

Knowledge and lifelong learning

- a central theme of the Lisbon Agenda

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1. Knowledge economy and knowledge policies

1.1. On the transition to the knowledge-intensive economy

We are going through a great transformation which can be called a transition to knowledge-intensive economies. We can say that we are entering a new mode of knowledge creation, diffusion and use due to three main factors: their acceleration by information and communication technologies; the increasingly sophisticated procedures to codify, to learn and to manage knowledge; and the social perception of knowledge as a strategic asset of companies, nations and people.

These three factors are gradually transforming:

- the knowledge creation by professional groups such as researchers, artists, engineers as well as by the different social communities, developing different forms of life in working and family life, leisure, public space;
- the knowledge diffusion by telecommunications networks, content industries, media, education and training;
- the knowledge use by companies, public services, local authorities, the different actors of civil society and people at large.

This broad transformation involves new patterns of behaviour, values, social relationships and institutional forms. The financial markets were the first ones to be transformed by the new opportunities opened by cyberspace. With just-in-time interaction becoming possible, the global interdependency of these markets and the mobility of capital have increased dramatically. The same does not happen with their regulation, which has still many shortcomings— hence the greater risks of systemic crisis.

More recently, we have been witnessing a new dimension of the process of globalisation (Soete in Archibugi and Lundvall, 2001) with the rise of the intangible transactions at international level encompassing not only services, but also transfers of technology, information and knowledge connected with manufacturing. Just-in-time interaction and co-ordination at

global level is also becoming possible for manufacturing. The production chains are being re-organized at global level. Multinational corporations are focusing the most value added-production based on trademarks and building wide networks of out-sourcing and delocalisation. With the diffusion of e-commerce, more particularly with business-to-business, new e-market places are emerging, speeding up global transactions which can involve not only big but also small and medium companies that are discovering completely new opportunities.

Within companies, it is not only the production process that is becoming more intensive in information and knowledge. It is also the content of the products and the services themselves, as we can understand by driving a car, using a TV set, a washing machine or looking for a personal banking, health or entertainment service (Tapscott, 1995). Hence knowledge management is becoming a key factor of competitiveness, leading to a fundamental reconsideration of the principles of strategic management (Wikström and Norman, 1994). The goal of knowledge management is to build and exploit intellectual capital effectively and gainfully (Wiig in Despres and Chauvel, 2000).

Against this background, there are companies reshaping their organisation towards a learning organisation, with multitasking, more flexible arrangements, more open communication, more scope for initiative and creativity and more opportunities for lifelong learning. More sophisticated procedures are introduced in human resources management based on competence assessment. (Le Boterf, 1998). New types of workers are spreading, called knowledge workers by Robert Reich (1991), categorized by Manuel Castells (1996) in different occupational profiles such as innovators, connectors and captains.

In the meantime, new risks of social downgrading or social exclusion – a digital divide – involve the workers who cannot keep up with this pace of change. Labour markets tend to new forms of segmentation between workers with voluntary mobility based on up-dated skills and workers with involuntary mobility due to out-dated skills. New types of labour contracts and collective agreements are being experimented in order to take into account the time and the financial resources invested in lifelong learning by the companies, the workers and the public authorities. New forms of security regarding training or social protection are being defined in order to facilitate the occupational mobility of workers and their choices between working, learning and family life throughout the life cycle.

The institutional framework of labour markets is being reshaped in order to combine competence building, employability and adaptability with basic conditions of security and citizenship (e.g. Esping-Anderson, 1996, Fitoussi and Rosanvallon, 1996). Labour market services are being more focused on active employment policies, social protection systems on

activating social policies, industrial relations on negotiating new trade-offs between flexibility, security and competence building. Finally, education and training systems are facing the challenge of developing a learning society, improving their access to knowledge to the different kinds of users taking advantage of the different kinds of media.

These are trends that are still in conflict with other trends coming from the past, the previous mode of development, but they might be fostered by a new generation of policies, which can be called knowledge policies.

