 Jiada Bono
 Doca Nevenca
 Pedro Raposo
 Nico Rose
 Ralf Urlinger
 Valerie Belhassen
 Kristen van den Eynden
 Michael Stammberger
 Jeremy Roffe-Vidal
 Anita Gaile
 Lucia Pavani
 Ezio Slegnan
 James Bonello
 Chrysanthi Danou
 Allan Christiansen
 Knut Eckstein
 Ann Bleuze
 Sabine Gleiss
 Heidemarie Lyding-Lichterfeld
 Sara Laver

Position

Manager
 Communications Manager
 Human Resources
 Head of Training and Development
 Senior Manager
 Group HR Deputy
 Vice President, Talent Development
 CFO
 HR Partner
 Employee Relations and Global Mobility
 Training and Development
 HR Business Partner
 Senior Recruiter
 Executive Director of Human Resources
 Human Resources Director
 Director Corporate Development
 Head of Training Academy
 Group Head of Training
 Head of talent management
 Director training
 DRH Groupe
 HR Division Director
 Human Resources Manager
 Training Manager
 Managing Director
 HR Manager
 Head of Develop & Coach
 HR Development
 Learning and Development Manager
 HR Group Technology and Operations
 Head of HR Development
 Head of People Development and Engagement

ELM ÉMÁSZ Company Group	Rita Nagy-Molnár	HR manager
Endress Hauser Conducta GmbH Co.KG	Stephan Köhler	Head of HR
ENICS Eesti Electronics	Kristel Jalek	HR Manager
Ericsson AB	Petter Andersson	Head of HR
Eversheds UK	Angus MacGregor	HR Director
Ewopha MA	Ilona Biekseite	HR manager
Fissler GmbH	Christine Weinz	Consultant for VET and HR Development
Gedeon Richter Ltd.	Margit Paroczai	Head of human resources
Goodrich Corporation	Simon Hardiman	Learning and Development Director
Goodyear	Damien Schrobiltgen	HR Manager
Hanza Tarkon	Anu Ulp	HR department manager
Hellenic Vehicle Industry (ELVO)	Chara Karameri	Human Resources Team
Hilti	Miroslav Mendl	HR Director
Honda Akademie	Gerhard Grindl	Head of Honda Academy
Jaguar Land Rover	Jo Lopes	Head of technical excellence
JUTEKS D.D.	Breda Hladnik	HR manager
KLM	Liesbeth Lambrichts	Director Corporate MD & HR Manager Executives
Korsnäs AB	Ulrika Spåls	HR director
Lafarge Zementwerke GmbH	Mark Trösch, MSc	Director Organisation & HR
Lego	Marcel Berg Husson	Director, People and Culture
Legrand Group	Marc Parouty, Xavier Couturier	Head of International HR Projects and Group HR
Leitner	Alexander Paul Ploner	Head of human resources
Magyar Posta Zrt	Judit Nemethne-Eszenyi	HR manager
Mediobanca S.P.A.	Sabrina Tan	Head, Organisational Development and Compensation
Medtronic Vascular Galway Ltd.	David Morris	Rewards Program Manager
Mærsk	Mads Ingholt	Senior Director
Nordea Bank	Henrik Priergaard	Head of HR group
Novo Nordisk A/S	Lars Christian Lassen	Senior vice-president, HR
OTP Bank	Maria Batta	Head of HR Department
Philips	Hans Dijkman	Area HR manager Benelux
PSA PEUGEOT CITROËN	Rémi Boyer	Head of Group HR Development
Raiffeisen Informatik GmbH	Michael Würzelberger	HR Manager
Recticel	Jan De Moor	HR Manager IHQ
RWE Service GmbH	Peter Gentges	Vice President Strategic Human Resources
Sampo	Johan Börjesson	HR Director
SAP	Markus Bell	Head of Vocational Training and Education
Schneider Electric SA	Xavier d'Esquerre	Senior Vice President, Strategy and Organization

SEAT S.A. Sellafield Sites	Manuel Moreno Hernandez Jane Sanders-Brown	Development Training Department Head of Talent and Resource Management Centres of Expertise
Solaris Bus & Coach Standard Life TERME MARIBOR D.D. Thyssen Krupp Steel Europe AG Unilever Unimerco Unisys UPM-Kymmene VITO NV Volksbank Freiburg eG	Krystyna Woźniak Sandy Begbie Olja Salesin Rainer Behrendt Lara Vanden-Eynden Carsten Risom Brigitte Legreve Riitta Savonlahti Anne-Mie Van de Wiele Jens Hupperich	HR director People Director Legal and Personnel Affairs director Team Leader Office & Systems Director Learning Europe R&D Director Senior HR Practice Consultant Executive Vice President, Human Resources Director, HR & General services HR Manager
Other stakeholders		
ACEA - European Automobile Manufacturers Association	Sigrid de Vries	Director of Communications and Public Relations
CEC - European Confederation of Executives and Managerial Staff	George Liarokapis	President
Cepis - The Council of European Professional Informatics Societies	Fiona Fanning	Secretary general
EBF - European Banking Federation	Giancarlo Durante	Chairman, EBF-BCESA
EFB - European Federation of Biotechnology	Francesco Lescai	Chairman
EFCA - European Federation of Engineering Consultancy Associations	Henrik Garver	Member of Committee on European Consulting Future
EFPIA - European Federation of Pharmaceutical Industries and Associations	Richard Bergström	Director General
ETUC - European Trade Union Confederation	Cinzia Sechi	Advisor
EuCIA - European Composites Industry Association	Alisa de Backer	General manager
Eurocommerce	Ilaria Savioni	Advisor
FIEC - European Construction Industry Federation	Dominico Campogrande	Director, Social Affairs

Annex 2: Interview guide

The interview guide below was used for the interviews of the 81 large enterprises included in the survey. A slightly modified version of the questionnaire (same content but slightly different wording) was used for the 12 interviews of sector-, business- and labour organisations.

Overall challenges

1. Please mention the three most important challenges related to skills that you see for your company over the next three years.
2. Does your current staff possess the right types and levels of competences to meet these challenges?
 - If not, are the main gaps related to technical/occupational skills or to general skills like reading, language, teamwork etc.?

Detecting and addressing skill needs

3. If you identify skill gaps in your workforce, what is your main approach to solve them?
4. What are your main sources of information about skill requirements in the company?

Approaches to competence development

5. Please describe and explain the main approaches to competence development in your company?
6. Do you employ a company-based career development programme? Which categories of staff does it address?
 - Can we get a (link to a) description of the programme?
 - Is it linked to a talent management programme? Can we get a (link to a) description?

External collaboration and public support

7. Do you profit from any kind of public support to competence development of employees – the support may be in the form of provision of training opportunities or in the form of access to funds?
 - If not, why?
8. Is your company involved in wider initiatives concerning competence development?
 - At which level?
 - Results?
 - Challenges?

EU's role in supporting competence development

9. Should the EU support projects where each sector identifies its skills needs to enable training providers to develop curricula that match those skill needs?
 - Would your company/organisation participate in such a project?

