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Executive Summary

This report contributes to the eEurope benchmarking programme by evaluating the developments and progress of a representative selection of 30 key actions from the eEurope 2002 action plan in all EU Member States. The SIBIS project survey provides a comprehensive overview of the eEurope action plan implementation by country, based on desk research and interviews carried out in each Member State in the period June-September 2001.

The launch of eEurope represented a turning point for the EU agenda on the development of the Information Society. Its strategic goals were raised to a priority level in the policy program, with the endorsement of the highest levels of government and an ambitious schedule of targets. The initiative of the Lisbon Council certainly impressed a new momentum to governments strategies in this field, but with different ways and impacts depending on the different national contexts.

SIBIS analysed the national contexts of eEurope action plan adoption and implementation on the basis of two main aspects: the organisation of the plan implementation in the country's institutional context and the coordination with more or less pre-existing Information Society Plans. The results show that for seven countries (the Northern countries, France, Germany, the UK and the Netherlands) the eEurope initiative was integrated into, and gave new force to, pre-existing Information Society plans, often with similar goals and already in the implementation phase. For the other eight countries eEurope had a stronger impact, since it led to the actual implementation of a series of policies, usually already discussed in Information Society strategies plans but not yet really launched. In other words, eEurope provided additional momentum for a coherent framework of innovation promotion policies, especially in Southern Europe.

The SIBIS survey shows that eEurope priorities have been translated in policy actions by Member States for almost all action areas, but with very different levels of aggressiveness and results, depending on the type of action and on the country. While the Member States have agreed on the overall goals of the eEurope action plan, the ways of its implementation vary greatly, depending on national policy strategies and "styles" of government - that is whether the government chooses to take direct action or to create the conditions for society to act. Moreover, the level of development of the different national markets also affects the implementation of policy measures. This makes it very difficult to carry out a comparative analysis of eEurope implementation progress by country. Nevertheless, a synthetic overview of the SIBIS survey does show that progress is greater in some areas than others.

Overall, the survey shows that the actions addressing the improvement of availability and access of the Internet networks, especially for schools and the teachers/students user population have achieved the greatest progress. The actions addressing the stimulation of the use of the Internet, which were mostly designed to accelerate adoption and frequency of usage by creating favourable conditions for market development, were not as successful. This is true also for the stimulation of use of innovation in the public sector (government online) where measures were launched but results must still be seen. Actions where harmonisation of legislation was called for (such as laws against cybercrime) are also proving difficult to implement, not because of lack of initiatives but of their variety and range.

A common element is that the time needed for full implementation of the policy measures launched is often underestimated, so that actual results seem slow to materialise. For most actions and most countries, policy measures have been launched only recently.

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Looking at the results by country, no obvious laggard emerges, nor structural gaps between groups of countries (for example between Southern European countries and the others). For every action there are some forerunners and some latecomers, but they are not always the same. This does not cancel out the different level of development of markets, which shows for example how Greece starts off with a presence of personal computers in classrooms much lower than Sweden. But looking at policy initiatives as this survey does, it is clear that Southern European countries have made a comprehensive effort in the last years to create favourable conditions for information society development. Spain and Portugal, for example, often show up among the most active countries for policy measures in several areas. On the other hand, some Scandinavian countries where Internet usage is more developed tend towards a "hands off" approach. This means that these governments may not choose to use policy measures to reach some of eEurope targets but prefer indirect intervention or leave it to markets initiatives.

The qualitative analysis has been complemented with a benchmarking indicator, developed by SIBIS, which measures the level of policy progress achievement for 14 selected actions *(on the basis of a score ranging from no policy activity identified = 0 to mission completed = 4, see also methodology)*. This indicator must not be considered as a comprehensive assessment score, but as a marker of the level of policy activity by action and by country: from this point of view it can provide useful insight and provide a basis for some comparisons.

The greatest progress so far has been achieved by the actions addressing the improvement of Internet access for schools and the incentives for teachers to use technologies. This is in fact an area considered as a priority by all governments, where eEurope mainly contributed to accelerate developments already in motion setting more rigorous targets.

A relative lack of progress is shown for the actions concerning the promotion of industry-led codes of conduct for e-commerce, and measures for life-long learning and IT training. These are policy areas which need greater attention and initiatives, as underlined also by the Commission recently. Finally, last of the list of the measured actions is the support of telework which is actively promoted only by a minority of countries.

1. Political awareness and Implementation Strategies of eEurope

eEurope's objectives are to accelerate the development of the information society in Europe and to ensure that its potential is available to everybody in all Member States, all regions, all citizens. Benchmarking eEurope progress is a key activity carried out by the Commission in order to measure and monitor developments which are indicative of what is happening in the Information Society. Benchmarking eEurope enables us to take stock of where we are now and take informed decisions for the future.

Main goals of the eEurope benchmarking programme are to:

- evaluate the net overall impact of *e*Europe and the information society;
- show the current levels of activity in key areas;
- shape future policy, by informing policy-making.

This report contributes to the eEurope benchmarking programme by evaluating the developments and progress of a representative selection of key actions from the eEurope 2002 action plan in all EU Member States. Most benchmarking studies launched by the Commission in the past year focus on the in-depth analysis of homogenous groups of actions (Internet usage, or Participation for all exc.).

The SIBIS project survey instead provides a comprehensive overview of the eEurope action plan implementation by country, based on desk research and interviews carried out in each Member State. The value added of this report therefore is the ability to provide a general picture of the European context of implementation of the eEurope plan, an understanding of eEurope impact on main policy strategies and an overview of the points of strength and weakness of the plan in the context of national specificities.

1.1. National contexts of adoption and implementation of eEurope

The launch of eEurope represented a turning point for the EU agenda on the development of the Information Society. Its strategic goals were raised to a priority level in the policy program, with the endorsement of the highest levels of government and an ambitious schedule of targets. The initiative of the Lisbon Council certainly impressed a new momentum to governments strategies in this field, but with different ways and impacts depending on the different national contexts.

The following table analyses the national contexts of eEurope action plan adoption and implementation on the basis of two main aspects: the organisation of the plan implementation in the country's institutional context and the coordination with more or less pre-existing Information Society Plans. The results show that for seven countries (the Northern countries, France, Germany, the UK and the Netherlands) the eEurope initiative was integrated into and gave new force to pre-existing Information Society plans, often with similar goals and already in the implementation phase. For the other eight countries eEurope had a stronger impact, since it led to the actual implementation of a series of policies, usually already discussed in Information Society strategies plans but not yet really launched. In other words, eEurope provided additional momentum for a coherent framework of innovation promotion policies, especially in Southern Europe.

Tab. 1   Institutional context of eEurope Action Plan implementation by country

Coordination between national IS plans and eEurope plan	Organisation of eEurope implementation	
	Co-ordination and monitoring by a central Government body	Co-ordination and monitoring at Ministry level
Information Society strategy and implementation plans predating eEurope	France UK	Denmark Finland Germany Netherlands Sweden
Information society plans strategy before eEurope, implementation plans after eEurope	Austria Italy Greece Ireland Spain Portugal	
Information society plans after eEurope	Belgium Luxembourg	

Source: SIBIS consortium

The other important axis of differentiation between countries is the organisation of the eEurope plan implementation, which is for most countries (10 out of 15) coordinated and monitored by a central government body, often an interministerial commission or an office attached to the Prime Minister's cabinet created for the purpose. In these countries the central office usually also prepares and coordinates the national strategic plan for the Information Society, while implementation of the specific policies is delegated to the competent Ministry (for example school policies to the Education ministry, infrastructures development to the Communication Ministry exc.)

The context is different for Germany, the Netherlands, and the Scandinavian countries where there is no central co-ordinating office but a group of Ministries acting together to implement the policies of their competence. Usually one Ministry tends to assume a "first among peers" leadership role, handling also some of the interaction with the European Commission on eEurope matters. In Scandinavia it is generally the Ministry of Information Technology and Research: in Germany it is the Federal Ministry of Economics and Technology. Generally the leader Ministry is the one already involved in Information Society initiatives in previous years.

Austria

Responsibility for the implementation of the *eEurope 2002 Action Plan* on the federal level is distributed among several federal ministries and departments, according to the topic. To some extent, the Federal Chancellery has taken the role of a co-ordinator and central info-point, monitoring progress in each of the actions by delivering a monthly updated report on the implementation of *eEurope* actions in Austria.
The responsibility for planning and carrying out activities remains with the different ministries and departments.
There is no designated *eEurope* office, task force or manager in Austria.

Belgium

A five-pillar plan called "Information Society and e-gov" has been presented by the Federal Government in October 2000. The five pillars are: electronic public authorities, access and competences, security, knowledge and innovation, and regulation. Being Belgium a federal state, many of the resolutions are directives for the regional and community authorities.

Denmark

Denmark has an explicit strategy to do better on the technological front. The strategy started some time ago and is receiving more and more attention. A key goal is to make Denmark the leading IT-nation in the world and this statement joined many forces in a common mission.
The Ministry of Information Technology and Research monitors the eEurope action plan, but this specific action plan does not have top priority.
No overall structure or organisation exists for the purpose of monitoring and co-ordinating specific eEurope initiatives. Many Ministries, local authorities, organisation and so forth are working with the issues described in the plan.

Finland

The assessment of the implementation of the eEurope initiative in Finland is made by the Ministry of Transport and Communication, which has the most ongoing initiatives close to the eEurope programme. There is an absence of a visible leader in these issues, and the distribution of responsibilities between different departments and ministries is unclear. The public office responsible for most of the questions regarding eEurope is the Communications department in the Ministry for Transport and communication. This department has the overall responsibility of Networks and Telecom, Media and E-commerce and security. In addition to this there are task forces in several other departments including Healthcare department and Education department, which both have IT initiatives along the eEurope goals.

France

In January 1998 the French Government approved PAGSI (Programme d'Actions Gouvernemental pour la Société d'Information), set up for the promotion of the Information Society. Responsible for France's eGovernment strategy is the Commissariat Général du Plan. This body ensures the overall coherence of the government and organises committees and working groups, under the direct authority of the Prime Minister.

Germany

An activity for monitoring the eEurope initiative has been set up by the German Federal government. Under the responsibility of the Federal Ministry of Economics and Technology (BMWi), all federal ministries have been approached and nominated a responsible staff member to act as co-ordinators and provide relevant information for monitoring the implementation of the eEurope actions in Germany to the BMWi. This group of co-ordinators or task force is identical to the group responsible for updating the national action programme "Innovation and Jobs in the Information Society of the 21st Century" published by the German government under the auspices of the BMWi and the Federal Ministry of Education and Research (BMBF) in September 1999. In the view of the BMWi the above national action programme, which they see as a programme rather similar to the eEurope initiative, was in place much earlier than the eEurope initiative and can therefore be seen as a precursor to the eEurope initiative. The above task force acts within the national government structures, i.e. it is not an independent entity.

Greece

The Operational Programme for the Information Society was proposed in December 1999. Responsible for the overall running and supervision of the programme are the Ministry of National Economy and the Ministry of Interiors and Public Administrations.

Ireland

The Irish government has taken some specific steps, most notably the setting up a specific advisory body, the Information Society Commission, which has played a paramount role in policy directing. This body has presented an action plan for implementing the information society in Ireland, which has many points of tangency with eEurope.

The eEurope Action Plan has been taken on board by the government and some explicit and specific measures have been put in place. In relation to the implementation of eEurope, there is a special (part of) public body charged with co-ordinating the implementation of the Action Plan on behalf of all Government Departments. This administrative body is a sub-division of the Department of Enterprise, Trade and Employment and is called the "e-business unit". The role of the Unit is to help Irish enterprises to meet the technological, competitiveness and strategic challenges, and exploit the opportunities, posed by the new Information Communication Technologies (ICTs). The Unit, in collaboration with the Department of the Irish Prime Minister, is responsible for the eEurope Action Plan.

Italy

With a Decree approved the 5 February 1999, the Italian Prime Minister set the "development of the Information Society among the primary goals of his action" and created 3 bodies in charge of monitoring, studying and co-ordinating the growth towards the complete affirmation of the Information society in Italy. Together with the Committee of Ministries and the Inter Ministry group of Study, the Information Society Forum – within the Prime Minister's Cabinet – has been created in order to co-ordinate, promote and monitor any activity supporting the Information Society in Italy. After the launch of the eEurope Action Plan, the Forum has been monitoring the implementation of eEurope in Italy. Some of the IS-Forum contributions were collected in the Action Plan for the Information Society , issued by the Committee of Ministry for the Information Society on the 16th June 2000. In October 2000, the IS-Forum has issued "e-Italia" report, that exhaustively describes the achievement of the Information Society in Italy.

Luxembourg

The National Commission for the Information Society (hereafter it « CNSI ») was created by the Counsel of the Government in order to co-ordinate the execution of the eLuxembourg action plan. CNSI assures active government leadership in this domain.

Portugal

The Inter-ministerial Commission for the Information Society (Comissão Interministerial para a Sociedade de Informação) is responsible of the monitoring the eEurope actions. This commission has been created by Cabinet Resolution n. 114/2000 and includes task forces existent in all Ministries, called Nucleus for Information Society (Núcleos para a Sociedade de Informação).

Spain

The European Commission initiative eEurope, approved by the Lisbon Council in March 2000, led the Spanish government to introduce in Spain the initiative: "Info XXI: The Information Society for All". The "Dirección General para el Desarrollo de la Sociedad de la Información" is the State Office created to meet the eEurope Initiative and carry out specific actions to develop and co-ordinate the Action Plan Info XXI. This Office is under the "Secretaría de Estado de Telecomunicaciones para la Sociedad de la Información" integrated in the "Ministerio de Ciencia y Tecnología".

Sweden

The organisation of the eEurope matters is co-ordinated by the Ministry of Industry, Employment and Communications. Every concerned department has the responsibility to bring out the shared part of the agreement to execution. No special task force or a public office has been set up to implement the eEurope actions.

UK

The targets of the eEurope initiative are complementary to the UK Governments own approach and one of the recommendations set out in the UK Online Action Plan, for the UK government is to be responsible for implementing the eEurope action plan. UK online' is run by the UK office of the e-Envoy. The aim of the office is to lead the drive to get the UK online, to ensure that the country, its citizens and its businesses derive maximum benefit from the knowledge economy.

1.2.   Impacts on Policy Strategies

1.2.1.   Overview

The SIBIS survey shows that eEurope priorities have been translated in policy actions by Member States for almost all action areas, but with very different levels of aggressiveness and results, depending on the type of action and on the country. While the Member States have agreed on the overall goals of the eEurope action plan, the ways of its implementation vary greatly, depending on national policy strategies and "styles" of government - that is whether the government chooses to take direct action or to create the conditions for society to act. Moreover, the level of development of the different national markets also affects the implementation of policy measures. This makes it very difficult to carry out a comparative analysis of eEurope implementation progress by country. Nevertheless, a synthetic overview of the SIBIS survey does show that progress is greater in some areas than others, as reported in the following paragraphs, where results for each action are outlined.

Overall, the survey shows that the actions addressing the improvement of availability and access of the Internet networks, especially for schools and the teachers/students user population have achieved the greatest progress. The actions addressing the stimulation of the use of the Internet, which were mostly designed to accelerate adoption and frequency of usage by creating favourable conditions for market development, were not as successful. This is true also for the stimulation of use of innovation in the public sector (government online) where measures were launched but results must still be seen.   Actions where harmonisation of legislation was called for (such as laws against cybercrime) are also proving difficult to implement, not because of lack of initiatives but of their variety and range.

A common element is that the time needed for full implementation of the policy measures launched is often underestimated, so that actual results seem slow to materialise. For most actions and most countries, policy measures have been launched only recently.

Looking at the results by country, no obvious laggard emerges, nor structural gaps between groups of countries (for example between Southern European countries and the others). For every action there are some forerunners and some latecomers, but they are not always the same. This does not cancel out the different level of development of markets, which shows for example how Greece starts off with a presence of personal computers in classrooms much lower than Sweden. But looking at policy initiatives as this survey does, it is clear that Southern European countries have made a comprehensive effort in the last years to create favourable conditions for information society development. Spain and Portugal, for example, often show up among the most active countries for policy measures in several areas. On the other hand, some Scandinavian countries where Internet usage is more developed tend towards a "hands off" approach. This means that these governments may not choose to use policy measures to reach some of eEurope targets but prefer indirect intervention or leave it to markets initiatives.

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The greatest progress so far has been achieved by the actions addressing the improvement of Internet access for schools and the incentives for teachers to use technologies. This is in fact an area considered as a priority by all governments, where eEurope mainly contributed to accelerate developments already in motion setting more rigorous targets.

The implementation of local loop unbundling scores also very high in terms of achievement, a policy area which has been driven by Commission directives, with mandatory deadlines for action. The support of SMEs "Go Digital" action shows how most countries consider the participation of small enterprises in the digital economy a key element for markets growth.

The promotion of telematic networks in healthcare, the implementation of online public procurement and digital signatures also show up as policy areas targeted by most governments, similarly to the definition of a regulatory framework to fight Cybercrime.

The WAI (Web accessibility initiative) implementation has been targeted by many countries but mostly as a suggested guideline for public and private websites, so that its impacts are not yet widely felt. The development of infrastructures in Less Favoured Regions instead is pursued mostly by Southern European countries with the help of Community Structural Funds.

A relative lack of progress is shown for the actions concerning the promotion of industry-led codes of conduct for e-commerce, and measures for life-long learning and IT training. These are policy areas which need greater attention and initiatives, as underlined also by the Commission recently. Finally, last of the list of the measured actions is the support of telework which is actively promoted only by a minority of countries.

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1.2.2.   A cheaper, faster and secure Internet: synthesis

This area of the eEurope action Plan aims broadly at improving the exploitation of information infrastructures, addressing availability concerns (access and price), performance (especially of research networks) and security (including smart cards). Progress towards the policy targets defined in this area was remarkable, but the time needed for full implementation of the policy measures launched was often underestimated, so that actual results seem slow to materialise. The different national contexts affect strongly the design and implementation of policy measures: this appears to remain a relevant barrier against harmonisation efforts.

Among the actions selected by SIBIS for evaluation, the implementation of local loop unbundling regulatory framework showed remarkable progress, but the impact on competition has been weak so far. The improvement of research networks speed and technical performance instead is an area of growing convergence and common effort.

Security is the area where the greatest disparity among countries exists. For example, the regulatory framework concerning cybercrime is very different from country to country, as it is affected by the national approach to crime in general and consumer protection in particular. Similarly, the type of applications implemented on smart cards vary substantially, and progress towards common platforms does not seem fast. Concerning the more technical aspects of networks security, public initiatives are much more frequent than industry-led ones.

The comparison of policy progress achievement scores by country must be taken with caution, since it is based on only three specific actions which do not account for all the possible activities ongoing in the country. Nevertheless, it is remarkable that the ranking does not point to a Northern-Southern Europe gap as it is often the case. Spain and Portugal for example rank at the average European level or better. Finland's ranking slightly under the European average may surprise, but it is due to its policy of restrained legislative intervention in the telecom markets.

Tab. 2   Selected Actions: Policy Progress Evaluation by country

Country	Implementation of LLU	Dev. of infrastructures in LFR	Laws against Cybercrime
Austria	●●●	●●	●●
Belgium	●●●	?	●
Denmark	●●●	●●●	●
Finland	●●●	●	●●
France	●●	●●●	●
Germany	☑	☑	●●●
Greece	●●	●●	●●
Ireland	●●●	●●	●●
Italy	●●	●	●●●
Luxembourg	●●	?	●●●
Netherlands	●●●	●	☑
Portugal	●●●	●●●	●●
Spain	●●	●●	●●●
Sweden	●●●	●●●	●●●
UK	●●●	●●●	●●●

LLU: Local Loop Unbundling
LFR: Less Favoured Regions

Scores

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium 2001

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1 - CHEAPER AND FASTER INTERNET ACCESS	
	Action
1.3	*Work towards introducing greater competition in local access networks and unbundling of the local loop.*

All countries have published reference unbundling offers covering both unbundling and collocation (that is the provision of space and technical facilities to accommodate and connect the new entrant's equipment). But the impact on markets is not satisfactory since only in Germany, Finland and Denmark the number of lines for which unbundling is operational is relevant.

	Action
1.6	*Where necessary and without distorting competition, public financing instruments will give increased priority to supporting the development of information infrastructure and projects, notably in the less-favoured regions.*

This goal was adopted by all countries excluding Belgium and Luxembourg, and is mostly implemented at the regional level through the support of CSF funds. In Northern regions measures are focused on the promotion of broadband networks since basic networks are considered adequate. Most initiatives are relatively recent, especially in Southern Europe.

	Action
1.7	*Move towards full implementation of IPV6 through pilot implementation in Europe. Key telecom and manufacturer industries will be mobilised together with service providers and users.*

SIBIS focussed on the adoption of this protocol in publicly owned networks. Plans for implementation of IPV6 in Research Networks are progressing: seven countries have already done it, four are planning to do it and only Italy and Spain are not planning to do it.

