Investing in the Future of Jobs and Skills

Scenarios, implications and options in anticipation of future skills and knowledge needs

Executive Summary
Other Services

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Overview

This executive summary highlights the main results of the final report *Investing in the Future of Jobs and Skills. Scenarios, implications and options in anticipation of future skills and knowledge needs in the transport and logistics sector*. Apart from analysing sector trends and developments, the study explores four plausible and distinctly different futures and their implications for jobs, skills and knowledge in the year 2020. The study is scenario-based, and is both forward- and backward-looking. It presents a variety of options and recommendations to address future skills and knowledge needs, aimed at the sector (firms, industry at large, sectoral partners), education and training institutes, policy-makers and other stakeholders.

The study should be placed against the background of the EU's renewed Lisbon Strategy for Growth and Jobs and the recently launched New Skills for New Jobs initiative. Investing in people and modernising labour markets is one of the four priority areas of the Lisbon Strategy. The New Skills for New Jobs initiative (European Commission, 2008) presents a very first assessment of the EU's future skills and jobs requirements up to 2020. The initiative aims to help ensure a better match between the supply of skills and labour market demand and to improve the Member States' capacity to assess and anticipate the skills needs of its citizens and companies.

This study appears in a series of 16 sector studies which are all based on the same common foresight methodology and uniform step-wise approach (see table). The study combines desk research and expert knowledge, and brought together various internal (project team) and external sector experts. The methodological framework that was initially developed by Prof. M.J. Rodrigues was further developed, operationalised and applied by a consortium consisting of TNO (lead), SEOR and ZSI.

Methodological framework – the study explained in ten steps
Step 1. Identification of economic activities (sector selection)
Step 2. Main economic and employment trends and structures
Step 3. Main drivers of change
Step 4. Main scenarios
Step 5. Main implications for employment – changes by job function
Step 6. Main implications for skills – emerging needs by job function
Step 7. Main strategic choices to meet future skills and knowledge needs
Step 8. Main implications for education and training
Step 9. Main recommendations
Step 10. Final workshop (validating, complementing, finalising)

The other services sector – main characterisation

For the purpose of this study other services comprises the activities summed up in Table 1. This report concentrates on other personal services (93/96) and activities of households as employer of domestic personnel (95/97).

Other personal services comprise a variety of activities:

- hairdressing and other beauty treatment;
- washing and (dry-) cleaning of textiles and clothing;
- funeral and related activities;
- physical well being activities (sauna, steam bath, massage salons, not fitness centres and not medical treatment);
- other personal services (among others: dating and escort services, pet care service, astrologists and spiritualists, tattooing and piercing studio's, etc.).

Table 1 Overview of activities and their relevance to this study

NACE Rev 1.1	NACE Rev 2.0	Description	Relevancy[1]
90		Sewage and refuse disposal, sanitation and similar activities	Irrelevant
91	94	Activities of membership organizations	Irrelevant
92		Recreational, cultural and sporting activities	Irrelevant
	95	Repair of computers and personal and household goods	Regarded as part of retail
93	96	Other personal service activities	Relevant
95	97	Activities of households as employers of domestic personnel	Relevant: Important share of informal activity
	98	Undifferentiated goods- and services-producing activities of private households for own use	Less relevant

The activities of households as employers are a special case, as they belong for a large, if not major part to the informal sector (moonlighting or undeclared work of the working force, officially inactive population and persons on benefits). It comprises personal services (e.g. hairdressing, child care, pet care and transport of elderly, sick and disabled) and activities like cleaning, construction, repair and gardening. But also administrative activities, such as assistance in filling in forms (registration forms, tax forms), are delivered by individual workers to households. For a part relatives, friends and acquaintances, partly paid, partly free of charge, supply these services.

In this study activities of membership organizations (91/94) are less relevant. Nevertheless, in some countries in the north and west of the EU, some membership organizations (for instance organizations in sports, environment, consumer interests, patients organisations) become more and more professional and relying less on only volunteers. Although the scale of employment might remain rather small in these activities, a further increase in employment can be expected, creating opportunities for specialists. Repair and maintenance (95) is very often combined with trade and should better be taken into account in the discussion of that sector. In our opinion the household production of goods and services for own use (98) is also less relevant to this study, as it will have little meaning in terms of required skills. However, in various countries in the Middle and Eastern parts of the EU this production might be important, although it is not certain whether it is registered or measured accurately in the country statistics.