1.2. Knowledge policies

Knowledge is becoming the main source of wealth of nations, companies and people, but it can also become the main factor of inequality. Therefore, public policies should be more concerned in facilitating the access to knowledge and enhancing learning capacities (Lundvall, 2001). This is why we can also speak about knowledge policies.

Knowledge policies can be defined as the policies aiming at fostering and shaping this transition to a knowledge-based society.

Regarding knowledge creation, these policies support basic research, applied research, as well as culture industries, encouraging dialogue among different cultures, social groups and generations.

Regarding knowledge diffusion, these policies develop broadband networks, spread the access to Internet, promote content industries and their dissemination by different media, reform education and training towards what we can call a learning society.

Regarding knowledge utilisation, these policies foster innovation in products and processes; knowledge management and learning organisations in companies and social services, as well as local and international partnerships for innovation.

Against this background, we can highlight a more far-reaching role for the policies, concerning notably research, culture, media, innovation, information society, education and training, and their implications for other issues such as employment, social inclusion and regional development. Moreover, some implications should also be drawn for macroeconomic policies and their impact on structural change. Budgetary policies should give a stronger priority to knowledge policies and even tax policies should encourage new patterns of behaviour in line with these policies.

All this was at stake, when a strategy for the transition to the knowledge economy was defined in the European Union.

2. A European strategy for the transition to the knowledge economy

2.1. In search of a European way

In the preparations for the Lisbon Summit (23-24 March 2000), we faced the following main question: is it possible to update Europe's development strategy so that we can rise to the new challenges resulting from globalisation, technological change and population ageing, while preserving European values? In the new emerging paradigm, knowledge and innovation are the main sources of both wealth and divergence between nations, companies and individuals. Europe is losing ground to the United States, but this does not mean we have to copy them.

The purpose was to define a European way to evolve to the new innovation and knowledge-based economy, using distinctive attributes ranging from the preservation of social cohesion and cultural diversity to the very technological options. A critical step would be to set up a competitive platform that can sustain the European social model, which should also be renewed.

Answering this question requires institutional innovations, if we want to tap into the potential of this new paradigm while avoiding risks of social divide. Innovation, for example, of norms regulating international trade and competition, of social models, or of education systems. Moreover, in each and every Member State of the European Union, institutional innovation has to internalise the level of integration accomplished through the single market and the single currency. This means that some level of European co-ordination is required to carry out institutional reforms, while respecting national specificity. A multilevel governance system is needed that enables its various levels (*i.e.* European, national and local) to interact.

In order to find an answer to the initial question, we had to commit to an extensive intellectual and political undertaking of reviewing Europe's political agenda and the main Community policy documents in the light of the latest updates of social sciences. European intellectuals with a broad experience in these fields were involved in this task (Rodrigues, 2002). Our purpose was to ascertain which institutional reforms could change the way in which European societies are currently regulated, so as to pave the way for a new development trajectory towards a knowledge-intensive economy.

2.2 Overview of the Lisbon strategy after its mid-term review

The Lisbon strategy launched by the European Council of March 2000 was precisely the elaboration of a European comprehensive strategy for the economic and social development in face of the new challenges: globalisation, ageing and faster technological change. Its central idea is to recognize that, in order to sustain the European social model, we need to renew it, as well to renew its economic basis by focusing on knowledge and innovation. This should be the main purpose of an agenda for structural reforms (Rodrigues, 2002).

Over the last five years, this strategy was translated into an agenda of common objectives and concrete measures, using not only the traditional instruments, such as directives and the community programmes but also a new open method of coordination, which had already been tested in the employment policy and which was then extended to many other ones: the policies for information society, research, enterprise, innovation, education, social protection and social inclusion (Rodrigues, 2003).

The general outcome in 2004 was clearly very unequal across policy areas and countries. A progress seems quite evident in the connections to Internet, the networks for excellence in research, the one-stop shops for small business, the integration of financial markets, the modernisation of the employment services or in some social inclusion plans. But some important bottlenecks are evident in fostering innovation, adopting a Community patent, opening the services market, developing lifelong learning or reforming social protection. Besides that, some Northern countries display better performances than some Southern ones, whereas some smaller countries seem to perform better than most of the big ones. This is, of course, a very rough assessment.