2 - FASTER INTERNET FOR RESEARCHERS AND STUDENTS	
	Action
2.1	*Adequate funds (in addition to the 80m Euros already allocated to the upgrade of the trans-European backbone interconnecting the National Research and Education Networks) will be earmarked for the research networking aspects of the IST Programme, with the objective of establishing Europe as a global connectivity leader and initiating the evolution towards a fully optical backbone with improved capacities in terms of bandwidth and services.*
2.2	*National research Networks should be upgraded to ensure that researchers and students across Europe benefit from powerful networks, for example, using structural funds and EIB support.*

An acceleration of investments in the National Research Networks (NRENs) is evident. All the EU countries are devoting a relevant effort to upgrade their NRENs bandwidth: 12 out of 15 Member States have upgraded their networks in the last two years and the majority plan further improvements. With the exception of Portugal and Greece, all NRENs have full optical backbones (and Greece is planning to implement it in 2002).

3 - SECURE NETWORKS AND SMART CARDS	
	Action
3.1.2	*Improve the overall security of on-line transactions by:* *Supporting the industry-led security certifications through co-ordination of efforts and mutual recognition, including information security professional certification.*

So far, progress in this area has been relatively slow. The SIBIS survey found more evidence of government-led initiatives than industry-led initiatives in this field. Only Portugal seems to be planning an industry-led initiative for security certification, while in a few countries (Austria, Belgium, Germany, UK) there are initiatives led by government departments or public

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organisations (e.g. the Chambers of Commerce in Belgium) to promote awareness or lead public-private cooperation to insure networks and electronic transactions security.

	Action
3.3	*Develop a co-ordinated European approach to cybercrime.*

The regulatory framework on cybercrime is articulated in all countries but harmonisation seems still distant. All countries have measures in the regulatory framework to prosecute electronic-based fraud, child pornography on the Internet and often cybercrimes by hackers. Only two countries (the Netherlands and Greece) have a specific law on cybercrime (the Netherlands since 1993). Seven countries declare that measurable positive results from cybercrime laws are already visible, and one (the Netherlands) claims a comprehensive protection.

	Action
3.6	*Availability of cost-effective smart card solutions to enable secure electronic transactions.*

The availability of solutions based on smartcards is rather diffused in Europe. The electronic wallet and credit cards are available in most countries. Shop cards and customer reward schemes are growing fast. Seven countries use smartcards to store personal medical data. Six countries have implemented or distributed ID cards based on smartcards.

1.2.3.   Investing in people and skills: synthesis

This area of the Plan includes actions to improve the use of digital technologies in the education system (European Youth into the digital age), the digital skills of workers (Working in the knowledge-based economy) and to reduce info-exclusion (Participation for all in the knowledge-based economy).   The first group of actions is achieving good results, while the second and the third are proceeding more slowly, as shown by the Policy Progress Evaluation table.

The relative lack of initiatives registered for the Digital Literacy target, as well as the late start of the plans to multiply IT training, confirm that the implementation of life-long learning is far from being achieved in the EU. While the education system is evolving, even if slowly, the training system does not seem to be growing fast enough to respond to the increasing needs created by new skills demand. Concerning the labour market, the promotion of telework does not seem a central goal of most Member States policies.

The policies to prevent info-exclusion are being developed in most countries, but with a wide variation of scope and strategy. The most common practical goal is ensuring access of the disabled to information infrastructures. From the point of view of universal access, the diffusion of Public Internet Access Points is disappointing in most countries and does not seem to be accelerating.

Tab. 3   Investing in People and Skills: Policy Progress Evaluation

Policy Progress	Internet access measures for schools	Incentives for teachers use of digital technologies	Digital Literacy measures	IT training measures	Telework support	WAI implementation
Austria	●●●	●●●	●●	●●●	?	●
Belgium	●●●	●●	●●●	●●●	?	●●
Denmark	●●●	●●●	●●	●●	☑	●●●
Finland	●●●	●●●	●●	●●●	●●●	●
France	●●●	●●●	●	●●	●●	●●
Germany	●●●	●●●	●●●	●●●	☑	●
Greece	●●●	●●	●	●	●	●
Ireland	●●●	●●●	●●	?	?	●●●
Italy	●●●	●●●	●	●●	●●	●●●
Luxembourg	●●●	●●●	?	?	?	?
Netherlands	●●●	●●●	?	?	●●●	●●●
Portugal	●●●	●●●	●●	●●	●	●●●
Spain	●●●	●●	●●●	●●●	?	●●●
Sweden	●●●	●●●	●	●●●	?	●●●
UK	●●●	●●●	●●●	●●●	?	●●●

WAI: Web Accessibility Initiative

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium 2001

4 - EUROPEAN YOUTH INTO THE DIGITAL AGE	
	Action
4.1	*Provide all schools, teachers, and students with convenient access to the Internet and multimedia resources, where appropriate using the Structural Funds.*
4.3	*Ensure availability of support services and educational resources on the Internet, as well as e-learning platforms, for teachers, pupils and parents (e.g. access for disadvantaged children, access to digitised cultural heritage, multilingual multimedia learning materials, European open source software initiative, collective of best practice). European Commission to support these efforts via the education, training and culture programmes and to provide adequate funding within the IST Programme.*
4.4	*Provide training, using Structural Funds where appropriate, to all teachers, in particular adapt teacher curricula and offer incentives to teachers to actually use digital technologies in teaching. European Commission will ensure exchange of best practice and co-ordinate research efforts through its education, training, and IST Programmes.*
4.6	*Ensure that all pupils have the possibility to be digitally literate by the time they leave school. European Commission to support pilot projects, exchange of best practice and co-ordinate research efforts, via its IST and education programmes.*

All EU countries have implemented plans to improve schools access to digital technologies and the Internet, both at the national and regional level, and to incentivate teachers training in ICT. In most countries these policies have already started to show results. The measures aimed at teachers are relatively more recent and in some countries (such as Greece and Spain) still have to show measurable results. The target to connect all schools to the Internet has been adopted by all countries and in most of them has been almost achieved - the less advanced ones, Greece and Portugal, nevertheless have connected approximately half of the schools.

A small group of countries are ahead in all fields: equipment, connectivity and usage. They are Denmark, Sweden, Finland, Luxembourg, followed by the UK. Southern European countries suffer from a much later start of ICT investments, Italy and Spain less severely than Greece and Portugal. But for example both Greece and Portugal have designed plans with the support of the Community Support Framework to close the gap within the next years. The other countries fall in between. Some variations in diffusion rates reflect policy choices. For example Germany falls under the EU average for the diffusion of both offline and online computers. But it presents a very high percentage of schools connected to the Internet and owning a Web page, which was clearly incentivated as a priority.

From these data it would seem that access to the Internet and multimedia resources is no more a main problem for EU schools. But the diffusion of technologies in the schools is only a first step: more important is how digital technologies are used to improve digital literacy among pupils and also how to exploit fully the Internet in education. From this point of view the way to go is still long. SIBIS describes a series of pilot projects in this field which show a variety oh approaches by the Member States.

5 - WORKING IN THE KNOWLEDGE-BASED ECONOMY	
	Action
5.1	*Give the labour force the chance to become digitally literate through life-long learning.*

The implementation of life-long learning and training measures aimed at increasing the digital literacy of the labour force has not been very satisfying: only 10% of Europeans of working age have had training in the past year. According to the SIBIS survey, three countries (Germany, Spain and the UK) have implemented measures with results already achieved. Six other countries (Denmark, Finland, Ireland, Italy, Portugal and Spain) have launched national initiatives with results forthcoming. The other countries are still planning or have not launched specific initiatives.

	Action
5.2	*Significantly increase information technology training places and courses and promote gender equality in such courses (both in work and in educational institutions), using European Social funds where appropriate.*

The Member States have been quite active in this area especially in the last year. Almost all States (excluding Belgium, Luxembourg and the Netherlands) have launched initiatives to increase IT training places and courses: in six countries (Austria, Finland, Germany, Spain, Sweden, UK) results have already been achieved.

	Action
5.3	*Establish a European diploma for basic information technology skills, with decentralised certification procedures.*

The implementation of the European Computer Driving Licence – a common diploma of workers IT skills with decentralised certification procedures – has been completed in all countries, last one Finland which has recently agreed to harmonise its own Computer Driving Licence system. The ECDL Foundation overseeing its implementation declares that 1.3 million EU citizens have entered the process to achieve the diploma, the majority of them in the last year.

	Action
5.4	*Support greater flexibility in the workplace, e.g. teleworking and part-time working, where appropriate through agreements by Social Partners and backed up by Member States.*

Since labour markets structure and policies differ markedly among the Member States, SIBIS survey focussed on the diffusion of telework policies as a common element providing comparable evidence. SIBIS analysis shows that the promotion of telework does not seem to be a central goal for most countries labour policies. Approximately half of the Member States have specific measures promoting telework; besides Denmark and Germany, where a favourable legal framework is fully implemented, significant progress has been achieved in Finland and the Netherlands. France, Portugal and Italy have more recent measures (in Italy only for public employees) while Greece is planning a specific law.

	Action
5.6	*Set up public Internet access points in public spaces and establish multimedia tele-centres in all communities providing access to training and e-work facilities, where appropriate using the Structural Funds.*

The diffusion of Public Internet Access Points (PIAPs) is still limited in many countries. In most countries PIAPS are located in public libraries, with the objective to extend the service to all existing libraries (not yet achieved though). Only a few countries however include ICT training in their PIAPS plans: France, Spain, Portugal, UK.

6 - PARTICIPATION FOR ALL IN THE KNOWLEDGE-BASED ECONOMY	
	Action
6.1	*Policies to avoid info-exclusion will be more effectively co-ordinated at European level through benchmarking of performance and exchange of best practice between Member States.*

In principle, the Information Society Strategies of all Member States include the prevention of info-exclusion among their goals and this principle must be respected by all public initiatives. Additionally, several Member States (10 according to the SIBIS survey) have launched specific measures to support information infrastructures' access and usage by the disabled. The policy measures surveyed by SIBIS can be divided as follows:

- specific measures to prevent info-exclusion have been launched by five countries: Austria, Belgium (specific for e-government) Denmark, the Netherlands and Portugal;
- general laws for the participation of the disabled, which include some actions to facilitate disabled access to information infrastructures and less often to avoid info exclusion, exist or are planned in four countries (Finland, Germany, Greece, Italy). Spain has implemented a framework agreement with the Disabled Association;
- finally, two countries (France and Ireland) have chosen to address the problem through guidelines for government agencies and private organisations.

	Action
6.4	*Adoption of the Web Accessibility Initiative (WAI) guidelines for public websites.*

The implementation of Web Accessibility Initiatives has made considerable progress in the last year Most countries have already implemented it and the few others plan to do so soon (Austria, Finland, Germany and Greece). However implementation means that the guidelines for Web accessibility have been approved by the country and are recommended to government agencies and private parties. Results are uneven as it is observed in France, because web makers are actually free to implement or not the recommendations. This is probably a gradual process by which web sites will adapt to the highest usability standards in time but in most countries it just started.

1.2.4.   Stimulate the use of the Internet: synthesis

This area of the Action Plan includes measures targeting the acceleration of e-commerce, of e-government, of the use of information infrastructures in the healthcare sector and of the production of European digital content. Policy initiatives for all these areas are numerous, particularly in the e-government field. According to the Progress Achievement score, initiatives have been launched but there are not yet measurable results.

Concerning e-commerce, the promotion of self-regulation codes is quite recent and results are still to be seen. There seem to be few self-regulation initiatives privately led in this field. Governments seem particularly keen to stimulate SMEs to "Go Digital": in 12 out of 15 Member States measures supporting smaller enterprises use of e-commerce have been adopted, including awareness raising initiatives, training and in some cases tax reductions.

Most countries have taken steps to create the regulatory framework for public online procurement, but only a fraction of government purchases is actually carried out on telematic networks: organisational procedures and cultural attitudes need to adapt to this service. Similarly, the EU Directive on digital signatures has been adopted in most countries but actual use is difficult because practical implementation problem abound.

The introduction of public online services faces similar barriers, since government policy initiatives need to be followed by implementation agreements and public-private co-operation to achieve results. Nevertheless, the services surveyed by SIBIS show great dynamism. For example, all countries now offer the chance to download tax forms from the Internet and several allow to return them online too. As a marker of local administrations orientations to use the Internet, the fact that most municipalities in Europe have opened a website to provide access to public information is certainly positive, even if the levels of interactivity are still quite low.

Measures addressing the introduction of ICTs in the healthcare sector vary substantially among countries. All countries are aiming at connecting all hospitals to the Internet, a target already reached or very near in the Scandinavian countries, the Netherlands, the UK, Portugal Spain and Germany.

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Tab. 4   Stimulate the use of the Internet: Policy Progress Evaluation

Country	Ecommerce Code of conduct	Support of SMEs "Go Digital"	Online Public procurement	Implementation of digital signature	Telematic networks in healthcare
Austria	●●●	●	●	●●●	●●●
Belgium	●	●	●	●●	?
Denmark	●●	●●●	●●●	●●●	●●●
Finland	●●●	●●●	●●●	●	●●●
France	●●●	●●●	●●●	●●●	●●●
Germany	●●●	●●●	●●●	●●	●●●
Greece	●	●●●	●●●	●●	●●
Ireland	●	●●●	●●●	●●●	●●
Italy	●	●●●	●●●	●●●	●
Luxembourg	●	●	?	●●	●●●
Netherlands	●●●	●●●	●●●	●	●●●
Portugal	●●●	●●●	●	●●●	●●●
Spain	●	●●●	●	●●●	●●●
Sweden	●	●●●	●●●	●	●●
UK	●●●	●●●	●●●	●●●	●●●

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium 2001

7 - ACCELERATING E-COMMERCE	
	Action
7.2	*Boost consumer confidence in e-commerce in partnership with consumer groups, industry and Member States. Promote alternative dispute resolution, trust marks and effective codes of conduct by working with stakeholders to develop general principles and by creating appropriate incentives. An "online e-confidence forum" managed by the Commission will engage as many stakeholders as possible in this process. Commission and Member States to further develop EEJ-net (European Extra-Judicial Network) linking alternative dispute resolution systems and launch pilot projects at European level through the IST programme.*
7.3	*Commission to stimulate increased flexibility in e-commerce regulation by building more on co and self-regulation, inter alia through co-operation with relevant business groups such as the Global Business Dialogue.*

The SIBIS survey evidenced a growing interest by EU countries towards self-regulation issues. 8 EU countries have adopted a code of conduct regulating e-commerce transactions: Austria, Denmark, Finland, France, Germany, the Netherlands, Portugal and the UK. 5 other countries are planning to do it. Most of these measures were launched recently: only the Netherlands and Germany have launched self regulation activities during 1999, before eEurope. Not surprisingly, consumer-and-industry associations are the most active in the promotion of self-regulation initiatives. In Austria, Germany and the UK, public bodies play a key role in e-commerce self regulation activities.

	Action
7.5	*Encourage SMEs to "Go Digital" through co-ordinated networking activities for the exchange of knowledge on, best practices, e-commerce readiness and benchmarking. "Reference centres" could help SMEs to introduce e-commerce into their business strategies.*

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There is a strong commitment by all the EU countries in support of e-commerce among SMEs. With the exception of Austria, Belgium and the Netherlands - who are currently discussing similar initiatives - all the EU countries have approved at last one measure aimed at supporting e-commerce. Some of these initiatives are specifically addressed to SMEs. Besides national level initiatives, there are several regional and local level ones. Some of the local initiatives foresee the participation of private partners, with the sponsorship of public bodies. Chambers of Commerce are particularly active.

The most common approach is providing consulting services to SMEs undertaking e-commerce activities, in order to help them identifying their needs and defining their marketing strategy.

	Action
7.8	*Establish electronic marketplaces for public procurement.*

Ten Member States have launched policies or regulations targeting public e-procurement, while the other five (Austria, Belgium, Luxembourg, Spain and Portugal) are currently discussing initiatives to be undertaken. Most of these initiatives were introduced after eEurope plan launch. But the governments complain about the strong difficulties encountered when adapting their regulatory framework for the public procurement procedures. In practice, most countries are only moving their first steps in this area and only a fraction of public procurements transactions passes through telematic networks.

8 – GOVERNMENT ONLINE: ELECTRONIC ACCESS TO PUBLIC SERVICES	
	Action
8.1	*Essential public data online including legal, administrative cultural, environmental and traffic information.*

The SIBIS survey was focussed on the diffusion of websites created by municipalities, which have the closest relationship with citizens. In 6 countries (Denmark, Finland, France, Ireland, Sweden and the UK) over 75% of municipalities have a website; in Austria, Belgium and Portugal about half of them do, and in Germany and Luxembourg about a third, while in Italy and Spain the percentage is much lower. However, many websites provide only limited content and interactivity. The path towards real transparency is still long.

	Action
8.2	*Member States to ensure generalised electronic access to main basic public services.*

Member States have defined a list of 20 basic services to be offered online and measured as a benchmark of egovernment progress. SIBIS tested the first of the list, income tax declaration, notification and assessment finding that tax forms are provided for downloading by all countries, excluding Luxembourg where this is planned in 2002. Tax forms can also be returned online in all these countries (excluding Austria and the Netherlands) but with very different procedures: sometimes through professional intermediaries, sometimes only by some category of citizens (i.e. the self-employed), only rarely by all citizens. Clearly full interactivity will be reached only gradually and governments are mostly experimenting with caution.

	Action
8.7	*Promote the use of electronic signatures within the public sector.*

Almost all countries have enacted a law/regulation creating the legal framework for the implementation of electronic signatures, adopting the corresponding EC Directive. Those countries which haven't (Finland, Netherlands and Sweden) are expected to take steps by 2002. However the adaptation of the regulatory framework is not a guarantee of implementation and in most countries actual usage of the digital signature is still rare. Main implementation problems concern the role of third parties guaranteeing the validity of the digital signature and the complexity of the process allowing to register a digital signature.

9 - HEALTH ONLINE	
	Action
9.1	*Ensure that primary and secondary healthcare providers have health telematics infrastructure in place including regional networks.*

All EU Member States have launched initiatives and projects finalised to implement ICTs in healthcare infrastructures, at the national or local level, but strategies and levels of implementations vary substantially. In Greece, Ireland and Portugal there seem to be several local projects but no national initiatives. Scandinavian countries, the Netherlands and the UK are in the lead concerning connections to the Internet by hospitals and medical doctors. In Portugal, Spain and Germany almost all hospitals are connected to the Net.

10 – EUROPEAN DIGITAL CONTENT FOR GLOBAL NETWORKS	
	Action
10.1	*Launch a programme to stimulate the development and use of European digital content on the global networks and to promote the linguistic diversity in the information society, including action to support exploitation of public sector information and establish European digital collections of key datasets.*

Almost all EU countries have launched initiatives and defined their strategy towards the exploitation of public sector information. They usually include more than one area: the programmes indicated by Austria, France, Germany, Ireland, Italy, Portugal, Sweden and UK are particularly focussed on the distribution of legal and administrative information, while some of the initiatives launched in Germany, Italy, the Netherlands are more oriented to the distribution of cultural and geographical content.

Denmark and the UK have applied a very similar approach to convey public interest information to their citizens: both countries' governments launched portals delivering administrative information of interest for all citizens, starting from everyday "life episodes".

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2.   Evaluation of eEurope actions: a cheaper, faster and secure Internet

2.1.   Cheaper and faster Internet Access

2.1.1.   Competition and Unbundling of the Local Loop

Action 1.3
Work towards introducing greater competition in local access networks and unbundling of the local loop
Deadline: end 2000

The ongoing liberalisation of the telecommunications market is considered the EU's main tool to create the essential infrastructures for a dynamic new economies. The Commission is working with the Council and the European Parliament to implement a new regulatory framework for electronic communications, to improve regulation in terms of simplification, promotion of competition and harmonisation. The most recent step to promote competition has been the harmonised introduction of the regulation on local loop unbundling, which became mandatory from January 2001, following Regulation 2887/2000. Most EU countries have complied, but results for the improvement of competition have not been satisfactory.

All countries have published reference unbundling offers covering both unbundling and collocation (that is the provision of space and technical facilities to accomodate and connect the new entrants' equipment). According to the Commission[1], these reference offers at the date of July 2001 did not cover shared access[2], another important step for opening the incumbent's network to competition, in Germany, Greece, Italy, Luxembourg and Portugal.

According to the SIBIS survey, only Austria, Denmark, Finland and Germany implemented unbundling before the launch of the eEurope action Plan (before 2000). In fact, the number of lines for which full unbundling is operational is relevant only in Germany (550,000), Finland (40,000) and Denmark (31,000). The number of operators with agreements in place with the incumbent is also high in these countries (97 in Germany, 18 in Denmark, 10 in Finland). In Greece, Spain, Luxembourg, Ireland and Portugal in July 2001 there were no lines open for unbundling and no competitors had yet agreements in place for operational unbundling. Practical difficulties have slowed down the translation of the unbundling policy into operational reality, concerning especially collocation and pricing. Poor supervision of cost accounting systems (which make it difficult for National Regulatory Authorities to negotiate with incumbents the correct non discriminatory pricing of unbundled access) and slow dispute resolution procedures have proved major barriers. In many cases incumbents have shown reluctance or inability to open this service fully to non discriminatory and effective access by competitors. According to the Commission, these problems are similar to those faced by the provision of Leased Lines at competitive prices, another important goal mentioned by the eEurope plan.