Looking at the other services industry as a whole, total value added in EU is € 282 billion. Value added in the EU increased annually with 1.6% between 1995 and 2006. There are, however, large differences in the development of value added between the EU 15 and the new member states. In the EU 15 value added grew with an average of 1.8% annually. Between 2000 and 2006 the growth slowed down. In the new member states value added declined between 1995-2006 with an average of 1.3 % annually. In many cases the overall economy grew faster than the other services sector.

Value added in other personal services in the EU (NACE 1.1 code 93) amounts to € 93 billion in 2006. Between 1995 and 2006 value added in this sector increased with a modest 0.8 annually. In EU 15 the growth was relative strong (1.3%). In the new member states the change was dramatic, with an annual average decline of value added of 6% between 1995 and 2006. Personal services in the EU make up 0.8% of national GDP, both in the old and new member states.

Employment

Employment in the EU in the other services industry totals about 14 million jobs (Table 2). The overwhelming majority of the jobs, 90% are to be found in EU 15. The industry faces a structural growth between 1995 and 2006, with an annual average of 2.6% in the EU. The growth in the new member states lies on a slightly higher level than in the EU as a whole. Employment growth is twice as high as value added growth – indicating limited possibilities for productivity growth in this sector.

Table 2 Employment other services, 2000-2006[1]

Countries	Level (*1000)	Average annual growth (%)	Share in EU employment sector (%)	Change in share in EU employment sector (%)
	2006	2000-2006	2006	2000-2006
EU 27	14 046	2.6	100	0
EU 15	12 638	2.6	90	0
NMS	1 409	2.7	10	0

Source: Eurostat/TNO data

There appears to be no country with a high concentration of other services employment and also an increase of the number of jobs (designated as ‘winning’). There are, however, countries with a high concentration of other services but with a declining employment. These countries are labelled ‘Losing momentum’ and are always members of the EU 15. Two large groups of countries do not have a high concentration in other services and show opposite trends. Upcoming countries are dominated by new member states, while retreating countries are dominated by old member states. In this last group, however, also four new member states are present.

Note, however, that these figures are including data for sectors not reflecting our sectors of interest (like sector 90, waste). The next paragraph shows that developments are very different when data are available for the sectors of interest.

Employment trends by job function

The occupation structure is dominated by other personal service workers and other service workers (51% in EU 15 and 45% in new Member States) and domestic helpers, cleaners and launders (16% in EU 15 and 22% in new Member States). These categories are gaining ground as the shares have risen in the last seven years. In the new member states the change in share is large for domestic helpers, cleaners and launderers.

Occupations and education level

Only a few figures are available for the education level combined with occupations. It is clear, however, that the majority of the services in this sector do not require more than elementary skills. However in the last seven years for most occupations the share of low education decreased, while the share of mid education increased. In the new member states we see a decrease both in low and mid education for other service workers, where the share of high education increased significantly. An exception are the craft and related trade occupations, where the share of low education increased during the last seven years.

Occupations and gender

Regarding the gender distribution it is clear that in the EU female employment is very high, except for craft and related trade workers. For domestic personnel the share of female workers climbs up to 94% in the EU. The share of female workers in other personal services amounts to 84%. The figures for the new member states differ modestly: they have more male domestic workers (13% compared to 6% in the EU 15) and craft workers (92% compared to 76% in the EU 15) but also more women working in other personal services (90% compared to 83% in the EU 15). The share of women working in the other services industry has slightly increased between 2000 and 2006 for most categories. The exceptions are other service and craft workers in the new member states.

SWOT analysis

The SWOT analysis in the table below provides an overview of perceived Strengths, Weaknesses, Opportunities and Threats of the sector.