In the meantime, the implementation gap was worsened by a communication gap, due to the absence of a communication policy able to connect some existent progress on the ground with this European agenda. In face of these shortcomings, the mid-term review in 2004-05, under the

Luxembourg Presidency, came up with some answers to the main problems which had been identified (Kok, 2004, Sapir 2004):

- blurred strategic objectives;
- inflation of priorities and measures;
- lack of implementation, coordination and participation mechanisms;
- lack of financial incentives.

2.2.1. Clarifying the strategic objectives

The first problem to address was about the very relevance of the strategy. Taking into account the new challenges, is the Lisbon strategy still relevant?

The world landscape is changing. The emergence of new competitive players coupled with more evident ageing trends should fully be taken into account by the Lisbon strategy, but its approach remains valid and becomes even more urgent – this was the position adopted by the Spring European Council under the Luxembourg Presidency. “Europe must renew the basis of its competitiveness, increase its growth potential and its productivity and strengthen social cohesion, placing the main emphasis on knowledge, innovation and the optimisation of the human capital” (Council 7619/05, §5). Stepping up the transition to a knowledge-intensive society remains the central direction. The need to improve the synergies between the three dimensions of the strategy – economic, social and environmental – is also underlined in the more general context of the sustainable development principles (Council 7619/05).

Still, it was considered that the strategy should be re-focused on growth and employment, with some implications for the definition of the political priorities, as we will see below.

2.2.2. Defining the political priorities

The major political priorities of the Lisbon strategy for growth and jobs, after the mid-term review concluded in July are three:

- Knowledge and innovation – engines of sustainable growth;
- Making Europe a more attractive place to invest and to work;
- More and better jobs.

These three political priorities were specified into a short list of 24 guidelines using the Treaty-based instruments called “broad economic policy guidelines” and the “employment guidelines”. Moreover, an additional strand was included dealing with the macro-economic policies, under the label “Macroeconomic policies for growth and jobs” (see next Table and Council 10667/05 and 10205/05).

LISBON STRATEGY

THE INTEGRATED GUIDELINES FOR GROWTH AND JOBS

Macroeconomic policies for growth and jobs

1. To secure economic stability for sustainable growth;
2. To safeguard economic and fiscal sustainability as a basis for increased employment;
3. To promote a growth-and employment-orientated and efficient allocation of resources;
4. To ensure that wage developments contribute to macroeconomic stability and growth;
5. To promote greater coherence between macroeconomic, structural and employment policies;
6. To contribute to a dynamic and well-functioning EMU.

Knowledge and innovation – engines of sustainable growth

7. To increase and improve investment in R&D, in particular by private business;
8. To facilitate all forms of innovation;
9. To facilitate the spread and effective use of ICT and build a fully inclusive information society;
10. To strengthen the competitive advantages of its industrial base;
11. To encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth.

Making Europe a more attractive place to invest and work

12. To extend and deepen the Internal Market;
13. To ensure open and competitive markets inside and outside Europe and to reap the benefits of globalisation;
14. To create a more competitive business environment and encourage private initiative through better regulation;
15. To promote a more entrepreneurial culture and create a supportive environment for SMEs;
16. To expand and improve European infrastructure and complete priority cross-border projects;

More and better jobs

17. To implement employment policies aimed at achieving full employment, improving quality and productivity at work, and strengthening social and territorial cohesion;
18. To promote a lifecycle approach to work;
19. To ensure inclusive labour markets, enhance work attractiveness and make work pay for job-seekers, including disadvantaged people, and the inactive;
20. To improve matching of labour market needs;
21. To promote flexibility combined with employment security and reduce labour market segmentation, having due regard to the role of the social partners;
22. To ensure employment-friendly labour cost developments and wage-setting mechanisms
23. To expand and improve investment in human capital;
24. To adapt education and training systems in response to new competence requirements.

Source: Council of the European Union, 10667/05 and 10205/05

Hence, for the first time, the EU is equipped with an integrated package of guidelines for its economic and social policies, using Treaty-based instruments. Behind this major political development a quite long maturing process had taken place and the need to enhance implementation was the final argument to be used.