The SIBIS policy progress evaluation on unbundling reflects this situation by showing to Germany as the country most advanced in implementation, followed by most of the other countries with France, Greece and Ireland as the countries less advanced. Greece and Ireland were the last countries to publish the reference unbundling offers necessary for operational agreements between incumbents and operators, and France is implementing unbundling only in trials.

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[1]   Seventh Report on the Implementation of the Telecommunication Regulatory Package, Commission Communication COM(2001) 706

[2]   Access to the non-voiceband frequency spectrum of the twisted copper pair.

Tab. 5   Policy evaluation: Implementation of Local Loop Unbundling

	Policy Progress	Year of Implementation		
		before 2000	2000	2001
Austria	●●●	✓		
Belgium	●●●			✓
Denmark	●●●	✓		
Finland	●●●	✓		
France	●●			✓
Germany	☑	✓		
Greece	●●			✓
Ireland	●●			✓
Italy	●●●			✓
Luxembourg	●●			✓
Netherlands	●●●	✓		
Portugal	●●●			✓
Spain	●●			✓
Sweden	●●●		✓	
UK	●●●		✓	

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

Local Loop Unbundling: Country profiles

Austria

In Austria, the unbundling of the local loop was operative since before the EC Regulation came into force on 2 January 2001. The regulatory authority Telekom-Control-Kommission has issued several decisions related to unbundling since 1999. As of July 2001, 66 licences for voice telephony and 69 for leased lines have been issued by the regulator. In spite of clear legal provisions, there has been only a little demand from operators' side up to now in offering unbundled services to customers. In general, unbundling has proved to be a slow process in Austria in practical terms: the number of unbundled access lines is still insufficient (about 2000), most customers are business users while consumer market is even poorer and nearly all operators (about 10-15) are offering unbundled fixed phone services only on a local or regional level.

Belgium

In Belgium four licenses are now granted and 24 unbundled lines are in place.

Denmark

In Denmark there is not a national law on unbundling of the local loop; nevertheless, the national reality is quite dynamic. Since July 1998 telecom enterprises have had access to Tele Denmark's (TDC) local subscriber network. The Government is letting the improvement of the infrastructure depend on market forces, but they paid particular attention to its development in less favoured regions. In Autumn 1999 the Government made decisions to create more competition, more options and lower prices for Danish customers. In July 2001 the Government approved an action plan to increase competition, with the purpose of establishing a specific code of practice to create transparency, objectiveness and non-discrimination as a foundation for the tele-operators access to limited frequency resources and establishment of infrastructure. In general, the Danish Tele-policy rests on the following principles: cheap ICT services and Internet access of high quality; liberty of choice between alternative technologies, healthy competition via several access roads/nets.

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France

The French governmental action for the *e*Europe views the access to France Telecom's local loop as one of the key factors to opening the local market to competition and to the creation of high-speed access offers. The decree dated 12 September 2000 regarding access to the local loop defines measures relative to unbundling: the decree states that France Telecom has to provide technical information in order to allow new operators to evaluate possibilities and new ways to enter the market. After a broad consultation with consumers and operator associations, ART (Authorité de Régulation des Télecommunications) is moving ahead and on 18th July 2001 adopted a decision aimed at defining the implementation conditions and deadlines for allowing subscribers to select a telephone operator of choice for local phone calls. Although over 100 fixed service licences have been issued, there is still no clear indication of local traffic being taken away from France Telecom. New entrants complain of a series of problems with the tariffs and technical conditions for unbundling applied by FT.

Germany

Germany is the country with the longest experience in unbundling the copper loop in the European Union. The Deutsche Telekom AG has been required to offer full unbundled access to the local loop since 1998, and unbundled access is mandated under § 2 of the Network Access Ordinance (NZV) in 1996. Unbundled access is mandated under the Network Access Ordinance (NZV) in 1996. There is a wide selection of possible alternative local access networks. The percentage of the population which can be reached by local network operators has increased from about 1/4 to 1/3 of the population.

Greece

The Greek telecommunications market was fully liberalised on 1 January 2001. The adoption of the new Telecommunications Law in 2000 allowed the transfer of powers from the Ministry of Transport and Communications to the national regulatory authority EETT, which has approved and published the reference unbundling offer in mid 2001. Operationalisation of the lines is starting.

Ireland

In Ireland not a single local loop has been unbundled yet. Only one operator, Esat - which is now owned by British Telecom - has officially applied, while the other two potential operators have withdrawn for the time being. Esat and other operators have persistently blamed delaying tactics and pricing of access to local loop from the incumbent operator, Eircom. The price that operators would pay to access Eircom's local network was eventually set by the telecom regulator, but is being challenged by Eircom in the courts. In addition, Eircom blames other telecom operators for not engaging with the unbundling process and for not formally applying to gain access to its network (only Esat has made a formal application to access Eircom's local network and several companies that expressed interest in the unbundling process have since withdrawn).

Italy

The liberalisation of the Italian telecommunications market has been carried out under the influence of the EU legislation. In March 2000 the National Regulation Authority adopted the decision on the unbundling of the local loop. Telecom Italia presented its offer for unbundled services in May 2000. Initially, the service has been tested in 12 sites in Milan, Rome and Turin. New entrants consider that the proposed price is too high , that access to sites is problematic and that the procedures are difficult to implement. The Italian Regulator has setup a unit to monitor the implementation of the unbundling, and is working actively with Telecom Italia and the new entrants. Progress has been made in 2001 and TI delivered the first 367 sites for collocation in August 2001.

Luxembourg

In Luxembourg only one license has been agreed (Cegecom) but no unbundled installation have occurred yet. It should be noted that cable operators offer significant competition on broadband access (4000 connections) vs 600 DSL connections.

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Netherlands

Local Access competition in the Netherlands remains a problem. Full unbundled access became available in June 2002, but most lines have been given to the incumbent's data communications branch and only a fraction to new entrants who complain about a large number of delivery problems. The regulatory authority OPTA is considered not to have sufficient powers to improve the situation. The Cabinet's ambition is to have a first-class, affordable, accessible and reliable telecommunications infrastructure: innovation and investment in telecommunications must be encouraged by assuring competition on the market. The emphasis lies on strengthening competition, including in the local connection network, and the new regulatory framework.

Portugal

ICP (the Portuguese Institute for Communications) decided that unbundling of the local loop will be mandatory in Portugal by 30th June of 2001; however, some problems aren't solved yet. ICP imposed a set of changes on the offer that the incumbent operator – PT (Portugal Telecom) – had presented. These changes must ensure that price and technical conditions of unbundled of local loop access favour the establishing of loyal and sustainable competition (non-discrimination, loyal competition, economic efficiency and interest of users). Technical trials are being conducted under the supervision of the regulator. Local and regional calls were liberalised the 1st January of 2001, but only for the indirect access - telephone fixed services.

Spain

In Spain, after 5 months since the start of the collocation process according to Telefónica's offer specifications, the process found big difficulties for its implementation. The CMT (Spanish NRA) adopted a decision on 21st June 2001, which owing to urgency reasons, is an interim injunction measure, reviewing administrative proceedings and reducing collocation prices by 12 times on average. The measure adopted in June has revitalised the collocation process and 13 operators are requesting space in Telefónica's office exchange buildings. It is expected that services based on unbundled local loops will be offered by the end of the year.

UK

In November 1999, Oftel (Office for Telecommunications) issued a statement, "Access to Bandwidth, Delivering Competition for the Information Age" which set out its decision to require British Telecom (BT) to make its local loop available to other operators. To achieve this result, in August 2000, Oftel mandated full unbundling of BT's local loop allowing other operators to rent space in a Local Loop Provider's exchanges, lease local access lines and upgrade them with DSL technology to provide a range of higher bandwidth services to end customers. In addition, Oftel has required BT to provide its wholesale ADSL services to other Operators and service providers on non-discriminatory terms. These obligations are now being extended to Kingston Communication (Hull) Ltd another large UK operator. British Telecom has been very slow at releasing its grip on local networks and very few other incumbent operators have yet been given to chance to be an affordable alternative to BT providers. Office for Trial sites were to be ready by 3 January 2001; some were ready in December 2000. In a supplementary Memorandum to the Committee, British Telecom stated that 6 of the 7 trial sites were completed on, or ahead of, time. Operators, however, had been slow to take possession. This situation is changing constantly and by the end of 2001 OFTEL will be in a position to announce new service providers. There is low demand by new entrants for fully unbundled lines and no uptake at all for shared access and sub-loops which are also offered by the incumbent.

2.1.2.   Development of Information Infrastructures in Less Favoured Regions

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Action 1.6

Where necessary and without distorting competition, public financing instruments will give increased priority to supporting the development of information infrastructure and projects, notably in the less favoured regions.
Deadline: end 2000

The deployment of high speed networks is primarily a task for the private sector operating in the competitive market. Investments in broadband infrastructure and new markets need a favourable regulatory environment. But specific policy measures are needed to avoid that advanced networks diffusion is concentrated in the most advanced regions leaving out peripheral and less favoured regions. Under this aspect, the Commission recommended that every regional development plan should include activities to encourage access to the information society. For the Objective 1 regions alone, it is estimated that 6 billion Euro of Community funds will be mobilised during the 2000-2006 programming period.

SIBIS survey confirms that the development of information infrastructures in the Less Favoured Regions is a policy objective adopted by all EU countries with the exception of Belgium and Luxembourg, but with different implementation results. This goal is generally included in the National Information Society Plans and in the R&D investment plans for telecoms. In Northern Europe the diffusion of basic networks is considered relatively adequate and measures are focused on the promotion of broadband networks. Actual implementation of infrastructures is usually delegated at the regional level: in Southern Europe (Greece, Italy, Spain and Portugal) this is a key goal of the Operational Plans of 3rd Community Support Framework for Objective 1 regions. CSF funds are also used for this goal by other countries (i.e. Austria). In the other countries initiatives are mostly enacted by specific regional projects.

Most of these initiatives are relatively recent, so SIBIS policy progress evaluation shows that in most countries implementation has not given measurable results yet or initiatives are at the planning stage. Denmark, France, Portugal, Sweden and the UK claim some measurable results already achieved. Germany is a special case because telecom networks development in Less Favoured Regions has been addressed by a major investment plan in recent years so at present there are no specific measures but the goal is evaluated to be fully achieved.

Tab. 6 **Policy Evaluation for Measures of Development of Information Infrastructures in Less Favoured Regions**

	Policy progress	Type of policy measure		
		National umbrella programme/action plan	Regional programmes/action plans	R&D investment plans
Austria	●●	✔	✔	(✔)
Belgium	?			
Denmark	●●●	✔	✔	✔
Finland	●			
France	●●●	✔	✔	✔
Germany	☑		✔	
Greece	●●	✔		
Ireland	●●	✔	✔	✔
Italy	●	✔	✔	✔
Luxembourg	?			
Netherlands	●	✔		
Portugal	●●●	✔	✔	✔
Spain	●●	(✔)	✔	✔
Sweden	●●●	✔	✔	✔
UK	●●●	✔	✔	

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented
✔	=	existing
(✔)	=	planned

Source: SIBIS consortium

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Development of Information Infrastructures in Less Favoured Regions - Main Initiatives Mapping by Country

Austria

> *National*
> Information infrastructure objectives for less favoured regions are mainly addressed on a regional level within the European Structural Funds Programmes. However, there are national funds and programmes which touch upon information infrastructure objectives, as for instance RIF and ERP funds.
> The **ERP Infrastructure and Regional Programmes** provide incentives for technology transfer, start-ups in innovative sectors and for the implementation of new technologies and new forms of work. The ERP fund provides low-interest loans to organisations and businesses eligible for support.
> The **REG Plus Programme** supports the further development of regional technology incubators and their co-operation. But the Programme does not directly support the implementation of telecommunication infrastructure.
>
> *Regional*
> **@telekis Programme**
> The aim of *@telekis* is to provide the optimum preparation of the Province of Styria for the knowledge society. The Programme focuses on three main objectives:
> - to dynamically develop strong leading sectors in industry-related services of the Styrian economy by the use of telecommunication;
> - to compensate for the disadvantaged economic and traffic geographical situation of Styria by means of telecommunication;
> - to extend the telecommunication sector of the Styrian economy in order to react to the strong employment shift from traditional industries in this sector.
>
> *R&D*
> **ITF - Innovation and Technology Fund**
> The Programme was aimed at promoting research on IT, software, energy, transport, and technology transfer schemes. The programme is completed, but a new technology transfer programme is planned to begin in 2002.
> **FFF – Forschungsförderungsfonds der gewerblichen Wirtschaft - R&D funds for applied research by commercial enterprises**
> This is Austria's most important source of finance for R&D projects and innovation projects carried out by industry. Supporting the development of information infrastructure in less favoured regions is not a direct objective, but some projects financed by this fund support that goal.

Belgium

> In Belgium no specific measures for the development of information infrastructures in less favoured regions are have been launched. In fact, the telecom infrastructure is well developed, even in less-favoured regions, i.e. post industrial areas. Each of the three Regions (Flander, Brussels, Wallonia) has a fiber optic backbone network in place. Over 80% of the country has ADSL access, cable access to the Internet is currently developing. The total number of broadband internet connections (ADSL and cables) is over 200,000 and is expected to grow fast, given the favourable price/performance ratio compared to ISDN and even PSTN.

Denmark

National

Fra Isenkram til Indhold - hurtig, billig og sikker internet til hele Danmark - From Hardware to Content - Strategy for Fast, cheap and Secure Internet to all of Denmark

The main objective of this Programme, approved in July 2001, is to ensure fast, cheap and safe Internet to everyone in Denmark. It is estimated that before July 2002 a minimum of 95% of all households will be able to get access to fast Internet connections through one or more technologies (ADSL; FWA or cable-modems).

Regional

Det digitale Nordjylland

Nordjyllands Amt (a region with many rural districts). One of the aims of this plan is to ensure that all residents in the region have the best possible access to the Internet (including user-friendliness, prices, capacity and security).

R&D

Omstilling til netværkssamfundet (Switch-over to Network-Society Action Plan)

The Action Plan, approved in January 2000, contains 37 specific initiatives to achieve the following 6 objectives:

1. getting the most modern and "future-orientated" infrastructure with cheap broadband connection to as many users as possible;
2. give basic IT rights to citizens that ensure safe use of the Internet;
3. guarantee lifelong learning and quality in the network society;
4. invest in e-trade and maintain Denmark's position as a successful trade nation;
5. provide citizens with easy access to the public administration;
6. expand IT-policy through, among other things, annual network reports.

France

National

Comité interministériel d'aménagement et de développement du territoire/ Volet numérique - Action plan – Les Schemas services collectifs

The fundamental objectives of this Plan are to help regions – particularly less favoured regions - to fully enter into the Information Society and to ensure access to ICT technologies and services for all.

Regional

IRISI - Inter Regional Information Society Initiative in Nord Pas de Calais

This region participated to a Commission led initiative to promote the Information Society at the local level. Main aims are to reinforce competition in the area, to contribute to the territorial planning and to guarantee access for all to the Information Society. Funding was 51,000,000 Euro (from the French Government)

R&D

Loi d'orientation pour l'aménagement et le développement durable du territoire

25th June 1999

This law mentions the development of information infrastructures in less favoured regions, notably in rural and deprived areas.

Germany

National
No specific measures are active presently at the national level because telecom networks in Germany's Less Favoured Regions (the Eastern Landers) have been developed and upgraded recently by a massive Deutsche Telekom investment plan.
Regional
Bavaria Online
The main objective of the initiative "Bavaria Online" was the construction of a modern information infrastructure in Bavaria as fast as possible. Due to the implementation of a full-fledged high-speed backbone (up to 155 Mbit/s) for universities and the Bavarian public administration network, all of the Bavarian regions have been connected to the fibreglass backbone since spring 1996.

Greece

National
Greek Operational Programme for the Information Society (OPIS)
This Programme was proposed in December 1999 in the context of the 3d Community Support Framework Programme for Greece with a total allocation of 2.8 billion Euros of funds, 19% of which reserved for the action line "Communications" which among other objectives includes "improve access to advanced telecommunication infrastructure in remote areas".

Ireland

National
National Development Plan - 2000-2006
The Plan deals with the issue of regional and rural development in a broad sense and is not limited to the development of information infrastructures.
R&D
National Development Plan 2001
The Plan is aimed at ensuring that necessary investments in information infrastructures take place.

Italy

National
Action Plan for the Information Society (2000-2006)
The main objective of this Plan is to facilitate the transition of Italy into the Information Society. The development of adequate information infrastructures is listed as a strategic objective to be implemented at the Regional level.
Economic and Financial Planning Document 2002-2006 (EFPD)
The EFPD includes strategic guidelines for actions aiming at supporting the growth of the digital society and the transition to the Information Society. Within the objective of the development of the Less Favoured Regions in Southern Italy (Mezzogiorno), a special focus is put on the creation/strengthening of immaterial networks and communication infrastructures in this area.
Regional
At the regional level, the development of information infrastructures in Mezzogiorno is addressed by the Operational Programmes of Italy's Objective 1 regions and included in the goals of the **Community Support Framework** for 2000-2006. Broadband networks development is specifically included in the CSF objectives.
R&D
National Research Programme (NRP) for 2000-2003
Approved in December 2000 by the Interministerial Commission for Economic Planning it recognizes that a sizable increase of R&D investment in the ICT sector is necessary and that the development of information infrastructures (especially broadband ones) in Mezzogiorno is to be encouraged to increase these regions competitiveness.

The Netherlands

National
Digital TrapveldJES - The Dutch Digital Delta (2000-2003)
This is the main Dutch Plan for the development of the Information Society and one of its main objectives is to decrease the differences in knowledge within the society by supporting the development of ICT in less favoured regions.

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Portugal

National

Programa Operacional Sociedade da Informação - Operational Programme for the Information Society (2000-2006)

Among the objectives of the Programme is the development of basic and advanced ICT skills and the promotion of R&D in the ICT's field. Funding is about 800,000,000 Euro.

Regional

With exception of "Lisbon and Tagus Valley" the whole Portugal is considered by EC as a "Less Favoured Region". In particular, Madeira and Azores Autonomous Regions' Programmes address information infrastructures development.

R&D

Programa Operacional Sociedade da Informação - Operational Programme for the Information Society, Measure 1.3 "Research and Development" (2000-2006)

Approved in July 2000, this Plan aims at improving international competitiveness, avoiding external dependence and creating conditions for exporting goods and services with a higher level of innovative processes and products. Funding is 87,700,000 Euro.

Spain

National

Programa Operativo de la Sociedad de la Informaciòn (Operative Programme for the Information Society - 2001-2006)

The aim of this Programme is to support the accessibility to the information infrastructures and services in Regions objective 1, to involve SMEs in the Information Society and promote the use of ICTs through guaranteeing all citizens access to ICTs. Funding is 436,000,000 Euro (ERDF Fund).

Regional

Selected initiatives in the regions are:

Autopista Gallega de la Informaciòn (Galicia)

Cataluña en Red (Cataluña)

Iniciativa ACABA (Comunidad Valenciana)

R&D

Programa Operativo Intehrado de I+D+I (Integrated Operative Programme - 2001-2006)

The Plan intends to promote investments in R&D projects and technology innovation, focusing on the development of Ipv6 protocol, research networks, technologies supporting security platforms, smart cards, e-learning platforms. Funding is 1,394,000,000 Euro (ERDF Fund).

Sweden

National

IT-proposition 1999/2000, "An Information Society for all" (2000-2002)

The Plan introduces tax reduction and governmental support in order to facilitate the transition of less favoured regions to the information society. Funding is 580,000,000 Euro.

Regional

IT- Norrbotten

The main purpose of the project is to build high-quality IT infrastructures.

IT- Värmland

The aim of the project is to educate local players (both private and public) to use the infrastructure and to develop services for the local market.

R&D

Forskning och förnyelse propostition 2001/2003

Enlarged funding for IT research. The direction of the research should be an information society for all. Funding: 12,000,000 Euro

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UK

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National

Wired up communities initiative

The objective of the initiative is to assess how individual access to the Internet transforms opportunities for people living in the most disadvantaged communities (deprived regions). A range of technologies will be tested, including broadband and narrowband access and satellite communication .

Regional

Regional Electronic Economy Programme

North East England

The programme covers all facets of regional life including social exclusion, learning and the stimulation of high value-added, knowledge-based business. Through various partnerships, the programme intends to build on what networks currently exist to provide a larger "network of networks" to support communities. The network will link a growing number of "Electronic Village Halls"; 284 libraries already on the Wolfson[3] funded network; 16 Further Education colleges; five universities; the regional Centres of Excellence network; four town and city networks; the developing "Northern Grid for Learning"; and the proposed Voluntary and Community Sector Group access to information network. It is hoped that the "network of networks" will create the potential to pilot new communications technologies and, where appropriate, share content at a regional scale.