Strengths	**Weaknesses**
o Customized services, tailor-made solutions, personalized, one-on-one services o Low barriers to entry	o Lack of innovation due to severe price competition, low profits, value added o Lack of economies of scale o Enforcement of rules and regulations difficult
Opportunities	**Threats**
o Structural growth of incomes o Demography and ageing o Development of new business models o Transparency in labour markets o Quality assurance, certification	o Enforcement of rules and regulations difficult

Main drivers of change

Drivers of change have been identified using a systematic approach which addresses trends in Demography, Economy, Society, Technology, Environment and Politics (DESTEP). Starting with a long list of possible drivers the most relevant drivers for this sector have been selected in consultation with an expert panel using an instrument (presented in the table below) that scores possible drivers on a number of criteria: relevance for the sector, uncertainty, expected impact on the volume of employment, on the composition of employment, and on skills and competences – and if so when and where. The following drivers have been identified as most relevant to the other services sector:

- *Ageing*: adapting to market demands is of key importance.
- *Economic*: income level and income distribution determine to a large extent the demand for personal services.
- *Cultural values*: life style changes such as individualisation affect the demand for personal services.
- *Institutional issues*: especially labour market regulations affect the demand for and the provision of personal services.
- *Ageing*: It is certain that ageing plays a major role in the sector. Ageing affects both the supply of labour and the demand for a number of personal service, specifically aimed at the elderly.
- *Income*: Income is demand inducing in the other personal services sector. Income level and income distribution determine to a large extent the demand for personal services
- *Life style*: Major differences are present between life styles resulting in an individual setting promoting formal and paid services and life styles resulting in a social setting promoting informal services by family, friends and voluntary organisations.
- *Market segmentation*: An important difference exists between developments stimulating general services and developments incurring dedicated services. More diverse cultural values are also leading to growing market segmentation.
- *Labour market*: Flexible labour markets will be able to quickly restore imbalances between demand and supply of labour. For the other personal services sector the tax system is crucial. Flexible arrangements include price interventions such as grants given to demand or supply. It is, for instance, possible to use these grants to decrease the gap between labour supplied at the formal and black labour market.
- *Quality of institutions*: Institutions are here defined as legal bodies supervising regulations. A high quality institutional framework promotes the solution of problems in an efficient manner.

Key drivers of change for the Other Services Sector

Cattegory	Driver	Is this driver relevant for the sector? Y / N	How relevant is this driver for the sector? Scale 0-10	How uncertain is this driver for the sector? Scale 0-10	Are substantial impacts expected on the volume of employment? Y/N	Are substantial impact expected on employment composition? Y/N	Are substantial impacts expected on new skills? Y/N	Short, medium or long run impact?[1]			Are substantial differences expected between (groups of) countries? Y / N	Are substantial differences expected between subsectors? Y / N[2]
								S	M	L		
Ageing / demographics	Ageing - Adapt to the market demands of an ageing and more diversified society	Y	9	0	Y	Y	Y			Y	N	N
Economic	Income per capita and household	Y	9	0	Y	N	Y			Y	Y	Y
	Income distribution	Y	9	0	Y	N	Y			Y	Y	Y
Cultural values	Increasing market segmentation (tailor made production, mass customization)	Y	9	3	N	Y	Y		Y	Y	Y	N
	Lifestyle changes	Y	9	3	N	Y	Y		Y	Y	Y	N
	Quality of institutions (judiciary, transparency, lack of corruption, viable business climate, structural rigidities)	Y	7	0	Y	Y	Y	Y	Y	Y	Y	N
	Labour market regulation	Y	9	0	Y	Y	Y	Y	Y	Y	Y	N

[1] Short = 0-3 years; medium = 3-7 years; long = > 7 years. All three categories may apply