2.2.3. Fostering the implementation

The aim of defining coordinated guidelines for economic and social policies in the EU comes from the nineties, with the preparation of the Economic and Monetary Union. During the Lisbon European Council in 2000, the political conditions were still not ripe to achieve the adoption of an economic and social strategy using more compulsory instruments such as Treaty-based guidelines. Hence, a new method was defined, called “open method of coordination”, based on (Council SN 100/00 and Presidency 9088/00):

- identifying common objectives or guidelines;
- translating them into the national policies, adapting to national specificities;
- organising a monitoring process based on common indicators, identifying best practices and peer review.

The development of this method in eleven policy fields since 2000, in spite of some shortcomings (such as bureaucratisation, simplistic benchmarking, etc.), had been quite instrumental in building the necessary consensus about the strategic challenges and the key reforms to be implemented. In 2005, the arguments regarding the implementation and the coordination gap were already enough to ensure a transformation of some of the most important of these “soft” guidelines into “harder” ones, by building on them in order to formulate Treaty-based guidelines (Council, 10667/05 and 10205/05).

Hence, the open method of coordination did play a role in building a European dimension, organising a learning process and promoting some convergence with respect to national differences. Does this mean that this method is now over? This is not the case at all (see Council 7619/05 § 39 d/ and Commission, SEC 28.04.2005). It can pursue its role, when this is

needed which means that the policy making process can work at two levels, one more formal and precise than the other, ensuring the necessary political re-focusing in the implementation.

A second important development regarding the instruments for implementation concerns the national reform programmes for the next three years, to be prepared by all the Member States in the Autumn 2005 (Commission, SEC 28.04.2005). These programmes should be forward-looking political documents setting out a comprehensive strategy to implement the integrated guidelines and adapting them to the national situation. Besides presenting the political priorities and measures, these programmes are also expected to point out the roles of the different stakeholders, as well as the budgetary resources to be mobilized, including the structural funds with a link to the stability and convergence programmes. The preparation, implementation and monitoring of the national programmes should involve the main political institutions as well as the civil society and, when appropriate, a national coordinator should be appointed. An annual follow-up report is also supposed to be provided by all Member States, leading to a general report to be presented by the European Commission to each Spring European Council.

A last important piece to foster the implementation is the recently adopted Community Lisbon Programme, putting together, for the first time, all the regulatory actions, financing actions and policy developments to be launched at European level regarding the Lisbon strategy for growth and jobs, and organising them by the three main priorities already mentioned (Commission, COM (2005) 330). Some of its key actions are underlined:

- the support of knowledge and innovation in Europe;
- the reform of the State aid policy;
- the better regulation for business operation;
- the completion of the internal market for services;
- the completion of an ambitious agreement in the Doha Round;
- the removal of obstacles to physical, labour and academic mobility;
- the development of a common approach to economic migration;

- the support to manage the social consequences of economic restructuring.

As the national programmes for growth and jobs will require a stronger coordination within the governments, this Community Lisbon Programme will require the same from the European Commission and also from the Council of Ministers in its relevant formations: Ecofin, Employment and Social Affairs, Competitiveness, Education and Environment. Regarding the European Parliament, an internal coordination procedure is already under way between different EP commissions and the same should be considered by the national parliaments, as some of their commissions can be concerned.

2.2.4. Developing financial incentives

Different reforms of financial instruments are underway in order to put them more in line with the political priorities of the Lisbon strategy for growth and jobs:

- the Community framework for the State aids is being reviewed in order to turn them into a more horizontal approach, focusing R&D, innovation and human capital;
- the European Investment Bank and the European Investment Fund are also deploying new instruments in support of the strategy for growth and jobs, and were asked to put a special focus on the needs of the innovative SMEs in Europe;
- the Community Programmes can also play an important role, notably if they are also able to become a catalysts of the national programmes for growth and jobs. Three very relevant cases are the 7th Framework Programme for Research and Technological Development, the Community Programme for Competitiveness and Innovation and the Community Programme for Lifelong Learning;
- the Community Strategic Guidelines for the Cohesion policy, which were recently proposed by the European Commission are now strongly in line with the integrated guidelines for the Lisbon strategy, covering their three main strands: making Europe and its

regions more attractive places to invest and to work; knowledge and innovation for growth; and more and better jobs (Commission, SEC (2005) 0299).