The Maran Project

The MARAN project in Mid-Wales is using the New Opportunities Fund and Capital Modernisation Funds for schools and public libraries. It is an excellent example of what can be achieved by collaboration. It has brought a new telecommunication provider into the area, delivering broadband services via microwave links across a large part of rural mid Wales and allowing three local authorities to provide cheaper, high speed services across all their needs: schools, public libraries and corporate services.

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[3]   The DCMS/Wolfson Public Libraries Challenge Fund was established in July 1997 to enhance the services and facilities provided by public libraries in England

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2.2.   Faster Internet for Researchers and Students

Action 1.7
Move towards full implementation of IPV6 through pilot implementation in Europe. Key telecom and manufacturer industries will be mobilised together with service providers and users.
Deadline: end 2001

Action 2.1
Adequate funds (in addition to the 80m Euros already allocated to the upgrade of the trans-European backbone interconnecting the National Research and Education Networks) will be earmarked for the research networking aspects of the IST Programme, with the objective of establishing Europe as a global connectivity leader and initiating the evolution towards a fully optical backbone with improved capacities in terms of bandwidth and services.
Deadline: end 2001

Action 2.2
National research Networks should be upgraded to ensure that researchers and students across Europe benefit from powerful networks, for example, using structural funds and EIB support.
Deadline: end 2001

The development of high speed networks for the research environment is considered a crucial step towards the development of collaborative learning and researching and the achievement of a proactive collaboration between the public and the private sector. All the EU countries are devoting a relevant effort to upgrade their National Research Networks' bandwidth: specifically, eight countries have upgraded their NREN between 2000 and 2001 (Austria, Finland, France, Germany, Ireland, Netherlands, Portugal, UK) and eight have planned improvements for the near future (France, Germany, the Netherlands and the UK again, plus Greece, Italy, Spain and Sweden). This means that 12 countries out of 15 have upgraded their networks in the last two years.

It seems therefore that the recommendations of eEurope for an improvement of the research networks have resulted in an acceleration of investments and general upgrade of the available bandwidth.   Concerning the maximum available bandwidth, two countries (the UK and Netherlands) are planning for 20 Gigabit levels while five more (France, Germany, Greece, Italy and Sweden) should reach 10 Gigabit very soon. The other NRENs maximum bandwidth ranges from 1 to 2.5 Gigabit. In 2001, the Dutch National Research Network's backbone – with 10 Gb – has the highest bandwidth. Only Portugal NREN seems to remain at bandwidth levels under 1 Gigabit.

With the exception of Portugal and Greece, all the EU countries' National Research Network have a fully optical backbone. Greece is planning to implement it in the first semester of 2002.

The implementation of the Ipv6 protocol, a new protocol required to enlarge the IP numbering space and facilitate new and more secure services development, is specifically targeted by the eEurope plan. The Commission communication "eEurope Impacts and Priorities" of March 2001 added as a specific goal that "Member States should make a commitment to progressively introduce IPV6 in their publicly owned networks, e.g. those for research and administration". SIBIS investigated plans for implementation of IPV6 protocol in the Research Networks which seem to be progressing. Seven countries (Belgium, Finland, Germany, Greece, Ireland, the Netherlands and the UK) have already implemented IPV6 in their research network. Four of the remaining countries are carrying out pilot trials to apply it in their NREN. But two countries (Italy and Sweden) are not implementing it and do not have plans to do so.

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Tab. 7   Maximum bandwidth currently available in EU National Research Networks

	Before/in 2000	In 2001	Planned for ….
AUSTRIA	32 Mb	1 Gb	n.a.
BELGIUM	155 Mb	155 Mb	n.a
DENMARK	n.a.	822 Mb	n.a.
FINLAND	155 Mb	2.5 Gb	
FRANCE	155 Mb	2.5 Gb	10 Gb
GERMANY	155 Mb in 1996	2.4 Gb	10 Gb (in 2004)
GREECE	155 Mb	155 Mb	10 Gb
IRELAND	34 Mb	2.4 Gb	n.a.
ITALY	2.5 Gb	2.5 Gb	10 Gb (in 2003)
LUXEMBOURG	n.a.	1Gb	n.a.
NETHERLANDS	1Gb	10 Gb	20 Gb (in 2002)
PORTUGAL	140 Mb	201 Mb	622 Mb (in 2002)
SPAIN	155 Mb	155 Mb	2.5 Gb (2002 – 2003)
SWEDEN	2.5 Gb	2.5 Gb	10 Gb (in 2002)
UK	155Mb	2.5Gb	20Gb

Source: SIBIS Consortium

Tab. 8   Implementation of IPv6 protocol in EU National Research Networks

	Before/in 2000	In 2001	Planned for ….
AUSTRIA	Pilot trials	Pilot trials	
BELGIUM	Yes		
DENMARK	Yes		
FINLAND	Yes		
FRANCE		Pilot trials	
GERMANY		Yes	
GREECE	Yes		
IRELAND	No	Yes	
ITALY	No	No	No plans
LUXEMBOURG		Pilot trials	2002
NETHERLANDS	Yes		
PORTUGAL	No	Pilot trials	2002
SPAIN	Pilot trials	Pilot trials	Not available
SWEDEN	No	No	No plans
UK	Yes		

Source: SIBIS Consortium

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National Research and Education Networks - Country profiles

Austria

ACOnet - the Austrian Academic Computer Network - was launched in 1990 as a non-profit network for science, research and education in Austria. The ATM technology has been implemented in the whole ACOnet-backbone providing high-speed communication between all the 19 Austrian state universities and most of the Fachhochschulen (Advanced Colleges). In October 2001, 2 additional cities will be connected to the ACOnet.
From Vienna the ACOnet is connected to Ebone with a bandwidth of 140 Mbps and to the TEN-155 with a bandwidth of 45 Mbps. Once switched from Ten-155 to GEANT network the connection will be 620 Mbps.

Belgium

BELNET consists of a private IP network built on top of high speed SDH rings or redundant ATM networks from a variety of telecommunications operators. The topology of the network is a dual star centred in Brussels with direct connections. To each of the Belgian universities, where the local BELNET POP is installed. The central sites are fully redundant ATM nodes capable of switching up to 40 Gigabit/s or 24 million packets per second. Each of remote ATM nodes can switch up to 5 Gigabit/s.
BELNET has a 155 Mbit/s access to the high-speed pan European research network TEN-155, and is in the process of implementing a 2.5 Gbit/s connection to Géant.
BELNET has a direct interconnection at 155 Mbit/s with Internet 2 (Abilene) and other international research networks.

Finland

The Finnish National Research Network's maximum bandwidth has been recently increased passing from 155 Mb of bandwidth before 2000 up to the current 2,5 Gb. The capacity of the general bandwidth in 2001 is between 100 and 155 Mbps . The plans for 2002 include an upgrade of the network that will guarantee 2.5 Gbps of bandwidth and major improvements of the maximum bandwidth by 2004.

France

There are plans to upgrade the maximum bandwidth of the French NREN up to 10 Gb, in order to guarantee 155 Mbps of speed in the backbone.

Germany

Germany disposes of a nation-wide broadband communications research network named Deutsches Forschungsnetz (DFN) through which all universities and federal ministries are connected. The cable infrastructure of the German research network is fully optical. The maximum bandwidth generally available in the German NREN has constantly increased in the last years. The plans for the future are to update the DFN up to 10 Gb by 2004.

Ireland

HEAnet is the Irish NREN; its backbone consists of four point of presence, linked by fibre in a resilient mesh. The bearer sub-structure is fibre throughout and terminates in STM-16 add-drop multiplexes at each of the PoPs. Capacity of 155 Mbps (STM-1) has been purchased for the backbone, although the infrastructure can sustain bandwidth of up to 2.4 Gb. At each PoP, a core router maintains SDH connections with at least two other PoPs. Access routers enable connections from clients via ISDN, leased line and ATM, at bandwidth from 64 kbps to 155 Mbps. Backbone and access routers are linked by independent fast Ethernet and ATM switches. Management systems and applications servers, such as videoconferencing MCU systems, also from each part of PoP. HEAnets' Ipv6 project is in the development stages of a project that will pilot Ipv6 services for HEAnet customers (e.g. similar services to those already on offer for IPV4, such as IPV6 address allocation as Local Internet Registry (LIR), Domain Name Server (DNS), reverse DNS etc. Nevertheless, IPV6 is in early stage of development in Ireland; further extension and increasing implementation is planned and envisaged.

Italy

Beside currently available Italian GARR-B network, the "National Research Programme" is currently experimenting the GARR-G high speed network for research and training offering innovative networking solutions and advanced multimedia applications. This network will be managed by a specific National Agency.

Sweden

The Swedish National Research Network has a fully optical backbone. Since 2000, the maximum bandwidth available was of 2.5 Gb, while the general speed available in 2001 is of about 622 Mbps. The plans for 2002 are to upgrade the research network up to 10 Gb.

UK

SuperJANET, the British NREN, uses Worldcom's fiber based national transmission network. A migration to DWDM technology from current SDH is planned for end 2001. Most organisations that connect to the NREN do so via Metropolitan Area Networks. The MANs connect to the SuperJANET backbone at speeds ranging from 155 Mbps to 2.5 Gbps. As the SuperJANET will be upgraded, the MAN access links will also be upgraded. All the universities in the UK are connected to JANET.

2.3. Secure Networks and Smart Cards

2.3.1. Secure Networks

Action 3.1.2
Improve the overall security of online transactions by:
Supporting the industry-led security certifications through co-ordination of efforts and mutual recognition, including information security professional certification
Deadline: end 2001

Action 3.3
Develop a co-ordinated European approach to cybercrime.
Deadline: 2002

Security problems, both real and perceived, are widely seen as an inhibiting factor for the development of the digital economy and e-commerce. Recent months have seen increases in the acts of high profile sabotage, such as the multiplication of viruses and denial of service attacks to well-known e-commerce sites. Greater understanding of the potential for economic damage has raised public awareness of the problem of networks security. But improving network security requires political, organisational and technical actions which have to be coordinated, raising the complexity of the issue. So far, progress in this area has been relatively slow. For example, a recent Netcraft survey[4] found that the USA has six times as many secure servers as the EU and this gap has not narrowed in the time between their most recent surveys.

The SIBIS survey found more evidence of government-led initiatives than industry-led initiatives in this field. As shown by the following country comments, only Portugal seems to be planning an industry-led initiative for security certification, while in a few countries (Austria, Belgium, Germany, UK) there are initiatives led by government departments or public organisations (e.g. the Chambers of Commerce in Belgium) to promote awareness or lead public-private cooperation to insure networks and electronic transactions security.

The regulatory framework on cybercrime is articulated in all countries but harmonisation seems still distant. The Commission recently adopted a Communication which foresees the establishment of an EU Forum on cybersecurity and cybercrime[5].

All countries have measures in the regulatory framework to prosecute electronic-based fraud, child pornography on the Internet and often cybercrimes by hackers. Only two countries (the Netherlands and Greece) have a specific law on cybercrime (the Netherlands since 1993). Two countries (Ireland and Luxembourg) approved in 2000 specific laws on electronic commerce which prosecute misdemeanors in internet transactions. France includes cybercrime in the Law on the Information society approved in 2001. Finland, Sweden and the UK have laws on specific aspects of cybercrime. All the other countries have basically extended their existing regulatory measures to include cybercrime, for example the Penal Code or laws concerning child pornography, consumer protection, privacy protection. Belgium and Denmark have measures under discussion.

Seven countries declare that measurable positive results from cybercrime laws are already visible, and one (the Netherlands) claims a comprehensive protection, that is protection against cybercrime is considered to be active in more than half of the EU.

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[4]   Reported in OECD Communications Outlook 2001
[5]   Creating a safer society by improving the security of information infrastructures and combating computer related crime, COM(2000) 890

Tab. 9   Specific Laws/regulations against cybercrime

	Policy Progress	Approved before/ in 2000	Approved in 2001	Under discussion
AUSTRIA	●●			
BELGIUM	●			▲
DENMARK	●			▲
FINLAND	●●	■		
FRANCE	●		■	
GERMANY	●●●			
GREECE	●●		■	
IRELAND	●●●	■		
ITALY	●●			
LUXEMBOURG	●●●	■		
NETHERLANDS	☑	■		
PORTUGAL	●●			
SPAIN	●●●			
SWEDEN	●●●	■		
UK	●●●	■		

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented
■	=	approved
▲	=	currently under discussion

Source: SIBIS consortium

Secure Networks - Country Profiles

Austria

Security Certifications

In Austria there is not a single "industry led certification activity". Nevertheless, a number of potentially relevant initiatives have been launched since 2000. Austria's approach to promote standardisation and certification of secure information systems is not industry driven, but – as stipulated by Electronic Signature Act of 2000 - based on third parties who act as certification or confirmation bodies under legal assignment. An important step towards security certification was the implementation of the supervisory authority for certification activities under the Electronic Signature Act: certification services providers are required to report their services to the supervisory authority. The fulfilment of all security requirements in technical components and procedures used in the creation of secure signatures has to be certified by a confirmation body. The first recognised confirmation body in Austria is the Secure Information Technology Center – Austria (A-SIT).

Cybercrime Laws

In Austria, there is not an explicit and all-encompassing law against cybercrime passed specifically for dealing with criminal offences related to new ICTs. However, the Austrian regulatory framework in force includes relevant directives for prosecuting computer-related offences. The Federal Ministry for the Interior has implemented a special office fighting child pornography; the ISPA (Austrian Internet Service Provider Association) has launched a similar initiative and a new law including special regulations for e-commerce is currently under discussion.

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Belgium

Security Certifications
BelSign was founded by the Federation of Chambers of Commerce and Industry of Belgium and Ubizen (formerly Net Vision) – a leading provider of enterprise-wide Internet security solutions. In August 1998 BelSign developed into the GlobalSign network as part of its international expansion strategy.
The transformation into and International Certification Network was a logical solution because BelSign was issuing most of its certificates outside Belgium in other European countries.
Cybercrime Laws
A law proposal (Projet de Loi relative à la criminalité informatique) was approved on 14 October 1999 by the Council of Ministers and still has to be presented to the Parliament. The key objectives of the law are to combat forgery, fraud, unauthorised access, sabotage.

Finland

Cybercrime Laws
Act on Electronic Service in the Administration
This act approved in the fall of 1999 aims at improving the smoothness and rapidity of the services in the administration, as well as data security. This is done by means of promoting the use of electronic data interchange and preventing any cybercrimes.

France

Cybercrime Laws
Loi sur la sociètè de l'information (Law on the Information Society - 13 June 2001)
This law has, among the other goals, the objective of guaranteeing freedom in online communications and reinforcing the fight against cybercrime.

Germany

Security Certifications
The "Initiative D21" promoted by German business with the objective of accelerating the change from the industrial to the information society includes six work groups: one of them – workgroup N. 6 - deals with "security and trust in the Internet". Complementary to the "Initiative D21" and to the task force "Secure internet" of the Federal Ministry of Economic Affairs operates the "Partnership Secure Internet Business", a public-private partnership led by the Federal Ministry of Economics and Technology essentially with public relations tasks.
Cybercrime Laws
There is not a comprehensive law against cybercrime, that is persecuted and punished by applying existing local regulations. Some domestic laws are particularly relevant in fighting cybercrime: the Telecommunication Act, the Digital Signature Act, laws regulating copyrights and intellectual property rights and specific media regulations. According to the Ministry of Justice, a specific law on cybercrime would impact on already existing laws rather than creating a new legal field.

Greece

Cybercrime Laws
Presidential Decree 150/2001 (June 2001)
This regulation, affecting the issues related to cybercrime, has become operational and is currently co-ordinated by an organisation called EFTA.

Ireland

Cybercrime Laws
Electronic Commerce Act 2000
This Act supports many aspects related to electronic transactions. Concerning cybercrime, this Act tackles fraudulent use of e-signatures making it a criminal offence punishable by a prison sentence; offers protection to online consumers pending the introduction of the EU Electronic Signatures Directive in 2000; regulates the registration of the Internet domain names in the republic and opens debate on the need for more than one current center (IEDR) administrating registration.

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Italy

Cybercrime Laws
Italy does not have a specific law on cybercrime. The Penal Code is applied extensively to prosecute telematic networks-related offences. Law 547/1993 describes the concept of "telematic fraud", Law 269/1998 acts against hypothesis of child pornography offence, the Italian Privacy Law states specific duties for operators active in the provision of goods sold on line while the Italian bank Law introduced specific norms against the illegal use of credit cards.

Luxembourg

Cybercrime Laws
Loi relative au commerce éléctronique du 14 Aout 2000 (Law on Electronic Commerce)
This Legislation on electronic commerce includes aspects strictly related to cybercrime. In particular: it guarantees consumer rights and personal data secrecy through ISP surveillance, electronic signature obligation to guarantee professional secrecy.

The Netherlands

Security Certifications
In the Netherlands operates the "Netherlands National Communication Security Agency".
Cybercrime Laws
Wet computercriminaliteit (1993)
This act regulates several types of computer-related criminality like child pornography, internet fraud and hackership. A proposed amendment to the act has been presented by the ministry of Justice on July 1999.

Portugal

Security Certifications
Portugal is currently discussing an industry-led certification initiative. The ITIJ (Institute of Information Technologies in Justice) was set up on September 2000; but it is not operative in this domain yet and its activity concerning this area is expected to start by the end of 2001.
Cybercrime Laws
Portugal does not have a coherent and complete legal framework concerning cybercrime. The basic Portuguese legislation consists of Law 109/1991, named Computer-related Crime Law that introduced matters and terms as "sabotage", "unauthorised access" and "intellectual property offence". Law 67/98 regulates personal data protection, while Decree-Laws 48/95 and 65/98 of penal code regulate respectively unauthorised access and communication and computer science fraud. It is important to stress that Portugal will probably approve the "International Convention on Cybercrime" .

Spain

Cybercrime Laws
Còdigo Penal (art.264.2) (Penal Code, November 1995)
The Penal Code contains several norms providing safeguard against destruction, alteration, damages or hurts of programs and information systems.
Moreover, it does protect secrecy of information and electronic documents available on the net
Ley Orgànica de Protection de Datos de Caracter Personal (Law of Personal Data Protection, December 1999)
This Act guarantee freedom and fundamental rights of citizens regarding the treatment of personal data.

Sweden

Cybercrime Laws
BBS – regulation 1998
This Regulatory Framework guarantees the personal names protection and defines responsibility for any material on the Net.

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UK

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Security Certifications

In the UK measures aimed at improving industry security certification systems are promoted by the central administration. The UK government is raising awareness of the need for appropriate levels of security by giving attention to the specific issues raised by trading online and promoting best practice. This will be done by means of: devoting more resources from DTI to promote information security best practice to UK businesses and putting information security at the heart of e-government strategy.

In 1999 the national Government set up the National Infrastructure Security Co-ordination Centre (NISCC) to co-ordinate and develop protection of the public and private sector infrastructure against electronic attacks. NISCC raises awareness of information security across those organisations responsible for the critical national infrastructure.

Cybercrime Laws

Regulation of Investigatory Powers Act (28 July 2000)

This regulation provides legal interception of communications including the Internet and a legal framework for disclosure of lawfully acquired information in an intelligible form, where necessary by disclosure of a password or description key.

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2.3.2.   Smart cards

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Action 3.6
Availability of cost-effective smart card solutions to enable secure electronic transactions
Deadline: 2002

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Smart-cards are an enabling technology which can increase the level of confidentiality and privacy in information society services. It takes many forms and offers multiple functionalities such as access, identification, authentication and payment. An initiative has been already launched at the "Smart-Card Summit", organised by the Commission on the European Communities in Lisbon on 11 April 2000, and industry has shown strong willingness to pursue common efforts.

A Smart Card Charter, containing a detailed work-plan, was adopted and the participants agreed to set up a high level Task Force to initiate and support common developments in the deployment of smart cards in the European Union. (source: *e*Europe 2002 Action Plan)

To build confidence and trust in electronic communications, *e*Europe proposes to improve the security of online transactions by supporting the development of certification services and Internet security solutions and encouraging the development of common specifications for smart cards. The availability of solutions based on smart cards is rather diffused in Europe as shown by the following table.

An overview of the application areas of smart cards across Europe can be useful in understanding their current dissemination in the EU countries.

Smart card are diffused in all the EU countries.

The electronic wallet is used in all EU countries, with the exception of Greece and Ireland. Credit cards are similarly diffused: twelve out of fifteen EU countries have implemented smart card solutions for credit cards.

A quite dynamic application area is that of "shop cards" and "customer rewards schemes". Beside digital TV payments many EU Countries are successfully experimenting smart cards solutions for public transport services.

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Smart cards storing personal medical data are used in seven countries, while only Finland, France and the Netherlands have activated cards enabling the prescription of healthcare services.

In the area of public services to citizens only electronic ID cards seem to have a meaningful role: six EU Countries have implemented or distributed ID cards on smart cards support. There is not yet a relevant national usage in the area of tax payment.