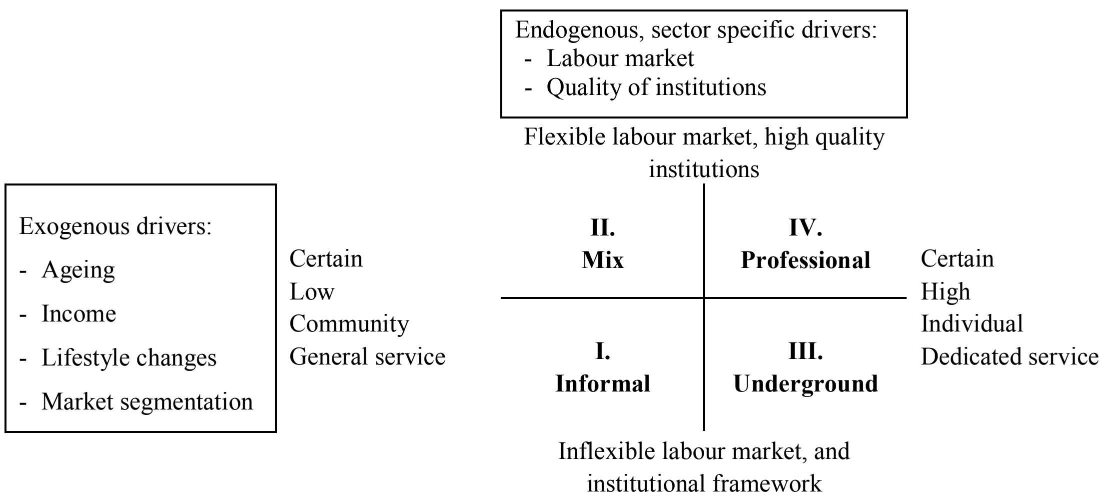
Scenarios for the other services sector

Four sector scenarios are developed for the other services sector:

- Scenario I: Informal;
- Scenario II: Mix;
- Scenario III: Underground;
- Scenario IV: Professional. (see figure below).

The scenarios depict plausible and credible futures for the utilities sector in Europe by 2020. Rather than wishful pictures of the future, scenarios are founded on drivers and trends observed and are derived in a logical and deductive way, hence making inferences about plausible future developments.

Scenarios for other services



Scenario I: Informal

In 'Informal' the demand for other personal services is relatively low as a result of low incomes of inhabitants. Basic services like hairdressing and undertaking are used, of course, but especially the more high quality services are less in demand. Many services are provided by informal suppliers within their own community (e.g. family support). The labour market is inflexible, decreasing the demand for formal services further as labour taxes are in many cases too high to make formal services profitable.

Scenario II: Mix

In 'Mix' the level of formal service provision is increasing somewhat as regulation tries to formalise informal labour. However, the demand for low paid services is not compatible with this development. As the quality of institutions is high, authorities get hold on the informal market. This reduces informal services, but does not result in an equal rise in formal services.
Institutions and regulators try to control informal services leading to price increases. As a result, an increasing number of people refrain from making use of these services. This is, however, dependent on the way the supply side is financed. It is possible to give grants to suppliers to decrease the gap between the costs of the formal and black labour market. This scenario depicts to some extent the current situation in some countries with existing formal

regulations for many services (e.g. in childcare, elderly care, wellness services) and where regulators try to control the ‘grey zones’ of rather informal practices and undeclared work.

Scenario III: Underground

In ‘Underground’ a sharp increase in demand for other personal services is visible. Luxury services like physical wellbeing activities and beauty arrangement are demanded much more as disposable incomes rise. This demand is increased further by ageing, as more people require dedicated services. The industry changes to supply the required services from general to dedicated service delivery. Informal services are profiting more than formal services as a result of the high tax rates and inflexible institutions.

Customers expect rather high quality services. Since the regulatory framework is weak, many service providers are operating informally in a legal sense, but are actually running their business quite professionally. Networking and ‘secret tips’ are an important means of marketing. The competition is high and the service providers are mostly sufficiently qualified. Quality is an important factor, but the market is the determining factor rather than institutional controls.

Scenario IV: Professional

In ‘Professional’ the labour market is reorganised to accommodate the growing demand for other personal services (as a result of the developments already described in ‘Underground’). Compared with ‘Mix’ more possibilities to regulate the supply of other personal services are available due to the high income demand. Innovative arrangements are implemented making it possible to formalize and professionalise personal services, while at the same time the effective tax rate is not too high. Informal services, however, remain available, though at a lower level. Although the institutional framework is quite flexible, the formal market for services it is not sufficiently developed to drive out all informal services.

The formal service sector is quite professionalised and maintains institutional quality control. Certifications and legal aspects (e.g. licensing) play an important role and are an important factor for gaining the customer’s trust. At the same time informal services continue to exist, but they are generally of lower quality and sometimes non-certified, but also cheaper.

Implications of scenarios for jobs, skills and knowledge by job function

The scenarios presented above do not only have implications for the expected the volumes labour required in different job functions, they also have an effect on the types of jobs. New jobs may emerge and significant changes in the nature of the work to be undertaken in existing jobs can be expected.