The scope of these two last instruments depends, of course, on the size of the financial resources to be given in the next Financial Perspectives (2007-2013) to two central objectives: investing in the Lisbon priorities and keeping regional cohesion.

Beyond all this, a reform was introduced in the Stability and Growth Pact which can have very relevant implications for the Lisbon strategy (Council 7619/05). According to this reform, macroeconomic stability remains a central concern, the limits for the public deficit and the public debt remain 3% and 60% as ratio of the GDP and pro-cyclical fiscal policies should be avoided. Nevertheless, a new emphasis is put on fostering economic growth and on the sustainability of the public debt in order to cope with the demographic trends. Against this background, the Lisbon goals, such as reforming social protection systems and redirecting public expenditure to key investments for growth potential (in R&D, innovation, human capital) are among the relevant factors to be taken into account when assessing the public deficits (either below or above 3%) or when defining the adjustment trajectories, in case of the excessive deficit procedure.

Against the new background provided by the mid-term review of the Lisbon Strategy, let us now focus on one of its most important priorities: developing lifelong learning.

3. On the European policies for lifelong learning

Lifelong learning plays a central role in order to explore the full potential of a knowledge intensive economy for competitiveness, growth and jobs creation with social inclusion. The analysis of the present situation in the EU shows very important bottle-necks, in spite of an increasing public awareness of this issue. Following recent policy developments at European level, all Member States are about to define their national strategies to develop lifelong learning.

Some elements of this broader strategy seem to be emerging everywhere such as: lifelong learning as an issue concerning the population as a whole, the importance of basic competences, the role of multiple stakeholders, new funding instruments, the development of multiple pathways and the need to remove obstacles, the potential of e-learning, the need to improve guidance and recognition. By contrast, others topics still seem underdeveloped: the critical role of early childhood learning, the potential of work organisation, the role of collective bargaining, the budgetary implications of the targets for investment in lifelong learning.