Tab. 10   Smart cards application areas (with exclusion of mobile phones SIM cards)

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Italy	Ireland	Luxembourg	Netherlands	Portugal	Spain	Sweden	UK
Public administration and other public services cards															
Electronic ID cards				X	X			X			X		X	X	
Tax payment															
School enrolment											X		X		
Healthcare services															
Prescriptions of healthcare services: prescriptions, medical visits, etc.				X	X						X				
Storage of personal medical data		X		X	X			X			X		X		X
Other				X		X					X	X	X		X
Credit cards	X			X	X	X	X	X	X	X		X	X	X	X
Electronic wallet	X	X	X	X	X	X		X		X	X	X	X	X	X
Shop cards and customer rewards schemes															
Public transport services			X	X	X	X		X	X		X		X	X	X
Public utilities supply payment					X			X				X	X		X
Digital TV	X		X	X		X		X					X	X	X
other	X		X	X		X			X		X	X			

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Smart Cards solutions: some examples

Austria

Austria is planning a large scale implementation of smart cards: the Austrian Association of Social Insurance Carriers has plans to introduce a common smart-card solution for social security. According to the schedule of the initiative, all citizens will be equipped with a card by mid 2003. The system will be tested among a selected sample of practitioners during 2001, within in a pilot trial. The Federal Government is considering to extend the Social Security card, in the long run, into a general "Citizen Card", e.g. with ID functions.

Belgium

Since July 1999, all Belgian citizens benefiting from social security use of smart card called SIS for access to doctors, hospitals, pharmacies, etc. The card chip contains identification data in clear and encrypted "Sickness Fund Data".

Germany

Germany is developing several regional and local initiatives on smart cards. The Curiavant-Card project in Nuremberg is an example for a comprehensive citizen chip card with functions specially designed for local residents. Other cities, municipalities and regions are developing similar initiatives; as an example can be quoted the "KölnCard", a citizen chip card for residents living in Cologne.

Italy

Italy is currently pilot testing the implementation of electronic ID cards. A preliminary cost evaluation is currently being carried out. This will enable the Italian Public Administration to estimate the costs of the implementation of electronic ID cards on a large scale and help defining the technological standards and facilities that will be implemented on the electronic ID cards.

Case story: the "*Boots Advantage Card*" in the UK

The Boots Advantage Card is a retail loyalty card scheme available in the UK that uses smart chip technology. Born in 1997 from a private initiative, totally funded by Boots Ltd itself, the Advantage Card is today the largest smart card retail loyalty scheme in the world and it is also the third largest retail loyalty scheme in the UK in terms of issued cards.

For customers, the Advantage card is a loyalty card that provides rewards and treats for shopping in Boots. For Boots, the card is the major marketing and merchandising initiative to improve marketing and merchandising decisions and sell to customers more efficiently.

This loyalty scheme has been created on the principles of customer relationship marketing. The way Advantage card information can be analysed means that Boots can obtain a better understanding of its customers requirements and that it has the opportunity of establishing a meaningful two-way communication with them.

By analysing the information provided through the cards and transmitted to a sophisticated Customer Database, Boots can gain important insight into customers shopping behaviour and can better plan its marketing decision making.

The initiative achieved great results and the Advantage card diffusion has continued to grow. Regular mailing, offers and double points promotions gave pushed its membership through the 13 million barrier, and increased its value to the business.

Boots the Chemist has recently teamed up with Egg (an e-commerce company created by Prudential, the UK based financial services company) to launch a loyalty and credit card: Boots loyalty card holders can apply for an Advantage Credit Card which serves both purposes.

Benefits include low interest rates and Boots Advantage points whenever the card is used. Holders of the new card have additional reasons to shop at Boots, to use the Advantage Point Kiosks and visit Boots on the Internet through the Egg Shopping Zone. The key consumer feature of the new card is represented by the possibility for holders to earn more points on all transactions.

For Boots, the new card creates new opportunities in the increasingly competitive online market and helps the electronic marketing through existing Kiosks and the Internet.

Source: SIBIS elaboration on information from Boots PLC http://www.boots-plc.com

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3. Evaluation of eEurope actions: Investing in people and skills

3.1. European youth into digital age

Action 4.1
Provide all schools, teachers, and students with convenient access to the Internet and multimedia resources, where appropriate using the Structural Funds.
Deadline: end 2001

Action 4.3
Ensure availability of support services and educational resources on the Internet, as well as e-learning platforms, for teachers, pupils and parents (e.g. access for disadvantaged children, access to digitised cultural heritage, multilingual multimedia learning materials, European open source software initiative, collective of best practice). European Commission to support these efforts via the education, training and culture programmes and to provide adequate funding within the IST Programme.
Deadline: end 2002

Action 4.4
Provide training, using Structural Funds where appropriate, to all teachers, in particular adapt teacher curricula and offer incentives to teachers to actually use digital technologies in teaching. European Commission will ensure exchange of best practice and co-ordinate research efforts through its education, training, and IST Programmes.
Deadline: end 2002

Action 4.6
Ensure that all pupils have the possibility to be digitally literate by the time they leave school. European Commission to support pilot projects, exchange of best practice and co-ordinate research efforts, via its IST and education programmes.
Deadline: end 2002

The agreement on providing Internet access to schools by 2001 and on ensuring the training of teachers by the end of 2002 were amongst the most far reaching commitments achieved at Lisbon when eEurope was launched. According to the SIBIS survey, the eEurope action plan did have a very strong impact on national policies to introduce digital technologies in schools and train teachers in ICT. While most countries (especially Scandinavian countries) were already investing to bring technologies in the classrooms, eEurope provided a tighter timetable, more ambitious common targets and a feeling of urgency, which resulted in a strong acceleration of national plans and noticeable progress.

The following table mapping policies shows that all EU countries have implemented plans to improve access to digital technologies and the Internet, both at the national and regional level, and to incentivate teachers training in ICT. In most countries these policies have already started to show results. The measures aimed at teachers are relatively more recent and in some countries (such as Greece and Spain) still have to show measurable results. The target to connect all schools to the Internet has been adopted by all countries and in most of them has been almost achieved - the less advanced ones, Greece and Portugal, nevertheless have connected approximately half of the schools.

The diffusion of ICT and usage patterns vary considerably between the different countries. According to the last Flash Eurobarometer Survey on schools[6] , the average number of pupils per offline computer at the EU level is 12, and is 25 per connected computer. But numbers at country level vary from 3 pupils per computer in Denmark to over 20 in Germany and Greece. However, half of the computers used for education are less than three years old and pupils have access to the Internet in 8 out of 10 schools.

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[6] eEurope Benchmarking European Youth into the digital age - Eurobarometer surveys

A small group of countries are ahead in all fields: equipment, connectivity and usage. They are Denmark, Sweden, Finland, Luxembourg, followed by the UK. Southern European countries suffer from a much later start of ICT investments, Italy and Spain less severely than Greece and Portugal. But for example both Greece and Portugal have designed plans with the support of the Community Support Framework to close the gap within the next years. The other countries fall in between. Some variations in diffusion rates reflect policy choices. For example Germany falls under the EU average for the diffusion of both offline and online computers. But it presents a very high percentage of schools connected to the Internet and owning a Web page, which was clearly incentivated as a priority. The opposite is true for France, where the number of pupils per computer is lower than EU average, but the number of schools connected is surprisingly lower than EU average.

From these data it would seem that access to the Internet and multimedia resources is no more a main problem for EU schools. But the diffusion of technologies in the schools is only a first step: more important is how digital technologies are used to improve digital literacy among pupils and also how to exploit fully the Internet in education. From this point of view the way to go is still long. European countries are following two main strategies: to increase teachers training in ICT and promote the creation of new educational content. Initiatives promoting teachers training and the use of ICT in education are multiplying in Europe, as well as projects to promote pupils digital literacy. Many of these last projects address secondary schools to experiment educational strategies where digital technologies are exploited in several different ways. Most countries are also promoting networking among teachers to exchange experiences and information.
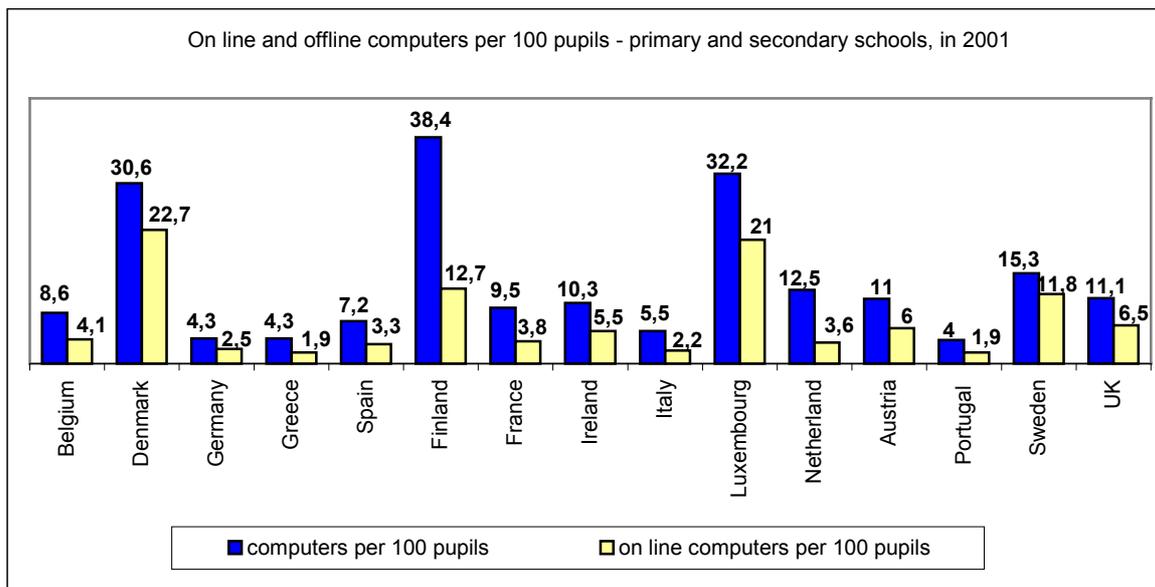
Tab. 11 Initiatives promoting the use of digital technologies in schools and teaching

	Policy Progress Evaluation of Internet access measures	National initiatives to provide access to the Internet and multimedia resources to teachers and learners	Regional initiatives to provide access to the Internet and multimedia resources to teachers and learners	Policy Progress Evaluation of teachers incentives measures	National initiatives offering incentives to teachers to use digital technologies	Regional initiatives offering incentives to teachers to use digital technologies	Projects to promote pupils digital literacy
Austria	●●●	✓	✓	●●●	✓	✓	✓
Belgium	●●●		✓	●●		✓	
Denmark	●●●	✓	✓	●●●	✓	✓	✓
Finland	●●●	✓	✓	●●●	✓	✓	✓
France	●●●	✓	✓	●●●	✓	✓	✓
Germany	●●●	✓	✓	●●●	✓	✓	✓
Greece	●●●	✓		●●	✓		✓
Ireland	●●●	✓		●●●	✓		✓
Italy	●●●	✓		●●●	✓		✓
Luxembourg	?			●●●	✓		✓
Netherlands	●●●	✓	✓	●●●	✓	✓	✓
Portugal	●●●	✓	✓	●●●	✓	✓	✓
Spain	●●●	✓	✓	●●	✓	✓	
Sweden	●●●	✓		●●●	✓		✓
UK	●●●	✓	✓	●●●	✓	✓	✓

■	=	approved
?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

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Tab. 12   ICT equipment available in primary and secondary schools

On line and offline computers per 100 pupils - primary and secondary schools, in 2001

Country	computers per 100 pupils	on line computers per 100 pupils
Belgium	8,6	4,1
Denmark	30,6	22,7
Germany	4,3	2,5
Greece	4,3	1,9
Spain	7,2	3,3
Finland	38,4	12,7
France	9,5	3,8
Ireland	10,3	5,5
Italy	5,5	2,2
Luxembourg	32,2	21
Netherland	12,5	3,6
Austria	11	6
Portugal	4	1,9
Sweden	15,3	11,8
UK	11,1	6,5

Source: Flash EUROBAROMETER 101.0 , June 2001

Tab. 13   Internet access and Web resources in EU schools (%)

	% of schools connected to the Internet	% of connected schools with a Web page
AUSTRIA	72	60
BELGIUM	91	48
DENMARK	98	77
FINLAND	99	78
FRANCE	84	44
GERMANY	94	51
GREECE	45	33
IRELAND	98	39
ITALY	89	42
LUXEMBOURG	92	51
NETHERLANDS	93	47
PORTUGAL	62	40
SPAIN	94	46
SWEDEN	100	81
UK	95	53
EU	89	49

Source: Eurobarometer Survey Flash 101 "Headteachers" and Flash 102 "Teachers" of February-May 2001

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Tab. 14   Number of schools with a Web site

	Primary Schools	Secondary Schools
AUSTRIA	251	1145
BELGIUM	1645	1035
DENMARK	437	n.a.
FINLAND	1000	335
FRANCE	16427	4869
GERMANY	1032	5006
GREECE	50	300
IRELAND	n.a.	364
ITALY	1944	503
LUXEMBOURG	23	20
NETHERLANDS	2521	502
PORTUGAL*	266	1083
SPAIN	2518	1122
SWEDEN	266	501
UK	6200	2200

(*)   data refer only to schools associated with the Internet at School Program

Source: SIBIS consortium

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Access to Internet in the Schools and Incentives to Teachers: Country Profiles

Austria

Access to the Internet and multimedia resources
National initiatives:
EFit Austria. Action Line 8: IT Infrasctructure - June 2001
The "eFit " plan is structured into eight focus areas, of which those concerning education are: teaching by using new media; IT education initiative; educational portals on the Internet; IT continuous training initiative ; culture in cyberspace; eGovernment in education.
The actions planned or already under way address the following objectives:
- to provide broadband Internet access to schools and educational bodies and organisations;
- to implement an Austrian Educational Portal by 2002;
- to implement a proper security architecture in schools and provide connection of classrooms;
- to provide Internet access from home to all teachers and students;
- to upgrade and update hardware equipment in schools.

Funding: 50% of the initiative is funded by the Ministry of Education, Science and Culture; the remaining 50% will be raised by participating institutions, and organisations , Municipalities and Laender. The funding from the Ministry is 15,000,000 Euro for 2001; 22 ,000,000 Euro for 2002 and 36,000,000 Euro for 2003.
Local initiatives:
The "**Salzburger Bildungsnetz**" (Educational Network of the Land Salzburg).
The main objective of the "Bildungsnetz" is to connect all educational organisations to the Internet, and to offer a platform for communication and a wide variety of teaching materials on the Salzburger Bildungsserver (educational server).

Vorarlberger Bildungsserver (Educational Server of the Land Vorarlberg).
It is a regional educational portal on the Internet, offering a variety of resources for teachers and information about educational institutions in the region. VOBS was launched in December 1998. It was set up and is maintained by the VTG – Vorarlberger Telekommunikations GmbH on behalf of the regional educational authority, and with financial support of the Federal Ministry of Education.

Incentives to teachers to use ICT
National initiatives:

eFit Austria: learning teaching and researching in the knowledge-based society.
Activities include:
- IT training to 33,000 teachers per year at Teacher Training Colleges and to 6.000 teachers by using the eFit-CD-Rom;
- Launch of "e-Fit – all teachers are on the Internet", an online teacher-training system;
- a special budget dedicated to teacher training institutions, which can submit proposals for special courses and programmes for funding;
- development of an electronic information system about teacher training seminars,
- special incentives for IT specialists among teachers;
- free of charge Internet access for teachers who have been trained on using new technologies.

Local initiatives:
The regional approach for supporting teachers in using digital technologies is mainly based on two pillars:

- Pillar 1: to build, maintain and upgrade the regional educational network;
- Pillar 2: programmes and courses offered by the regional teacher training institutions, mainly the "Pedagogical Institutes".

The Austrian educational network is a combination of two networks for education and research, the ACOnet (the Austrian research network) and the ASN (Austrian school net). These networks are connected in order to ensure that schools and other educational organisations are adequately connected to each other and to international research networks.

The basic connectivity in Austrian secondary schools is already quite advanced, whereas primary schools have some catching up to do. The biggest challenge for the next 1-3 years will be to upgrade the quality and convenience of Internet access in schools, not only in terms of bandwidth, but especially in the number of workplaces available in each school.

Follows

Further initiatives include:

- additional continuous training programmes for teachers in the areas of economics of IT, media and Internet technologies and telecommunications. Currently, 700 teachers have completed a programme of this type while 500 are participating;
- the programme "Multimedia Education", offering incentives for teachers in upper secondary education to use digital learning material;

Projects to promote digital literacy
ECDL at Schools (1999 – ongoing)
This project has been supported by the Federal Ministry of Education, Science and Culture and by the no – profit association ECDL at School. The goal of this initiative is:
- to offer pupils in secondary education to sit for the ECDL exams at special student prices;
- to integrate the ECDL syllabus into the "normal" school curriculum
- to establish a formal standard for minimum digital literacy for school leavers.
By mid 2001, 780 schools (out of about 2 700 secondary schools) have registered as ECDL test centres at the association, which requires that they fulfil a set of criteria. In addition to offering the ECDL exams, a lot of schools use the ECDL curriculum as the basis for their own lessons in computing.

Belgium

Access to the Internet and multimedia resources
National initiatives:
In Belgium education is a competence of Regions: there are federal directives but no actual initiative yet launched.

Local initiatives:
PC/KD - Project launched in the Flanders Region
Cyber-écoles - Project launched in the Wallonia Region. Both the projects require - or at least recommend - teachers to use the provided computers and Internet connections for teaching.

Denmark

Access to the Internet and multimedia resources
"**Informationsteknologi i folkeskolen**" (Information-technology in the Folkeskole, 1996) was launched in 1996 with the objective of doubling the IT investment in the schools to achieve a target of one computer every 10 pupils by the year 2003.

Incentives to teachers to use ICT
National initiatives:
In Denmark, the municipalities control the schools and have the responsibility for supplementary training of teachers. The municipalities and governing bodies responsible can decide which specific courses they wish to invest in. One third of the teachers are qualified for pedagogic ECDL or are in the process of becoming qualified.

IT, Medier og Folkeskolen (IT, media and the Folkeskole) 2000 – 2003
This initiative is aimed at strengthening the pedagogic use of IT in education. This will be done by supporting projects and initiatives putting emphasis on reading and mathematical skills; fostering flexible education (focussed on every single students' needs) and supporting the ability of IT to enhance dialogue between teachers and parents. Moreover, IT, Medier og Folkeskolen will support the use of IT in the development of contents and didactics in every subject. The funding is approximately 48,000,000 Euro.

Local initiatives:
The Municipality of Aarhus is buying computers for all teachers who, in return, have to qualify for a pedagogical variation of the ECDL.

Projects to promote digital literacy:

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> **The IT jump - Samsøgade school**
> Samsøgade school participates in a national project "IT Jump" in support of the computer literacy in schools. This is carried out by means of providing a laptop computer and other facilities to every student at school. Through this project, Samsøgade school has become an IT model school for the rest of the region. This project is supported by the Ministry of Education and the Ministry of Research. Funding is 200,000 Euro.

Finland

> *Access to the Internet and multimedia resources*
> *National initiatives:*
> **Information Society Structure** (2000 – 2004)
> This initiative aims at developing the hardware infrastructure and network environments to be applied in education and research. This programme is active on a national level, even if regional sub-projects at all educational institutions are active. Funding is 9,000,000 Euro per year.
>
> *Local initiatives*:
> **DUSOR**, **Snowball** and **The Gymnasium** projects.
>
> *Incentives to teachers to use ICT in teaching*
> *National initiatives:*
>
> **OPE.FI – Training for Teaching personnel (**2000 - 2004)
> This programme supports the diffusion of ICT in educational institutions and especially for pedagogic purposes**.** The first phase is carried out at a national level; further steps will be on regional basis. Funding is 6,000,000 Euro per year.
>
> *Local initiatives:*
> **OPE.FI Phase III**
> Several specific projects within the OPE.FI III will be implemented on a regional basis.
>
> *Projects to promote digital literacy*
> **e-Gymnasium (Aftis-Distis)**
> e-Gymnasium targets the Swedish speaking minority based in the non-urban areas in the Osterbotten region, in order to provide them with an ICT education. Thanks to this project, primary and upper secondary school pupils involved could get a very high basic level of use and knowledge of ICT. The project was supported by public bodies as well as private sponsors.

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France

Access to the Internet and multimedia resources
National initiatives:
ICT Development Plan in Education (1998 - 2001)
This plan is preparing France's entry into the information society. It concentrates on 7 objectives, including:
- network infrastructure equipment;
- staff training and development of teaching practices;
- production and broadcasting of multimedia teaching resources;
- development of companies in the field of educational multimedia.

Local initiatives:
- The city of Dijon will devote a budget of 2,300,000 Euro to mobilise the region over the next 5 years and to give equal access for all to ICTs.
- **RAPSODIE** (Réseau de l'Académie de Poitiers pour l'Optimisation et le Développement des usages de l'Information Electronique) is carried out by the Academy at Poitiers to support the development of ICT infrastructure and other tools to benefit the whole education community.