Identification of emerging competences, skills and knowledge needs

By taking the scenarios and drivers as a starting point, logical inferences (‘guestimates’) of skills and knowledge needs were made for each of the identified job functions. *Skills* refer to the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualification Framework (EQF), skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments). *Knowledge* refers to the outcome of the accumulation of information through learning. It is the body of facts, principles, theories and practices that is related to a field of work or study. In EQF context, knowledge is described as theoretical and/or factual. *Competences* refer to the proven ability to use knowledge, skills and personal, social and/ or methodological abilities, in work or study situations and in professional and personal development. Competences thus defined come actually close to what is generally understood nowadays as ‘soft skills’. In EQF context, competences are described in terms of responsibility and autonomy. In the practical elaboration of future skills and knowledge needs for the purpose of this study, both have been further ‘disentangled’ to result into six clusters of similar and related skills and knowledge needs.

Overview of skills and knowledge needs identified for each job function and scenario
Knowledge (‘hard skills’)
• Legislative / regulatory knowledge (environmental / safety / labour / contracting); Language; e-skills; Marketing skills; Technical knowledge; Product knowledge; Product development
Social Skills • Team working skills; Social perceptiveness (listening / understanding); Communication; Networking; Language; Intercultural
Problem-solving Skills • Analytical skills; Interdisciplinary; Initiative, Multi-skilling; Creativity
Self-management Skills • Planning; Stress and time management; Flexibility; Multi-tasking
Management skills • Strategic & visionary; Coaching and team building; Change management; Project management; Process optimizing; Quality management; People skills crucial for collegial management style
Entrepreneurial skills • Supplier and customer relationship / understanding; Business understanding / development; Trend setting / trend spotting

Source: TNO-SEOR-ZSI

Future skills and knowledge needs by job function

As in other sectors in the other services soft skills will become increasingly important. This applies not only to high skilled professional job functions but – because of the personal nature of many functions in this sector – also to low skilled job functions. In personal services the service, the person providing the service and the person receiving the service are closely linked. A high degree of trust is needed as personal services such as cleaning are provided in the home of the client.

The general trend of up-skilling across job functions applies in this sector only to a limited extent – mainly where personal services are provided through professional service providers. Here certain knowledge – notably e-skills – will become more important. Emerging competences of higher skilled jobs mostly refer to *how* to learn, communicate, interact and adapt to changing environments in addition to a high quality education. Emerging competences in medium-educated job functions that mostly execute defined tasks and processes refer mostly to specific knowledge sets that can be taught through learning. For many basic personal service functions there will be few changes in skills required.

Key emerging skills and knowledge needs by job function are sketched out in the following summary[2]:

Managers – Managers face different challenges in the four scenarios. In general, in the two scenarios with relatively low income growth challenges for managers are less severe than in those scenarios with high expected income growth. Of those, the 'Professional' scenario is the most demanding in terms of new skills required from managers as it combines a growing demand for services based on a combination of growing incomes, individual lifestyles, high quality demands from customers with a flexible regulatory framework – leading to new types of service provision and a more formalised organisation. In the 'Underground' scenario a large share of services is provided in the form of undeclared work. Managers working in the formal sector need to deal with competition from the grey and black market segment and will be challenged to find ways to attract qualified personnel. The main challenge for managers is thus to deal with high quality demands from customers. Some of the new management skills needed in the 'Professional' scenarios apply also to the 'Mix' scenario as more regulation requires a general formalisation of business. In 'Mix' and 'Professional' new regulations apply. Rules and regulations deal specifically with working conditions, safety and environmental issues, the use of chemicals (e.g. in hairdressers) and formal requirements to be able to supply services, including financing mechanisms (e.g. vouchers).

Technicians – The other services sector is a sector with a generally low potential for technological change as most services are of a personal nature, often provided by individuals, micro-enterprises or small companies, all of which have a low possibility to invest in new technology. This might change in the long run as robotics may come in as a major technology after 2020. However, between 2009 and 2020 it is not probably that this technology shows a high penetration rate. It is important to distinguish self-employed workers from those working for companies – the former require a broader range of (self) management entrepreneurship and e-skills. All scenarios still require that technicians keep up with the ongoing technical developments in their field. In 'Underground' and 'Professional' this is more important as quality demands from customers are increasing. E-skills also become important in all scenarios as technicians may use ICT as a problem solving tool, for information purposes and as a communication tool with their employers and customers (marketing new types of services and the possibility to deliver these services in novel ways).