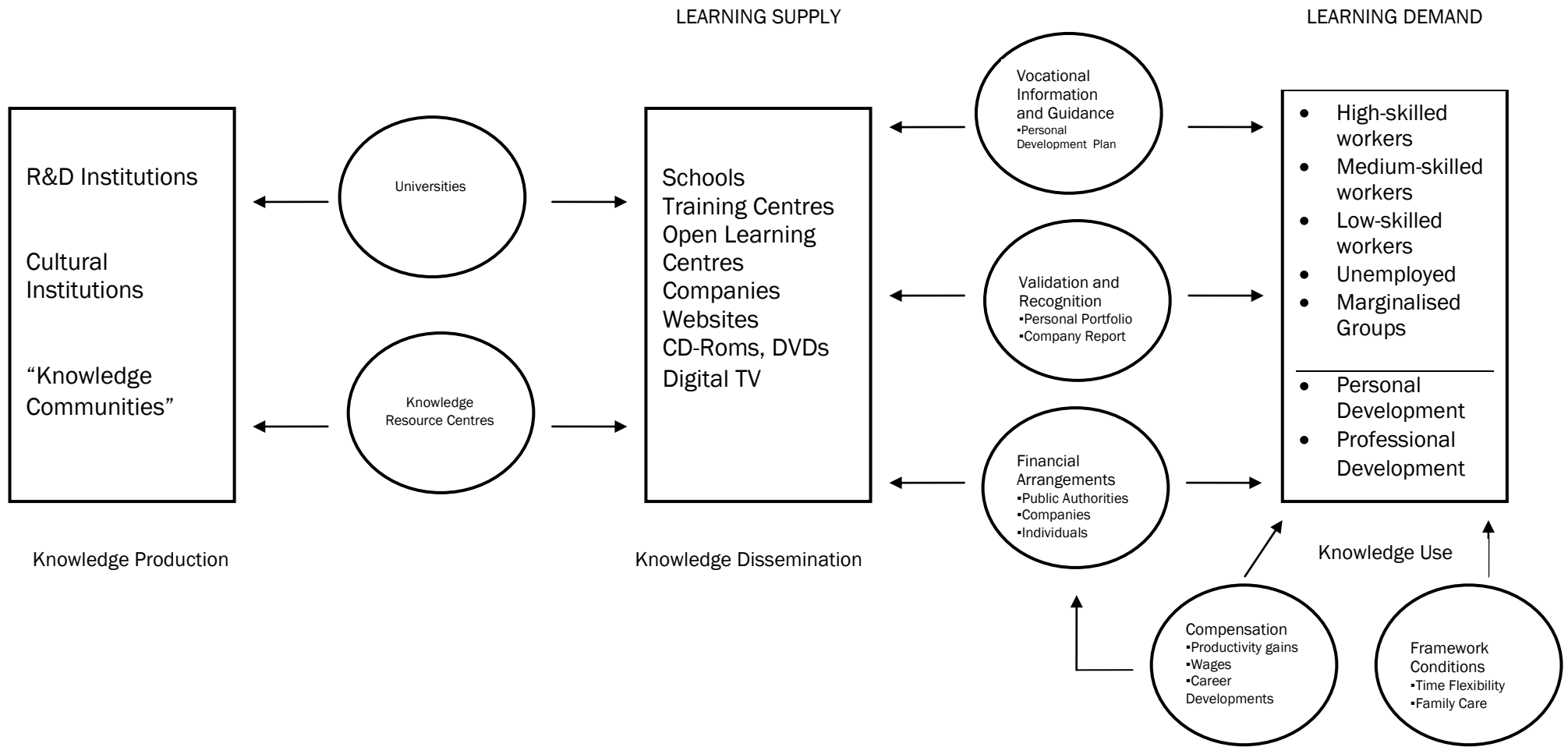
3.1. From the learning system to the strategy for lifelong learning

There is a clear gap between the European ambition to become a dynamic, competitive and inclusive knowledge based economy and the present scope of the learning activities involving both public and private initiatives. In order to overcome this gap we need a more systematic approach on the development of a *learning system*, which should be built on the following principles (see Figure 1):

- a/ this approach should take into account the general context of a knowledge-based society;
- b/ lifelong learning is a central activity in a knowledge society because it disseminates the knowledge which is produced to those who might use it. Therefore lifelong learning plays a central role in the chain of knowledge production, dissemination and utilisation;
- c/ in order to analyse the outcome of the autonomous initiatives of the actors of the knowledge dissemination versus the actors of the knowledge utilisation, it is useful to speak about the *supply of learning services* versus the *demand for learning services*. As a matter of fact we are considering a specific sector of services which is expanding and becoming more complex and sophisticated;
- d/ the supply of learning services is evolving according to the types, places and instruments of learning: schools and training centres might evolve to open learning centres; companies can create more sophisticated learning organisations; e-learning is developing by using websites, CD-ROMS, DVDs and data bases; digital TV can play an increasing role;
- e/ the demand of learning services is very heterogeneous according to the various target groups, from high skilled staff to skilled craftsmen or to marginalised groups and according to their concrete economic, social and cultural activities;

- f/ the demand of learning services depends on some framework conditions, such as the working time flexibility and the family care facilities. This demand also depends on the prospects to get incentives in terms of productivity gains and of personal or professional development, or in terms of salary or promotion to be defined by the labour contract or the collective agreement;
- g/ the interaction between the supply and the demand of the learning services depends on the forecasting and guidance procedures, on the validation and recognition of the learning activities and on the funding mechanisms; in simpler words, well known of economists, the interactions between supply and demand depend on information, value and money;
- h/ finally, all the interactions in this chain can be more strongly developed on the basis of a more powerful infrastructure of telecommunications (broadband) and logistics.