Incentives to teachers to use ICT
National initiatives:
Plan d'Urgence TIC (1998 - onwards)
The principal objective of this plan is to provide teachers with basic ICT training during their teacher training period. At the end of his/her studies, every teacher will know how to produce electronic documents and to use them for teaching purposes; and how to effectively use the Internet in the classroom. Funding initially is 9,000,000 Euro.
In February 2000, the Ministry of Education and France Telecom established an agreement to develop the Internet in schools. The first application of this agreement resulted in a programme of training for teachers in new technologies called "Internet Ambassadors from France Telecom in Schools".

Local initiatives:
All the academies have responsibility at a regional level for supporting teachers' training and ICT plans.

Projects to promote digital literacy
B21 (2000 – 2002 for level one)
The Ministry of Education - financially supporting the initiative - has set minimum standards to be achieved by school pupils in order to become IT literate, called "Brevet Informatique et Internet". B21 has two levels of qualifications and in 2001 will be rolled out for teaching in all schools in France. It is a simple test of competence in basic IT literacy, use of email, wordprocessing, etc.

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Germany

Access to the Internet and multimedia resources
National initiatives:
Schulen ans Netz e. V. (Schools Online)
This programme was launched in April 1996, with the aim of equipping all schools with computers and Internet access and encouraging the use of new media for teaching and learning.
Schulen ans Netz e. V. is a joint initiative of the Federal Ministry of Education and Research (BMBF) and of the Deutsche Telekom AG. "Schulen ans Netz" has been co-operating closely with related initiatives launched by Federal States and with regional sponsors. Since 2000, Deutsche Telekom has been providing all German schools with Internet access free of charge. Today, almost all German schools are connected to the Internet.
Funding: For the period between 1996 – 2001, the Federal Ministry of Education and Research contributed with about 32,000,000 Euro and Deutsche Telekom AG with about 48,000,000 Euro.

Local initiatives:
All German Laender (federal states) have launched regional programmes or initiatives to provide schools, teachers and students with convenient access to the Internet and multimedia resources. Furthermore, each federal state has set up educational servers offering information and teaching materials for teachers.
For example, **e-nitiative.nrw** was launched on November 1999 as a common initiative of the government North-Rhine Westphalia (NRW) and the local authority districts with the goal of providing convenient access to the Internet for all schools in the region, further vocational education and high quality learning and teaching software to all types of school in Germany.
The "**Medienoffensive Schule**" in Baden-Wuerttemberg is a part of a larger initiative called medi@ supported by the government of Baden-Wuerttemberg. This initiative went into effect in 1998. Its main objectives are to encourage further vocational training of teachers, to provide Internet access to all schools and to implement an educational server for Baden- Wuerttemberg.

Incentives to teachers to use ICT
National initiatives:
In February 2000, the Deutsche Telekom AG started its own initiative "**T@School**" with the aim of providing all German schools with a T-Online connection, either via ISDN or xDSL.
The initial mission of connecting schools to the Internet has been fulfilled. The initiative now focuses on enforcing the teachers' computer literacy and training teachers to use ICT efficiently in teaching.
New Media in Education (Neue Medien in der Bildung) 2000 - 2004
This programme aims at supporting durable and wide-spread integration of the new media into the classrooms in order to improve the quality of learning by using the new media. Moreover, this plan will help providing high quality learning and teaching software.

In Germany there are many different initiatives supporting the use of the new media in schools. Worth mentioning is the "**Initiative D21**" , that was launched on 27th July 1999 as a public-private partnership with members belonging to various fields of German business. A special programme supported by the "Initiative D21" is "**Intel® Lehren für die Zukunft**". The main objectives of this programme are to support training courses for teachers and effective use of technology in schools.
Moreover, within the framework of "Schools Online", different types of online platforms for teachers were established to improve the teachers knowledge of using new media at school.

Local initiatives:
In Germany, education and further vocational training is under the responsibility of the Laender. Consequently, there is a wide variety of mainly regional programmes and initiatives which aim at supporting and offering incentives to teachers to use digital technologies in teaching.
In addition to other initiatives, each of the German Laender has implemented an educational server which offers access to teaching materials and information about training courses for teachers using digital technologies in teaching .
The **e-nitiative.nrw** in North-Rhine Westphalia, for example, is supporting and increasing the qualification of teachers in using digital technologies at school. Within the framework of the e-nitiative.nrw, several adult education centres of North-Rhine Westphalia offer a newly developed basic qualification scheme for teachers in using digital technologies, called "e-card".
Another example is the **Neue Informations- und Kommunikationsmedien im Unterricht** in Schleswig-Holstein.

Projects to promote digital literacy:
InfoSCHUL (starting in 1997/98)
InfoSCHUL is a project within the framework of the initiative "Schools Online" supported by the Federal Ministry of Education and Research and the Deutsche Telekom AG.
This initiative will support different projects in German schools dealing with the practical use of new media and is a relevant example of a project for pupils at Sekundarstufe II (last three years of grammar school) to build a bridge to different measures at the universities.

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Greece

Access to the Internet and multimedia resources

National initiatives

Edu-net (National School Network)(2001 – 2006)

This initiative is developing the technical infrastructure for universal services for all schools. The project pilot phase started in 1998 and became operational in September 2001. Funding up to 2002 is 15,000,000 Euro.

OPIS - Operational Programme for Information Society (2000-2006)

The Programme dedicates 17% of its funds (476,000,000 Euro) to education and culture with main objectives the equipment of schools with modern technology, networking schools, creating digital content and training teachers in new technologies, as well as the use of new technologies to promote Greek culture and heritage. The 3rd Community Support Framework programme provides 60% of funding, the rest from the government and the private sector. The implementation is delegated to the competent Ministries. Specific targets have been set for the year 2006, coherent with eEurope targets, such as:

- to increase the diffusion of ICT equipment to 72% of primary schools and 100% of secondary schools (starting level in 2000 is 0.9% of primary and 59% of secondary schools)
- To connect all schools to the internet (starting level in 2000 is 3% of primary schools and 38% of secondary schools);
- to achieve an average of one pc for every 10 pupils in primary and secondary schools versus a starting level of one every 51 pupils in 2000 (one every 31 for secondary schools).

Incentives to teachers to use ICT

National initiatives:

Operational Plan for ICT in Education (2002)

This plan is developed in the context of the Operational Plan for the Information Society (OPIS) and aims at incentivating teachers use of digital technologies. It will be launched next year by the Ministry of Education and Religious Affairs. Main OPIS targets are:

- to increase the number of trained teachers of ECDL type from 8,000 in 2000 to 100,000 in 2006;
- to increase the percentage of curriculum that uses ICT (educational software, internet services, digital content) to 60% for primary education, 90% for High Schools and 80% for Lyceum and technical education.

Projects to promote digital literacy

Odysseia Programme

This Programme is part of the current Operational Programme for Education and Initial Vocational Training of the Ministry of National Education and Religious Affairs and is implemented by the Directorate of Secondary School Studies, the Community Support Framework Directorate, the Pedagogical Institute and the Computer Technology Institute. The Programme is structured in projects designed to introduce computer and network technologies into the daily school practice of 385 secondary schools in Greece covering every subject on the standard curriculum, in order to create a substantial number of school communities that will have incorporated these technologies as an integral part of their daily teaching and learning practice. Odysseia has developed a set of 27 educational software packages (under the Seirines and Nafsika projects) and adapted another 14 internationally recognised educational software packages for use in the Greek school system.

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Ireland

Access to the Internet and multimedia resources
Incentives to teachers to use ICT
National initiatives:
The School IT 2000 Project (1998 - 2001)
This project will support schools in building up basic ICT infrastructure. On this purpose the project will develop: multimedia computer centres, computer peripherals, networking and electronic wiring, software for education and administration purposes. Moreover, Schools IT 2000 will bring about a national partnership involving schools, parents, local communities, third-level institutions together with public and private sector organisations to meet the Project's goals. Within Schools IT 2000, 50,000 IT training places have been provided for teachers. The project brings together both public and private partners such as the Department of Education and Science, the National Centre for Technology in various local ICT and Eircom, the biggest national telecom operator.

Projects to promote digital literacy
School Integration Project - SIP (1998 - 2001)
SIP is one of the largest initiatives of the Schools IT 2000 programme and is aimed at promoting school development in relation to ICT integration. The National Centre for technology and Education plans to achieve this objective through a number of projects using an action research approach. The 75 projects funded involved more that 400 schools in the country, i.e. roughly 10%. Some projects were very time specific in duration, others were a maximum of 18 months, whereas others such as the Intel Ireland IT recycling scheme could go on indefinitely.
The nature of the projects funded is extremely broad and ranged from looking at using ICT in different subject areas of the curriculum to developing oral and aural language skills at infant and remedial levels, to using video-conferencing technology to assist a student with special needs.
As the Schools IT 2000 programme, the SIP project is funded by the Department of Education and Science, the National Centre for technology and Education, national telecom operator and other private companies.

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Italy

Access to the Internet and multimedia resources
National initiatives:
Programma di Sviluppo delle Tecnologie Didattiche PSTD (Plan for development of teaching methods Technologies) (1997 - 2002)

This plan was launched in order to promote and develop information technologies in Italian schools. In the first phase from 1997 to 2000 it increased greatly the diffusion of pc in schools, to 1 pc for every 35 pupils in 2000 (versus 1/500 pupils in 1997) and 1 pc every 15 pupils in secondary schools (versus 1/50 in 1997). In the years 2001-2 the plan target is to achieve a ratio of 1 pc every 15 pupils in primary schools and 1 every 10 pupils in secondary schools.

The plan targets several goals beyond the diffusion of PC:

- Diffusion of multimedia applications in teaching methods
- Connection of all primary and secondary schools to the Internet;
- Internal cabling of schools;
- launch of special plans oriented to the teaching of foreign languages at primary school and of a set of pilot projects focused on different matters and involving a number of schools around the entire country.

Funding was about 382,000,000 Euro for the first four years + 613,000,000 Euro for 2001 and 2002.

Incentives to teachers to use ICT
National initiatives:
Programma di Sviluppo delle Tecnologie Didattiche PSTD (Plan for development of teaching methods Technologies) (1997 - 2002)
One of the main goals of the plan is the ICT training of teachers and the introduction of digital technologies in teaching methods at all levels, including the production of teaching documentation, the creation of networks of teachers to exchange educational content, experiences and software, with specific attention to multimedia content. In 2001 and 2002 the plan foresees to train approximately 45,000 teachers per year, for an average 20 hours per teacher. The ultimate goal is to ensure that at least one teacher in every school is able to manage multimedia laboratories/libraries. Funding is 46,000,000 Euro in 2001, 92,000,000 Euro in 2002.

SeT programme
A four years plan promoted and financed by the ministry of Education (started in 12/11/1999), in order to support the growth of Italian cultural level at schools thanks to the increasing quality of teaching methods.

*Projects to promote digital literacy***:**
A CPU for Growing (April-June 2001)
A CPU for growing is supported by the Ministry of Industry, the Ministry of Education and ABI (Italian Banks' Association). Its goal is to increase the penetration of computers among students, by providing a free interest loan to buy a PC to students in the first year of secondary school. Students (600,000, at a rough estimate) can pay back the loan in two years.
The loan for each student who decides to join the plan amounts to about 743,7 Euro. To cover the risk on the loans granted by banks, the Finance Law for 2001 established a Trust Fund of 28.4 Million Euro for 2001 and of 64 million Euro for 2002; the Trust Fund is held by the Ministry of Economics.

Luxembourg

Incentives to teachers to use ICT
National initiatives:
MIRA (2000-onwards)
This programme has been launched with the aim of developing teachers' computing skills.

*Projects to promote digital literacy***:**
ALICE (2000-onwards)
The goal of this project is to help students to confront with the new reality of the Internet. This will be carried out by providing the teachers and students of the school involved with Internet access and e-mail.

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The Netherlands

Access to the Internet and multimedia resources
National initiatives:
Education Online (2001 - 2010)
This plan will stimulate the use of ICT in schools and improve learners' knowledge and skills. Funding for the period 2000 – 2001: 304,000,000 Euro. For the period 2001 – 2010: 150,000,000 Euro.
Local initiatives:
There are 34 regional projects targeting the diffusion of ICT in schools in the Netherlands.

Incentives to teachers to use ICT
National initiatives:
Digital Driving Licence in Education (1998 - 2001)
This initiative has been launched with the aim of stimulating the use of ICT in schools among teachers.
Between 2001 and 2002 there are a series of subsidy programmes put into force by the Ministry of Education.

- The "**Network subsidies**" (2001-2002) is financing the "network projects" where teachers, ICT co-ordinators and others work together in a network on the integration of ICT in education. Improvement of expert-knowledge by exchanging experiences and ideas is the central element.
- "Implementation subsidies" (2001-2002) are aimed at facilitating the use of ICT products during lessons.

*Projects to promote digital literacy***:**
Stichting ICT on school (2001 - 2005)
The objective of this project is to improve ICT products and services and ICT integration in primary and secondary schools. The initiative is financially supported by the Ministry of Education, federations for work and education, local and regional authorities, schools, universities, regional development centres and private companies. Funding is 2,700,000 Euro per year till 2005.

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Portugal

Access to the Internet and multimedia resources
National initiatives:
"**Internet in Schools**" **Programme** (2001 - 2006)
This programme intends to stimulate the use of the Internet for educational purposes in schools, supporting the production of scientific and technological content. Since this programme relies on a network of universities, primary and secondary schools, it promotes communication between the scientific community and schools. Various activities have been carried out to take advantage of this opportunity.
All private and public schools in Portugal, from the 5th to the 12th grade, and teacher-training centres are connected to the Internet. By the end of 2001, all of 1st to 4th grade primary schools and public libraries will be connected by the Science and Technology Ministry (MCT) and the National Association of Portuguese Municipalities.
The Education Ministry – with **PRODEP III** - will supply schools equipment's , stimulating local school networks and supporting the development of pedagogical projects.
The Employment and Professional Training Institute (Instituto do Emprego e Formação Profissional) is involved in the connection of all Professional Training Centres in the same conditions as described for schools.

Local initiatives:
Azores and Madeira Autonomous Regions, in their Operational Programmes, have specific measures to ensure the Internet connection of primary and secondary schools. For example, the **Integrated School Network** (ISN) is aimed at implementing a regional telematic network in Madeira Autonomous Region, linking different services and bodies covered by Regional Secretariat of Education, at a administrative level and allowing teachers and students to access to the Internet.

Incentives to teachers to use ICT
National initiatives

Programme for the Educational Development of Portugal - PRODEP III (2000 - 2006)
PRODEP III includes a specific measure addressed to teachers. It is reported in Action 5.1 – Learning and Information Society - that includes a measure on "Teachers and other Agents Training" . This measure contemplates continuous and skill training of teachers. For every teacher the programme provides for 83 hours in continuous training and 250 hours in skill training. Teachers can receive financial aid. Funding is 1,660,000,000 Euro for all the programme 2000 – 2006; 470,000,000 for Axis 3, Learning Society (2000 – 2006).

Local initiatives:
Youth XXI Century (Azores)

*Projects to promote digital literacy**::*
Programa Geração Millennium (July 2001 - 2003)
The Millennium Generation Programme (Programa Geração Millennium) is designed to provide ICT training to youth between 10 and 18 years of age. In the first phase, about 60,000 people are involved; the target is to train 200,000 by 2003. The project is managed by the Information Technologies Diffusion Foundation. Funding is 4,000,000 Euro.

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Spain

Access to the Internet and multimedia resources
National initiatives:

Internet en la Escuela- Equipamiento (Internet in the school - equipment) (2001 - 2003)
This programme is raising funds to provide schools with convenient multimedia resources. Funding is 71,700,000 Euro.

Internet en la Enseñanza (Internet in teaching) (2001 - 2003)
This programme is extending the broadband access to the Internet to educational centres. Funding is 70,300,000 Euro.

Local initiatives:
Several projects have been launched at a local level: Proyecto TRONCAL (Navarra), Proryecto EDUSI (Murcia), Proyecto ENTER (La Rioja), Programa Educ@ble (Madrid).

Incentives to teachers to use ICT
National initiatives:
Formación de Profesores en el Uso de las ITC (Teachers training for ICT usage) (2002 - 2003)
This programme will support the creation of ICT training courses for 45.000 teachers of the state education. Funding is 13,800,000 Euro.

Local initiatives:
Programa Regional de Formación Permanente del Profesorado (Asturias)
Programa Althia (Castilla La Mancha)
Asturias Proyecto TIZA (Navarra)

Sweden

Access to the Internet and multimedia resources
Incentives to teachers to use ICT in teaching
National initiatives:
National Action Programme for ICT in Schools - Itis (1999 - 2001)
Itis has several objectives in order to foster the diffusion of ICT in schools:
- training and ICT equipment of 70.000 teachers;
- state grants to improve the school's accessibility to the Internet;
- provision of e-mail addresses to teachers and students;
- support the development of the Swedish Schoolnet and the European Schoolnet;
- measures addressed to pupils with special needs;
- awards for excellent pedagogical contributions.
Funding is 150,000,000 Euro.
The use of IT in schools in Sweden is crucial. Besides ItiS, the **Knowledge Foundation** (KK-Stiftelsen) is particularly active. The **Swedish Schoolnet** is an important source for the teachers and pupils.

Projects to promote digital literacy:
The School Webb
The project is aimed at developing a new way of learning and working in school. It is currently operative at a local level, but there are plans to implement it at a national level. The School Webb is funded by Labs2, a private company in Sweden.

UK

> *Access to the Internet and multimedia resources*
> *National initiatives:*
> **National Grid for Learning (NGFL) (1998 onwards)**
> NGFL is providing educationally valuable content on the Internet and a programme for developing the means to make it accessible in schools, libraries and colleges, universities, workplaces, homes and elsewhere. Funding for the period 2001 – 2002: 392,000,000 Euro.
>
> *Local initiatives*:
> The **Community Grid for Learning** is currently undertaken by the majority of local authorities that provide online access to all learning opportunities in the borough. This community grid links directly into the National Grid for Learning.
>
> *Incentives to teachers to use ICT*
> *National initiatives:*
> **New Opportunities Fund (NOF) ICT training initiative (1998 - 2002)**
> This initiative will raise standards of pupils achievements by increasing the expertise of serving teachers in the use of ICT in the subject of teaching to the level expected of all newly qualified teachers. Funding is 360,000,000 Euro.
> Other initiatives launched in the UK include: **PCs for FE Teachers** to be launched in Autumn 2001 with target coverage of 4000 teachers between 2001 - 2002. Roll out of phase 2 of £20 million Computers for Teachers programme announced in March 1999. An additional 24 million Euro has been set aside to run the scheme in 2001 which includes 6.4 million Euro for a scheme for FE teachers. The scheme for schoolteachers is currently available to Key Stage 3 Maths teachers. The FE scheme will be run by the LSC in Autumn 2001.
>
> *Local initiatives:*
> Each region in the UK has a strategy for ICT. East Sussex for example is supplementing the national NOF money with a scheme to provide teachers with free portables.
>
> *Projects to promote digital literacy***:**
> **Excellence in Cities Programme**
> One of the key elements of the Excellence in Cities programme is the establishment of a network of school-based City Learning Centres (CLCs). They will provide state-of-the-art ICT-based learning opportunities for the pupils at the host school, for pupils at a network of surrounding schools and for the wider community. CLCs will: provide courses for individual pupils; offer outreach to local schools; provide extension for gifted and talented pupils; test new ways of teaching and cascade best practice.
> There are already 27 CLCs operating and some 50 more are due to start from September 2001 and it is planned that, by March 2004, there will be over 1000 CLCs operating across the country.

3.2. Working in the knowledge-based economy

3.2.1. Digital Literacy of the Labour Force

Action 5.1
Give the labour force the chance to become digitally literate through life-long learning
Deadline: 2002

Action 5.2
Significantly increase information technology training places and courses and promote gender equality in such courses (both in work and in educational institutions), using European Social funds where appropriate
Deadline: 2002

Action 5.3
Establish a European diploma for basic information technology skills, with decentralised certification procedures
Deadline: 2001

While considerable progress has been made in promoting the use of digital technologies in institutional educational systems, life-long learning and training measures aimed at increasing the digital literacy of the labour force have been less satisfying. According to a recent declaration by Viviane Reding - Member of the European Commission with responsibility for Education – in the past year "less than 10% Europeans of working age undertook any training. This in manifestly not enough and if we do nothing about it then Europeans will find it difficult to be part of an international economy and of society's in which knowledge and skills are becoming obsolete ever more quickly". *The Commission Communication on a European area of lifelong learning , the eLearning action plan* and the *Report on the concrete Future objectives of education systems* produced by the Commission in 2001 underline the relevance of life-long learning measures to improve the skills of the labour force and support the evolution of the digital economy in Europe. The strategic reflection on the Communication from the *Commission "Realising the European Union's Potential: Consolidating and extending the Lisbon Strategy"* also pointed to the improvement of skills as a goal of strategic relevance and an area where more efforts needed to be invested.