Administrative support staff – For administrative support staff differences between scenarios are not expected to be substantial. New skills needed include e-skills in order to deal with internet-based payroll and administration systems, especially for small companies. In the 'Professional' and 'Mix' scenario, administrative staff will most likely need to know about changing rules and regulations with regard to labour laws, health and safety in the workplace, tax regimes and financing mechanisms (e.g. vouchers). In 'Underground' and 'Professional' quality demands from customers become more important requiring better understanding of customer needs, social perceptiveness, higher quality communication and quality management. In 'Professional' planning skills become more important as customers do not like waiting time and waiting lists, while formal businesses might have a tendency for bureaucracy.

Service workers – Service workers can be either skilled or low-skilled. Skilled service workers include employees providing specialist services for which a diploma or certificate is required or expected. These include hairdressers and beauticians and for example suppliers of

[2] For expected changes in main skills and knowledge clusters, see tables below. More extensive and detailed accounts on future skills and knowledge needs can be found in the main report, with further differentiations made by scenario.

specialised cleaning services. Demand for these specialist services will be highest in the high income growth scenarios. E-skills are of key importance in all scenarios as these services are often provided by individuals or micro enterprises which can strongly benefit from the internet in the development of new services and better communication with (potential) customers. The internet also provides new ways of delivering services to customers. Technical knowledge (again to provide innovative up-market services) is more important in the 'Underground' and 'Professional scenarios' as customers are expected to demand more high quality services. In the 'Mix' and 'Professional' scenario, legislative and regulatory knowledge becomes more important as business is formalised. Flexibility and multi-tasking are also important in the 'Professional" scenario. In 'Underground' and 'Professional', several new skills emerge as a result of the growing demand for high-quality services.

Helpers & cleaners – In general, low-skilled job functions, such as cleaners and dog-walkers, have little potential for upgrading and innovation. Services are often provided for an agreed time period (baby sitting for four hours) – with almost no possibility to improve labour productivity. Services very often come with a person and are provided at the employer's home – a situation in which trust is of vital importance In the 'Professional', 'Underground' and 'Mix' scenarios e-skills are needed but only for independent service providers in order to be able to advertise their services in an effective manner to reach potential customers. In the scenarios with more regulation, knowledge about labour laws, safety regulations and legal requirements for businesses become increasingly important. Apart from the 'Informal' scenario, many low-skilled functions are provided by recent migrants. Therefore, a key success factor for these employees will be the ability to speak the local language and to have basic intercultural skills in order to adapt to the specific working environment.

Main strategic choices to meet skill and knowledge needs

In order to meet future skills and knowledge needs, apt and timely solutions – referred to here as strategic choices - are required (see table below). Strategic choices refer and relate to the medium- and longer term, even though emerging skills and knowledge needs in practice may also apply to the now and tomorrow. Essential in seeking appropriate solutions is to keep this longer time perspective in mind. Rather than focusing on one single solution, a set of linked strategic choices will in most cases be the best strategy to follow. Prioritising both in time (what first, where to follow up) and in allocation of resources (including budgetary focus) followed by further fine-tuning is a clear necessity to guarantee that skills needs are targeted and solved. Skill needs can be identified at various levels, ranging from assessments at the national or even European sector level to more precise assessments at the regional and company level. Increasingly the identification of skills and knowledge needs but also the search for adequate solutions will have to become an integral part of an overall longer-term business strategy, also for SMEs. Some solutions will be found within the company itself, e.g. through reorganising functions within or between plants, by offering (re)training trajectories or by active global sourcing of personnel. For SMEs and especially for micro-enterprises such longer-term, more strategic human resource management often will be more difficult to organise and operationalise.

In order to address the identified future skills and knowledge needs in an encompassing and timely manner, appropriate joint action is needed by all stakeholders, including the industry (firms, sector organisations and social partners), training and education institutes, intermediary organisations and, last but not least, government at all levels (EU, national, regional and local). Collaboration is needed in order to agree on and implement a package of feasible solutions. Timely, targeted and reliable information to make decisions – i.e. adequate monitoring and analysis - is an essential prerequisite.