FIGURE 1 - The system of lifelong learning



These seem to be the main components of what we can call a *learning system*, which will have concrete specificities in each national case. A national strategy for lifelong learning should therefore aim at dynamising this system in order to develop lifelong learning taking into account these national specificities. Nevertheless, beyond these specificities it is possible to identify some general strategic priorities to be taken into account in each national case:

- a/ to define the goals for lifelong learning in terms of not only educational levels but also new jobs profiles and competences;
- b/ to develop a new infrastructure for lifelong learning;
- c/ to create a diversified supply of learning opportunities able to provide more customised solutions:
 - to develop the new instruments of e-learning and to explore the potential of the digital TV;
 - to turn schools and training centres into open learning centres;
 - to encourage companies to adopt learning organisations;
 - to shape the appropriate learning mode for each target group;
 - to spread new learning solutions for the low skilled workers.
- d/ to foster the various demands for learning and to create a demand-led system:
 - to improve the framework conditions for lifelong learning;
 - to develop a dynamic guidance system over the life course;
 - to renew the validation and recognition system;
 - to create compensations for the investment in learning.
- e/ to spread new financial arrangements in order to share the costs of lifelong learning;
- f/ to improve governance for lifelong learning, involving all the relevant public departments and stakeholders of civil society.

3.2. To define the goals for lifelong learning

The goals of lifelong learning should be defined first of all in terms of education levels and educational attainments. The European Union has recently adopted a short list of common targets, assuming that the upper secondary level seems nowadays the minimal level to provide a solid foundation for lifelong learning. These targets (see Table 2) aim at focusing the investment in education and training in areas with clear value added, in

terms of economic growth and employability. This additional effort should combine targeted public investments and higher private contributions (Com (2002) 779).

Table 2 – Education targets in the European Union

1	By 2010, an EU average rate of no more than 10% of early school leavers should be achieved;
2	The total number of graduates in mathematics, science, technology in the EU should increase by at least 15% by 2010, while at the same time the gender imbalance should decrease;
3	By 2010 at least 85% of 22 years old in the EU should have completed upper secondary education;
4	By 2010, the percentage of low-achieving 15 years old in reading, mathematical and scientific literacy will be at least halved;
5	By 2010, EU average participation in lifelong learning should be at least 12, 5% of the adult working population (25 to 64 age group).

Moreover, according to the above presented analysis, two other targets should be added:

- a specific target concerning the education and training of the adult population who only has basic education;
- a general target concerning the pre-schooling education for all children, as it is proved it can play a crucial role in their cognitive development and their subsequent educational and professional performance; this target might be connected with the other already adopted, dealing with the generalisation of child care services.

In the meantime, the EU also agreed on a short list of basic skills which, in addition to literacy and numeracy, should include ICT skills, foreign language, entrepreneurship and social skills.

Lifelong learning activities are very often hindered by a lack of relevant information and awareness about skills needs. Companies complain about education institutions not being able to cope with their needs and education institutions argue they should not be completely subordinated to short term economic needs. Nevertheless, behind the success cases of

European regions and clusters we will find new patterns of interaction between skills demand and supply (Stahl, 2001).

Drawing some lessons from this experience, the goals of lifelong learning should also be defined in terms of occupational profiles and their specific competences. The purpose is not coming back to the traditional models of forecasting, setting a mechanical and unidirectional relationship between the industrial pattern of growth on the one hand and the skills needs on the other. On the contrary, the purpose should be to develop a permanent interaction between skills and the growth pattern at European, national, sectoral and local levels, involving the relevant actors and taking into account both long and short term needs. The recently created *Skillsnet* should be enhanced in order to provide basic references for this process at European level, building on the already very diversified work across Member States, which combines very different techniques: enterprise and labour force surveys, case studies, expert inquiries, analyses of jobs advertisements, forecasting and scenarios, observatories on skills developments (Descy and Tessaring, 2001).

In a knowledge-based society, lifelong learning can play a central role in paving the way to new areas of jobs creation. Jobs creation is increasingly intertwined with innovation in all its dimensions: innovations not only in process but in products and services, not only in technologies but in organisation, marketing and design. At the core of innovation there is the capacity to turn knowledge into more added value, and this requires much more skilled people.