According to the SIBIS survey, the Member States have in fact been quite active in this area especially in the last year. Almost all States (excluding Belgium, Luxembourg and the Netherlands) have launched initiatives to increase IT training places and courses: in six countries (Austria, Finland, Germany, Spain, Sweden, UK) results have already been achieved.

Initiatives for digital literacy through life-long learning measures are less diffused. Three countries (Germany, Spain and the UK) have implemented measures with results already achieved. Six other countries (Denmark, Finland, Ireland, Italy, Portugal and Spain) have launched national initiatives with results forthcoming. The other countries are still planning or have not launched specific initiatives.

The implementation of the European Computer Driving Licence – a common diploma of workers IT skills with decentralised certification procedures – instead has been completed in all countries, last one Finland which has recently agreed to harmonize its own Computer Driving Licence system. The ECDL Foundation overseeing its implementation declares that 1.3 million EU citizens have entered the process to achieve the diploma, the majority of them in the last year. This satisfies the objective of action 5.3.

Tab. 15   **Initiatives supporting digital literacy of labour force**

	Policy Progress of Digital Literacy measures	National initiatives of Labour Force Digital literacy through lifelong learning	Policy Progress of IT training measures	National Initiatives to increase Information technology training places and courses	Implementation of ECDL
Austria	●●		●●●	■	■
Belgium	●●●		●●●		■
Denmark	●●	■	●●	■	■
Finland	●●	■	●●●	■	■
France	●	▲	●●	■	■
Germany	●●●	■	●●●	■	■
Greece	●	▲	●	▲	■
Ireland	●●	■	?		■
Italy	●	■	●●	■	■
Luxembourg	?		?	▲	■
Netherlands	?		?		■
Portugal	●●	■	●●	■	▲
Spain	●●●	■	●●●	■	■
Sweden	●		●●●	■	■
UK	●●●	■	●●●	■	■

?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented
■	=	existing
▲	=	planned

Source: SIBIS consortium

Support of Digital literacy of Labour Force: Country Profiles

Austria

The **National Action Plan for Employment 2001** stresses the importance of life-long learning, envisaging the implementation of Centres of Excellence for Adult Education.

In addition, the **Austrian Tax Reform 2000** has introduced tax allowances for the expenditure on further training activities as an incentive to participate in training programmes. Within the activities launched by social partners special provisions have been established concerning educational leave and the right of employees to use a certain number of working days per year for further education.

Belgium

Through the **Information Society and e-gov Plan** the Federal Government requests Communities and Regions to encourage initiatives in the areas of ICT training and life-long learning.
At regional level, government-supported training centres (e.g. Technifutur in Liége, Technofutur3 in Charleroi, etc.) are chartered to promote and deliver ICT courses to enterprises and their personnel.
The regional employment agencies (such as VDAB in Flanders and FOREM in Wallonia) do the same for the unemployed.

Denmark

The **Information and communication technology in the education system- Action Plan** (1998-2003) is aimed, among other goals, at ensuring equal and flexible access to life-long learning and at improving co-operation between education institutions and industrial organisations. Furthermore, it intends to give citizens a complete overview of the courses they can attend. Contributions for the participation to courses, also those offered by non-Danish education institutions, are available.

Finland

In Finland there isn't a specific regulation concerning digital literacy; this is due to the belief that adult education should be self-motivated. However, the **Lagen om vuxenutbildningsstöd – Law on adult education** supports life-long learning and many supported ICT education projects are available. The **Financial Education Support Programme** provides incentives and tax exemptions for training/retraining courses, but they don't necessarily have to be in the field of ICT.

France

A national law supporting digital literacy through life-long learning is still under discussion. But it is worth to mention that on 18th July 2001 the French Government published a response/contribution to the European Commission Memorandum of Understanding for life-long learning.

Germany

In Germany there is no national law supporting digital literacy of the labour force through life-long learning. However, every employee has a right to job-related further education.

The Federal Ministry of Research and Education has recently introduced a national Action Programme, called **Lebensbegleitendes Lernen für alle – Life-long learning for all**, promoting innovative projects in the field on life-long learning and competence-developing learning on all educational levels, while the Federal Ministry of Labour and Social Affairs is working on a bill called **Job-Aqtiv-Gesetz**, whose objectives are, among the others, to promote individual ability of employment and the stimulation and to stimulate life-long learning. In order to improved the quality of education, the former also encourages the application of new media in further education, in order to improve the quality of education.

Since in Germany education is regulated at the Land level, many Länder have in their "Further Education Law" specific rules concerning durance and content of the events an employee may attend. For example, in the Land of North-Rhine Westphalia employees' further training is specifically regulated by the law **Arbeitenehmerweiterbildungsgesetz (AwbG) – Law regulating employees' further training**, which gives every employee the right to use five working days per year for continuing training activities. Similar laws are in place in the Länder Berlin, Brandenburg, Bremen, Hamburg, Hessen, Lower Saxony, Rhineland-Palatinate, Saarland, Schleswig-Holstein and Sachsen-Anhalt.

Ireland

In Ireland the National Training Fund, whose objectives are to raise the skills of employees and to give prospective employees relevant skills needed, supports a range of existing employment training initiatives including apprenticeship, traineeship, company-specific training programmes, sectoral training programmes and employment-related training courses for the unemployed. This Fund also supports new initiatives in the area of life-long learning.

Italy

The **Decree of the President of the Council of Ministers (DPCM) of 6th March 2001** intends to increase the public administration efficiency level and to promote public services innovation through information technology. This decree concerns only public employees and not the whole labour force. But recently the Ministry of Education has approved the guidelines for **Technical Training of Life-long Learners (IFTS)**, which establish that all Italian Regions will organise technical training courses for the workforce active both in the public and in the private sector.

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Luxembourg

Although there are no specific initiatives identified, the telecentre project being introduced into all communes gives basic computer and internet skills to the general public, including those employed or seeking employment. In addition, the National employment plan 2001 has specific measures to promote lifelong learning, but they do not specifically refer to IT skills.

Portugal

The **National Employment Plan 2001**intends to improve people's employability, adaptability and skills and their capacity to participate in the knowledge society. It includes, among the others, an axis called "Life-long learning and Information Society continuous training".

Beside the National Employment Plan 2001, there are various public programmes/actions that emphasise the support to digital literacy through life-long learning. The **National Programme to Support Innovation**, whose main objective is to improve people's employability, adaptability and skills and their capacity to participate in knowledge society, tries to co-ordinate different actions included in Portuguese Operational Programme supported by III CSF and includes, among the others, a measure entitled "Develop life-long learning". **S@ber+ Actions**, an entity of Education Ministry supervised by the National Agency for Education and Training of Adults (ANEFA), has recently implemented a general public enquiry on life-long learning.

Spain

The article 4 of the **LEY 6/2000, por la que se Aprueban Medidas Fiscales Urgentes de Estímulo al Ahorro Familiar y a la Pequeña y Mediana Empresa**, foresees tax exemptions for companies providing ICT training/retraining of their employees.

UK

The **Learning and Skills Act** aims to promote training courses for employees and sets out the formation of the Learning and Skills Council and the Adult Learning Inspectorate who primarily support training for post –16.
In UK there are incentives for employers to get the work force on training schemes.

National "Umbrella" Action Plans Or Initiatives Supporting "The Increase Of Information Technology Training Places And Courses" for workers: Country Profiles

Austria

The *focus area No.5* of the **eFit Austria Continuous Training Initiative** (June 2001- December 2003) addresses the objective to improve the conditions for IT continuous training in Austria. It includes measures aimed to facilitate life-long learning by improving educational infrastructures (especially by setting up a network of centres of excellence for adult education and training), to support open and flexible learning forms in adult education by using ICT, to diversificate and to raise the number of IT training courses offered by the Public Employment Service and to encourage IT training for women.
Funding: 22 million Euro for 2002 and 36 million Euro for 2003. This is about 50% of the total cost of the initiative. The other 50% has to be raised by the participating organisations and institutions, by the municipalities or by the Länder.

Denmark

The **Denmark's strategy for Education, learning and IT** is an overall strategy that covers everything from primary to further education, while the **dk.21 - En ny stragegi for dansk erhvervspolitik - .dk.21 - A new strategy for Denmark's industrial policy)** is aimed at creating a framework for how Denmark is going to handle the challenge of the global knowledge economy without losing the fundamental values.
Finally, the **Reform af offentlig voksen- og efteruddannelse - Reformation of public adult and further education** intends to offer relevant further education to all adults with a low level of education.

Finland

The Plan **Citizenship skills in the Information Society** (2000-2004) aims to define skills needed, to encourage and motivate people to attend training courses and to create co-operation networks with the private organisations.
Funding: 7.5 million Euro per year (on average)

France

The **CISI – le Conseil Interministeriél de la Société de l'information- module d'initiation à Internet pour les demandeurs d'emploi (**2000-2002) intends to provide 1.2 million unemployed people with IT training sessions by 2002.
Funding: 150,000,000 Euro (Government is financing 50% of the equipment of training centres for apprentices).

Germany

The **Action Programme "Lebensbegleitendes Lernen für Alle" – Life-long learning for all** is aimed at promoting training for using innovative technologies, including training for IT professionals. It also includes elements dealing with the preservation and improvement of vocational educational opportunities for young people.
The **Research and Development Programme "Lemkultur Kompetenzentwicklung"- Culture of Learning and development of competence (**2001-2007) is intended to build up efficient ongoing learning structures, paying particular attention to the promotion of the participation of women in the Information Society. Funding: 35 million DM.
Furthermore, within the framework of the **Immediate Action Programme** adopted by the Federal Government and the representatives of the companies involved in ICT to meet the need for IT specialists in Germany, businesses have agreed to develop a plan for further in-service training internet relevant technologies in companies also involving older workers.

Italy

Within the **e-Government Action Plan**, the **Chapter 13 "Training Actions"** aims to raise the level of competence in the use of IT both for those who already have some basic skills and for those who have no experience with computers, to increase the productivity of all those who need to work with computers, to achieve a higher return on investment in IT and, finally, to provide skills that enable anyone, regardless of schooling level and type, to be part of the Information Society.
This Action Plan is devoted only to public employees. Funding: 142,000,000 Euro (129,000,000 Euro for basic training and 13,000,000 Euro for specialised courses).

Luxembourg

In the eLuxembourg Action Plan there is a strong emphasis on broad education measures relating to ICT aimed not only at the working population but also at individuals entering the job market. This can be seen by the state funded Internetstuffen (telecentre) training programme, consisting of basic computer and Internet training.

Portugal

The **Labour, Training and Social Development Operational Programme, Axis 1, measure 5 and PRODEP III**, (2001-2006) intends to promote and stimulate the access to ICTs and their use in the vocational training courses. It is particularly focused on unemployed people.

Spain

In Spain two Programmes are intended to provide ICT training courses: the Programme **Formacion Ocupacional en Nuevas Tecnologias** (Employment training in new technologies) and the Programme **Formacion Continua en Nuevas Tecnologias** (Continuous training for new technologies). But while the former concerns training courses for unemployed people, the latter aims to provide training courses for employees.
In the period 2001-2003 these two programmes will receive, respectively, 30% and 40% of the permanent training actions funds financed by the Ministerio de Trabayo y Asuntos Sociales (631,062,710 Euro).

Sweden

The Development of IT skills Action Plan (2001-2002) has as its main purpose to ensure that everyone in Sweden has access to IT technology.

UK

The main objective of the **UFI – Individual Learning Accounts (learndirect)** consists in giving an 80% discount for computer literacy training through individual learning accounts and in having by the 2002 1 million Individual Learning Accounts open. *Learndirect* provides access to innovative and high quality courses, over 80% of them on-line, and will enable people to fit learning into their livesUfl's priority areas for its first few years include information and technology skills, basic literacy and numeracy, business and management skills for small and medium sized businesses, and four industry sectors.
Funding: 24,000,000 Euro (this money is for the first 100,000 learners doing computer training courses; each learner gets a government contribution of £150).

3.2.2. Diffusion of the European Computer Driving Licence

The European Computer Driving Licence (ECDL) was created to improve the level of basic knowledge about Information Technology and competence in use of personal computer applications in Europe and internationally. It is a standard certification procedure of basic IT skills, internationally accepted. It can simplify employment procedures by assuring the employers that applicants and staff have the necessary level of knowledge and competence to use common computer applications.

The ECDL is based on a series of tests defined by a single agreed Syllabus. Candidates entering the process receive a European Computer Skills Card, to record the results of the tests. After passing successfully four tests the candidate receives an ECDL start card. Passing all seven test levels leads to receive the ECDL.

According to the ECDL foundation, the organisation delegated to promote and coordinate the development of the ECDL concept, at any one time two thirds of candidates achieve the Start level and one third complete all 7 modules obtaining the licence. Candidates have up to 3 years in which to complete the programme. There are approximately 8,000 test centres in Europe and about 300 are added to the global network each month.

The programme is recognised in 54 countries by almost 1.5 million participants worldwide, of which 22 and almost 1.2 million respectively are in Europe. The number of candidates that have joined the programme is rising very fast with almost 50% having joined since last July.

The following table shows that in Scandinavia, UK and Ireland the ECDL holders are approaching the 100,000 mark, while in Italy and Austria there has been a strong increase in the last months with a high number of candidates entering the process. In the other countries ECDL holders are only a few thousands, even if the available data on candidates entering the process show a fast increase. The numbers seem especially low for France and Germany, given the size of their population. In Spain and Belgium the ECDL seems to have only a very marginal presence, while for Greece, Luxembourg and Portugal data are not available. Overall the ECDL process seems to be better accepted and well rooted in the northern and anglosaxon countries. The eEurope action plan provided the additional momentum needed for ECDS take off in Italy and Austria, and is probably behind the recent increase of Skills Cards in the recent months.

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Tab. 16   **Number of ECDL granted in main European countries**

	ECDL Holders	ECDL Start Holders	ECSC holders**
AUSTRIA	17,951	n.a.	66,055
BELGIUM	100	n.a.	2,810
DENMARK	70,000	n.a.	174,346
FINLAND*	85,000*	n.a.	60
FRANCE	3,700	3200	28,450
GERMANY	17,465	4928	83,024
GREECE	n.a.	n.a.	10,972
IRELAND	80,000	n.a.	142,034
ITALY	30,000	n.a.	172,379
NETHERLANDS	4,964	n.a.	24,039
SPAIN	200	n.a.	290
SWEDEN	120,000	n.a.	345,120
UK	94,000	n.a.	261,770
TOTAL	**523,380**		**1,311,349**

** cumulative data 30 September 2001 from ECDL Foundation
* Holders of the Finnish Computer Driving Licence introduced in 1994. Finland adopted ECDL from December 2000.
Legenda
ECDL holders = people who have passed all 7 ECDL modules tests
ECDL Start holders = people who have passed the 4 basic ECDL modules tests
ECSC holders = European Computer Skills Cards holders who have started the process to achieve the ECDL
Source: SIBIS consortium, September 2001

3.2.3.   Support of flexibility in the workplace and telework

Action 5.4
Support greater flexibility in the workplace, e.g. teleworking and part-time working, where appropriate through agreements by Social Partners and backed up by Member States.
Deadline: 2001

Improving the flexibility of the labour markets is a goal underlined by the European Union 2001 Employment Guidelines policies, as a way to maintain the momentum in jobs creation reached in 2000 and to achieve the benefits expected from IST adoption. Since labour markets structure and policies differ markedly among the Member States, SIBIS survey focussed on the diffusion of telework policies as a common element providing comparable evidence of the level of innovation in the different labour markets. Available data show that up to the year 2000 approximately 5.6% of EU workers used telework, although significant differencies existed between Member States. Denmark was first with 17.6% of workers teleworking regularly or occasionally, probably because of a combination of a supportive legal environment, favourable tax measures and a positive social framework. The rapid introduction in Denmark of framework agreements between the social partners, which make specific and generous provision for teleworking and cover most of the employed population, has driven telework diffusion especially among managers.

SIBIS analysis shows that the promotion of telework does not seem to be a central goal for most countries labour policies. Approximately half of the Member States have specific measures promoting telework; besides Denmark and Germany, where a favourable legal framework is fully implemented, significant progress has been achieved in Finland and the Netherlands. France, Portugal and Italy have more recent measures (in Italy only for public employees) while Greece is planning a specific law.

Tab. 17   Existence of policies supporting telework

	Policy Progress	Policies supporting telework
Austria	?	
Belgium	?	
Denmark	☑	■
Finland	●●●	■
France	●●	■
Germany	☑	■
Greece	●	▲
Ireland	?	
Italy	●●	■
Luxembourg	?	
Netherlands	●●●	■
Portugal	●	■
Spain	?	
Sweden	?	
UK	?	

■	=	existing
▲	=	planned
?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

Measures supporting telework: country profiles

Austria

There are no particular laws in Austria concerning telework; however new legislative measures have been invented or are under discussion that will elevate the flexibility and mobility of the workforce to internationally common levels. In particular, the **Ministry of Economic Affairs and Labour** has established a working group on "e-employment and skills" that proposed a number of projects addressing critical issues concerning skills development and work organisation (teleworking, social standards in the New Economy, working hours and flexibility etc.). The eEurope Action Plan-Implementation in Austria (31st July 2001) points, among other activities, at pilot trials by 3 federal ministries to introduce telework in public administration and model work contracts for teleworkers provided by the trade unions.

Belgium

Belgian authorities are looking at the potential of e-work to help solve problems such as the road traffic congestion, the high levels of unemployment and the shortage of ICT personnel, but although a law on home-working has been in force since 1997, a law specifically concerning telework hasn't been enacted yet.

Denmark

In Denmark the government typically promotes flexible labour market policies; it has launched the **Digital Denmark** national programme that aims to support and enable social partners to set in place telework framework agreements at the workplace.

Between 1996 and 1999, the **European project Telework Online DK** was aimed at spreading people's awareness about telework and new ways of organising work.

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Finland

In Finland the **Telework Theme Group** has been created with the aim to promote eWork and to inform people about its potential. In 1995 the Telework Theme Group launched a project called Virtual Network knowledge and skills, which was aimed at increasing people's skills and promoting employment and regional prosperity. Funding: about 8.5 million Euro since start.

The Finnish legal system does not explicitly encourage eWork, nor there are legal obstacles to its development.

France

In France telework is not taking off at the same rate as in other European countries: a lot of executives agree on the interest of telework, but very few launch telework initiatives within their establishments. This is perhaps partially due to the lack of specific laws stimulating employers to introduce telework.

The **Comité Interministériel pour la Societé de l'Information** on 17th July 2000 devoted 4 billion FF to reduce the digital divide, covering all areas of the information society included telework (even if not separately cited).

Germany

The Federal Government launched in 1996 the Initiative Telearbeit der Bundesregierung - Telework Initiative, in order to increase people awareness about telework.

Between 1997 and 1998 the Federal Government developed the Plan Telearbeit im Mittelstand – Telework in SMEs, with the purpose to motivate SMEs to implement telework. Funding. total budget of approximately 11 million Euro.

Currently the Plan Datensichere Telearbeit i kommunalen Verwaltungen (DATEL) (1999-2001.) – Secure Telework in Public Administration supports the implementation of telework in Public Administrations. Funding is approximately 1.3 million Euro.

Besides the plans described above, in Germany there are several initiatives at the federal level aimed at motivating industries and businesses to become familiar with telework and get some guidance for implementation (i.e. COALA, On ForTe and others).

Greece

Provisions in the **Operational Plan of Ministry of Employment** and Social Affairs planned for 1st semester 2002.

Ireland

In Ireland the **Plan e-working in Ireland** – Code of practice by the department of Science, Technology and Commerce intends to provide a code of practice relevant for teleworking that is endorsed by the main social partners (employers and Trade Unions organisations). The main target are first and foremost employers who are encouraged to introduce e-working as a flexible option. The Irish e-working Code of Conduct is not a legislation itself, but it is based on Irish employment legislation and gives a nationally accepted framework to companies' e-working policies.

Italy

Telework is one of the innovative ways of working promoted by **CIPA , Cohesion and Innovation in Public Administration** (1998-2002) a programme targeted to public employees, especially those of less favoured regions. CIPA includes also a database of telework initiatives. Funding: 23 million Euro (75% devoted to regions objective 1 and 25% to objective 2 and 5bis) plus 26 million Euro in addition to Regions objective.

The Netherlands

The Plan Flexibel Werken of Telewerken, launched in 1997, is specifically aimed at stimulating telework, in order to save costs and to achieve higher productivity.

UK

In the United Kingdom there are no national policies or initiatives for teleworking, although there are the Telecottage Association (TCA), which is dedicated to the promotion of teleworking, and a large number of teleworking pilots and full schemes being run by companies and public authorities according to their own needs.

3.2.4. Public Internet Access Points (PIAPs) in European countries

Action 5.6
Set up public Internet access points in public spaces and establish multimedia telecentres in all communities providing access to training and e-work facilities, where appropriate using the Structural Funds.
Deadline: 2001

The diffusion of Public Internet Access Points (PIAPs) is still limited in many countries. In most countries PIAPS are located in public libraries, with the objective to extend the service to all existing libraries (not yet achieved though). In Denmark for example the law states that all libraries must have public access points. The UK and France have plans to triplicate PIAPS in libraries within the end of 2002. Italy has launched a plan to transform public libraries in digital libraries with PIAPS (see case study on Mediateques). Finland is the only country where PIAPS are mostly created by private organisations. Only a few countries however include ICT training in their PIAPS plans: France, Spain, Portugal, UK.