Conclusions

A summary of quantitative and qualitative changes expected, and strategic options for different job functions is presented in the table below. Conclusions and recommendations are provided in summary form at to levels: first, specifically for education and training and then 'other' main conclusions and recommendations.

Conclusions and recommendations on education and training

1) Improve the information provision on skill needs and job requirements which is essential for improving training and education

2) Collaborate with all relevant stakeholders and intensify co-operation in education and training

3)) Improve the flexibility of the vocational education and training (VET) and general education systems

4) Promote Life-Long-Learning and develop incentives and cost sharing mechanisms between governments, companies and individuals

5) Prepare vocational educational schools for future demands

6) Supply special courses dedicated to sector characteristics – taking into consideration that the workforce is often low-educated, and working part-time

7) Supply special courses for older workers

8) Develop and increase the acknowledgement of certificates

9) Provide career guidance for labour market entrants

Main other conclusions and recommendations

1) Focus on change – anticipating new trends and developments in the sector

2) Expand the possibilities for legalising undeclared work in this sector

3) Improve collaboration between all sector stakeholders

Summary of job volumes, skills changes, strategic choices and main players in anticipatory action by scenario					
		Informal	**Mix**	**Underground**	**Professional**
Managers	1. Employment volume change	M	I	M	I+
	2. Skills changes counted	Count 0	Count 8	Count 11	Count 20
	3. Emerging skills needs		Knowledge, Social Skills	Social Skills, Self management,	Knowledge, Social Skills, Self management, Entrepreneurship
	4. Most important solutions	Recruit from other sectors, (Re)train employed workers, information about emerging skills, Improve sector image	Recruit from other sectors, (Re)train employed workers, information about skills, Improve sector image	Recruit from other sectors, (Re)train employed workers, information about emerging skills, Improve sector image	Recruit from other sectors, (Re)train employed workers, information on new skills, Improve sector image
	5. Most important actors	C,S,E	C,S,E	C,S,E	C,S,E
Technicians	1. Employment volume change	M	D	I	I+
	2. Skills changes counted	Count 2	Count 3	Count 7	Count 8
	3. Emerging skills needs	Knowledge	Knowledge	Knowledge, Social Skills	Knowledge, Social Skills
	4. Most important solutions	Recruit from other sectors, Recruit unemployed, Recruit young people from school, Outsourcing and offshoring, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit from school, Outsourcing and offshoring, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit young people from school, Outsourcing and offshoring, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit young people from school, Outsourcing and offshoring, Improve sector image
	5. Most important actors	C,S.E	C,S.E	C,S.E	C,S.E
Administrative support staff	1. Employment volume change	M	I	M	I+
	2. Skills changes counted	Count 1	Count 2	Count 5	Count 7
	3. Emerging skills needs	Knowledge	Knowledge	Knowledge, Social Skills	Knowledge, Social Skills

	4. Most important solutions	Recruit from other sectors, Recruit unemployed Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring,	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills
	5. Most important actors	C,S.E	C,S.E	C,S.E	C,S.E
Service workers	1. Employment volume change	M	D	I	I+
	2. Skills changes counted	Count 0	Count 2	Count 9	Count 17
	3. Emerging skills needs	Knowledge	Knowledge	Knowledge, Social Skills	Knowledge, Entrepreneurship
	4. Most important solutions	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills, Improve sector image	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Outsourcing and offshoring, Information on new skills, Improve sector image
	5. Most important actors	C,S,I,E,U	C,S,I,E,U	C,S,I,E,U	C,S,I,E,U
Helpers and cleaners	1. Employment volume change	M	D	I	I+
	2. Skills changes counted	Count 0	Count 3	Count 5	Count 9
	3. Emerging skills needs		Knowledge, Social Skills	Social Skills	Knowledge, Social Skills
	4. Most important solutions	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, information on new skills	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Information on new skills	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Information on new skills	Recruit from other sectors, Recruit unemployed, Recruit young people from school, (Re)train employed workers, Information on new skills
	5. Most important actors	C,S,G,E,	C,S,G,E,	C,S,G,E,	C,S,G,E,

=Companies; S=Sectoral organisations, U=trade Unions; E=Education and training institutes; G=Government (EU, Member State, regional, local)