Some countries are extending the establishment of PIAPS to other services from libraries: for example Austria is equipping the Public Employment Agencies and Portugal plans to equip postal offices, government agencies and other public organisations.

Tab. 18   Public and Private PIAPS - Status

AUSTRIA	342 PIAPS
BELGIUM	601 PIAPS
DENMARK	781 PIAP
FINLAND	2380 PIAPS
FRANCE	1603 PIAPS
GERMANY	4700 PIAPS
IRELAND	590 PIAPS
NETHERLANDS	1050 PIAPS
SPAIN	989 PIAPS
UK	1763 PIAPS

Source: ESDIS 2001

Tab. 19   **PIAPs penetration in Europe, 2001** (penetration on total population)

PIAPs Penetration in Europe per 1000 inhabitants (2001)

Country	Value
Austria	0,04
Belgium	0,6
Denmark	0,15
Finland	0,46
France	0,03
Greece	0,01
Germany	0,06
Ireland	0,17
Neherlands	0,07
Spain	0,11
Sweden	0,11
UK	0,03
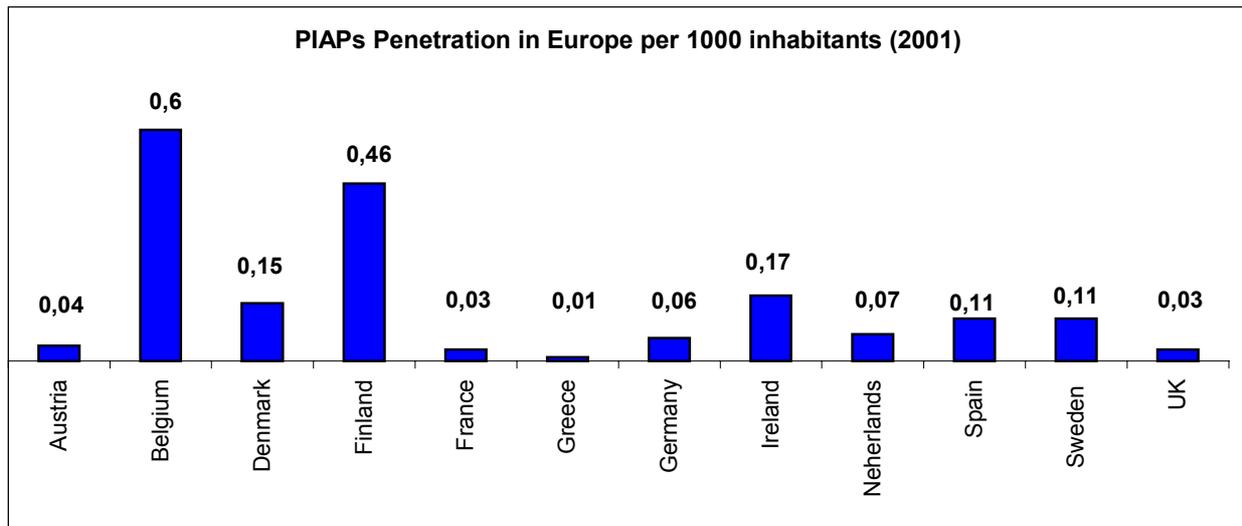
Source: ESDIS, February 2001

Public Internet Access Points (PIAPs): Country Profiles

Austria

In Austria there are 342 Public Internet Access Points (source ESDIS, 7 February 2001).

PIAPs are mainly implemented and maintained by (semi-) public providers (as public libraries, offices of public employment service, youth advice&service centres) and by commercial providers (as Internet Cafés, youth hostels).

In Austria the effort for the diffusion of PIAPS is devoted to the implementation of Internet access terminals for public employment services, to regional centres for training and education, to increase the number of online libraries and advanced ICT networks in schools.

Successful project:

Internet Access for people seeking employment at the offices of the Public Employment Service (AMS – Arbeitsmarkservice)

This project is offering AMS customers Internet access free of charge in most of its regional offices (access to AMS database, to guidelines, to special services and to external resources for employment). 120 terminals have been implemented by end 2001.

Denmark

In Denmark there are 781 PIAPS (source ESDIS, 7 February 2001). Almost every education establishment and, as stated by the law, all libraries have public internet access points.

Successful project

Personlig internetadgang

The purpose of this project, started in 2001, is to provide Internet users with a personal profile that can be used in contacting local authorities, unions, etc.

Finland

Public Internet Access Points in Finland are 2380 (source ESDIS, 7 February 2001).

Public organisations don't see the implementation of PIAPS as a priority in Finland. Some private PIAPS are available in airports, hotels, etc.

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France

In France Public Internet Access Points are 1603 (source ESDIS, 7 February 2001)
The French government foresees a growth of Public PIAPS in the next two years: by 2003, 7000 PIAPS are expected to be available. Within the implementation of the ECDL scheme, 2500 new digital public spaces will open soon, in order to offer free ICT training together with an additional scheme for job seeker to gain basic computer skills.

Successful project: Cyberlocal
This project, started in January 2001, will increase the diffusion of the Internet among the public.

Germany

Public Internet Access Points in Germany are 4700 (source ESDIS, 7 February 2001).
Successful project: **Webmobile für NRW**
This initiative is providing PIAPS for young people living in rural areas. It was started in 1998 with funding of 200,000 Euro annually.

Ireland

Citizens access the Internet from public libraries as well as from PIAPS provided by government/civic offices. Most private PIAPS have been set up by ESAT, the second largest telecom operator.

Successful project:

Branching Out – A new Public Library Service (1999 –2002)
This project is improving ICT infrastructure in libraries

Italy

In Italy there are 175 Private PIAPS, basically Internet Cafés. A public funded project to create a network of mediateques - multimedia libraries with PIAPS - has been launched in Southern Italy (see following box on project Mediateca 2000).

Netherlands

In the Netherlands there are 1050 PIAPs (source ESDIS, 7 February 2001).
Online libraries are 1000 and at least 850 of them are PIAPs.
Successful project: **Government-Citizen Project (**1998 - 2000)
The goal of the project is to improve accessibility to the Internet by creating PIAPS. Funding: 6,800,000 Euro.

Portugal

There are different kinds of PIAPs currently in the implementation phase:
- Cyber Coffees and PIAPS in Post Office stations
- Internet access in hotels and similar
- Digital Show Rooms with skilled staff and providing free access
- Cultural and scientific associations of the Science, Technology and Society Network (RCTS).

Successful project:
Tomar Municipality – Internet Space (April 2001–December 2001)
The final goals of the project are: to give access to new technologies to the disabled, and to help the training and certification processes of ICT users. Funding is 155,000 Euro.

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Spain

The PIAPs currently available are 989 (source ESDIS, 7 February 2001).
Government and Comunidades Autonomas are supporting the implementation of public Internet Access Points in public libraries and towns halls.

Successful project.

Las Bibliotecas Publicas Españolas, Centros de Informaciòn al Ciudadano en el Siglo XXI (2001-2003)
This initiative is implementing public Internet access points in Spanish public libraries. Funding: 3,515,921 Euro

UK

In UK there are 1763 PIAPs (source ESDIS, 7 February 2001).
62% of libraries in the UK are currently connected to the net; they should reach 100% by the end of 2002. In addition to them, there are many ukonline centres across England. 6000 access points should be operative by the end of 2002, including about 3000 libraries, community based centres and ICT training organisations.

Case Story: Italy - *Action Plan Mediateca 2000*

Mediateca 2000 was launched in 1997 as a national initiative implemented at the local level. The action plan Mediateca 2000 is aimed at developing an innovative concept of multimedia library. The initiative involved Italian municipalities in setting up a network of mediateques, by equipping them with the necessary infrastructure and providing their staff with the necessary professional skills.
The project is articulated in 2 phases:
- The first one, funded by CSF and other national funds set up several mediateques in the regions of Southern Italy. In this phase, 420 mediateque operators were trained.
- In the second phase, currently ongoing, the mediateques are being connected in a network extended to similar multimedia libraries based in northern Italy. It is estimated that – so far – about 70 Southern libraries have been technically equipped and are now able to offer internet access to their users. The new mediateques management is delegated to cooperatives formed by the trained staff. The second phase of the project implies an additional training programme, as well as support measures for the start-up cooperatives created to manage the mediateques. So far, 25 co-operative companies have been set up.

The Mediateca 2000 action plan facilitates significantly ICT training of all users and provides public access to the internet from the multimedia stations set up in every library. The "Action Plan for the Information Society" extends the Mediateca 2000 Plan to the next years.

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3.3.   Participation for all in the knowledge-based economy

Action 6.1 - Policies to avoid info-exclusion will be more effectively co-ordinated at European level through benchmarking of performance and exchange of best practices between Member States.
Deadline: 2001

Action 6.4 – Adoption of the Web Accessibility Initiative (WAI) guidelines for public websites
Deadline: end 2001

In principle, the Information Society Strategies of all Member States include the prevention of info-exclusion among their goals and this principle must be respected by all public initiatives. Many IS initiatives are meant to contribute indirectly to its achievement: for example, the actions to connect schools to the Internet, in order to provide access for all children on an even basis, or the implementation of public services online with interfaces adapted for access by all including the disabled. Additionally, several Member States have launched specific measures to support information infrastructures' access and usage by the disabled. The policy measures surveyed by SIBIS can be divided as follows:

- Specific measures to prevent info-exclusion have been launched by five countries: Austria, Belgium (specific for e-government) Denmark, the Netherlands and Portugal. Spain has implemented a framework agreement with the Disabled Association.
- General laws for the participation of the disabled, which include some actions to facilitate disabled access to information infrastructures and less often to avoid info exclusion, exist or are planned in four countries (Finland, Germany, Greece, Italy) .
- Finally, two countries (France and Ireland) have chosen to address the problem through guidelines for government agencies and private organisations.

The implementation of Web Accessibility Initiatives has made considerable progress in the last year. Most countries have already implemented it and the few others plan to do so (Austria, Finland, Germany and Greece). However implementation means that the guidelines for Web accessibility have been approved by the country and are recommended to government agencies and private parties. Results are uneven as it is observed in France, because web makers are actually free to implement or not the recommendations. This is probably a gradual process by which web sites will adapt to the highest usability standards in time but in most countries it just started.

Tab. 20   **Action plans/initiatives against the "info-exclusion" of physically and mentally disabled and for Web Accessibility**

	Initiatives against disabled info exclusion	Policy Progress for WAI implementation	Implementation of WAI
Austria	■	●	▲
Belgium	■	●●	■
Denmark	■	●●●	■
Finland		●	▲
France	■	●●	■
Germany		●	▲
Greece		●	▲
Ireland	■	●●●	■
Italy		●●●	■
Luxembourg	n.a.	?	
Netherlands	■	●●●	■
Portugal	■	●●●	■
Spain	■	●●●	■
Sweden	n.a.	●●●	■
UK	■	●●●	■

? = no explicit activities identified
● = activities planned, but not yet started
●● = activities launched, but no progress yet visible/measurable
●●● = activities launched and underway with some measurable progress already achieved
☑ = mission fully completed, i.e. objective has been realised and is documented
Source: SIBIS consortium

Policies against Info-Exclusion and Implementation of Web Accessibility Initiative: Country Profiles

Austria

National policies against info-exclusion:
Accompany measure **"Improved Access to ICTs for people with disabilities"** within the Employment initiative of the Federal Government for People with Disabilities.
This measure, approved in December 2001, intends to support people with disabilities facing professional difficulties, by helping them in the transition from school to employment, and in keeping their job, etc.
This accompany measure is funded by the Federal Ministry for Social Security and Generations from the "Behindertenmilliarde", a fund of about 73,000,000 Euro dedicated to support people with disabilities.

Web Accessibility Initiative
The Working Group on the "**Web-based applications**" within the IT Co-ordination of the Federal Government has been put in charge of investigating the WAI implementation. The issue is under consideration, but no definite decisions have been taken yet.

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Belgium

National policies against info-exclusion:
The federal government's "**Information Society and E-government Plan**", approved in October 2000, supports access to information networks by disabled persons, particularly within the future e-government projects.

Denmark

National policies against info-exclusion:
Freedom to Choose – an action plan for the IT use of disabled approved in 1996 – aims at making the information society accessible by people with handicaps.
Another initiative worth to be mentioned is "**Best on the Net**". This project, launched in the period 2000 – 2002, will make an annual evaluation of public sector websites and collect their users' opinion. The final goal of the initiative is to determine whether the service given by public sector websites is really satisfactory. Among the evaluation criteria, "Best on the Net" will consider the web sites' ability to meet the needs of the mentally and physically disabled.

Finland

National policies against info-exclusion:
A policy measure was approved in November 1999, with the specific aim to create pre-requisites for the employment of persons with disabilities.
Web Accessibility Initiative
In Finland there are currently plans to implement WAI.

France

National policies against info-exclusion:
Agency for Information and Communication Technologies in Public Administration, produces guidelines on how to make the Internet accessible to physically and mentally disabled. Documentation includes: recommendations from the W3C on the web content accessibility, a white paper from Braillenet on a more accessible web, a free braille surf navigator, tools to verify web accessibility, site rating tools and best practices from other countries.

Web Accessibility Initiative
Although the implementation of the WAI is currently being undertaken, very few sites reach the standards set by the W3C consortium. A paper issued by the French government in 1999 states that "people responsible for web sites will pay particular attention to provide access to information to all Internet user, notably people with disabilities, blind users, visually impaired or hearing impaired".

Germany

National policies against info-exclusion:
The draft Bill for the "**Law for Mainstreaming Handicapped People**" by the Federal Ministry of Labour and Social Affairs is currently under discussion; and is intended to go into effect in 2002. Paragraph 10 is focussed on "Information technology without barriers": in particular, it requires public sector bodies to create websites suitable for disabled people access. Moreover, the Federal Government is working towards supporting commercial suppliers to create websites suitable for disabled people.

Web Accessibility Initiative
The WAI has not been implemented yet. Nevertheless, the draft bill "Law Mainstreaming Handicapped People" by the Federal Ministry of Labour and Social Affairs , currently under discussion, sets – among the other goals - the creation of websites suitable for disabled people. This draft bill is expected to come into force in 2002.

Greece

National policies against info-exclusion:
The issue of physically and mentally disabled info-exclusion is one of the aspects dealt by the "**Information Society Operational Plan of Ministry of Labour and Social Affairs**", currently under discussion.

Ireland

National policies against info-exclusion:
IT Accessibility Guidelines for Service Providers, approved in 2001. These guidelines aim at making electronically delivered services accessible to disabled citizens. They cover a wide range of services: computer software, mobile phones, web sites, etc.

Web Accessibility Initiative
The Accessibility Guidelines include directions to implement the WAI in public sector websites, including various tips for enhancing general user friendliness of the websites (e.g. common look and feel, FAQs, usage of the HTML, etc.). In particular, public organisations have been recommended to adopt universal design concept and test their site through the "Bobby test " quality criteria for enhancing their accessibility.

Italy

National policies against info-exclusion:
The "**Government Action Plan for Disabled Policies 2000 – 2003** " approved in July 2000 does not foresee specific actions preventing disabled info-exclusion. Nevertheless, it affirms the principle that Government will prompt the development of new telecommunication services finalised to the integration of disabled people in the Italian society and economy.
Web Accessibility Initiative
In March 2001 the Italian Government approved a directive on web accessibility and usability of Public Administrations websites. This directive directs Italian central and local public administrations to apply WAI guidelines - in line with the W3C consortium guidelines - and the related verification procedures within their websites. The Italian Government has been the first in Europe to introduce the WAI: its website now meets the W3C requirements while the Ministry of Social Affairs's portal has received the "Bobby Approved" label.

Netherlands

National policies against info-exclusion:
DrempelsWeg, approved in November 2000, is a nation wide initiative against info-exclusion of disadvantaged people. It has been launched with the aim of improving communication possibilities for disabled people. Funding for 2001 is 2,268,000 Euro.

Web Accessibility Initiative
The Web Accessibility Initiative has not been implemented officially in the Netherlands. However, the WAI guidelines are widely taken into consideration both at a political and at an economic level. The Dutch government has taken several initiatives and promoted projects (in prevalence within the DrempelsWeg initiative) to stimulate the implementation of the WAI rules at a large scale. Moreover, since the year 2000, the Government has adopted an active role, setting up several research activities and a national organisation aimed at stimulating – and assisting – the implementation of the WAI. Accessibility is one of the procurement conditions for websites and a national helpdesk has been recently set up to offer free advise to organisations.

Portugal

National policies against info-exclusion:
The **National Initiative for Citizens with Special Needs** was approved in August 1999, with the objective to contribute to the complete use of information and communication technologies by citizens with special needs as a mean of social integration. The implementation of this initiative is transversal to most sectors – education, employment, training and health – and is managed by the Ministries of Labour and Solidarity, and of Science and Technology. The main support to the initiative will be provided by the Operational Programme for Information Society.
Within the axis 4 of the **Operational Program for Employment, Training and Social Development (OPETSD)**, which is aimed at improving the employability and the economic and social integration of the more disadvantaged people and of groups having greatest difficulty in access to the labour market, there's a measure called "To promote a labour market opened for all". Its main purpose is to give disabled people the possibility to take advantage of new technologies for entering the labour market.

Web Accessibility Initiative
The Web accessibility for Public Administration sites has been regulated in August 1999 according to WAI directives. After that, the Ministry of Science and Technology's Access Unit (Unidade Acesso) has prepared and edited the Access request (Requisitos de Visitabilidade) with basic level of WAI rules.
The Ministry of Science and Technology has recently created the "Citizens with Special Needs Solidarity Network" devoted to supply hardware, Internet access and web pages creation facilities for institutions and citizens with special needs. About 70 institutions are now connected.

Spain

National policies against info-exclusion:
"**Acceso a la Sociedad de la Información**", included in "Plan Info XXI", for the period 2001 – 2003 is not specifically focussed on preventing info exclusion. Nevertheless, it targets the promotion of tools for supporting access to Information Society from disabled people; the promotion and development of "e-learning" channels suitable to disabled people and of a gateway facilitating access of deaf people to the ITC. Funding is 7,090,000 Euro.
Worth to be mentioned is also the "**Agreement between the Ministerio de Ciencia y Tecnología and the CERMI**" (Comité Español de Representantes de Minusválidos) that took place in May 2001. This agreement has been made with the final goal to support:
- the development of IT tools and services designed with the concept of "serving everyone";
- technologies suitable to adapt already existing products in order to compensate for the loss of a bodily function;
- more in general, specific programs suitable for disabled people and the definition of Protocols and Regulations regarding the access by all users to Information Society products and services.

Web Accessibility Initiative
In 2001 the Spanish Association of Normalisation (AENOR) has published AENOR/CTN 153, with **"Technical Aids for People with Disabilities".** Since August 2001, the Spanish administration's website is accessible from people with disabilities.
Moreover, the adoption of the WAI guidelines in civic web sites is a main focus of the "Agreement between the Ministerio de Ciencia y Tecnología and the CERMI".

UK

National policies against info-exclusion:
The **"UK Online Action Plan"** has been developed by the e-Envoys' Office, in order to provide UK Online learning centres with facilities to overcome information exclusion, through access and learning facilities addressed both to the disabled and to all participants.
The "UK Online computer training" is a one-year national initiative providing free basic level computer training. 35% of participants had long term health problems or disabilities.

Web Accessibility Initiative
WAI has been implemented on Government sites in 2001 but there has been very little promotion outside the public sector. Nevertheless, the there is a specific regulation on web accessibility in UK. In particular, Section 21 of the "1999 UK Disabilities Discrimination Act" places a legal duty on all bodies to make their information accessible to users with disabilities.

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4. Evaluation of eEurope actions: Stimulate the use of the Internet

4.1. Accelerating e-commerce

4.1.1. Self regulation and alternative disputes resolution schemes

Action 7.2 - Boost consumer confidence in e-commerce in partnership with consumer groups, industry and Member States. Promote alternative dispute resolution, trust marks and effective codes of conduct by working with stakeholders to develop general principles and by creating appropriate incentives. An "online e-confidence forum" managed by the Commission will engage as many stakeholders as possible in this process. Commission and Member States to further develop EEJ-net (European Extra-Judicial Network) linking alternative dispute resolution systems and launch pilot projects on a European level through the IST programme.
Deadline: end 2000

Action 7.3 – Commission to stimulate increased flexibility in e-commerce regulation by building more on co and self-regulation, inter alia through co-operation with relevant business groups such as the Global Business Dialogue.
Deadline: end 2000

The scarce availability of secure and efficient dispute resolutions mechanisms is considered one of the main reasons of the slow up take of business to consumer e-commerce in the EU. Moreover, the cross-border nature of the Internet and electronic transactions still urgently needs a coherent regulatory framework all over the EU countries.

The eEurope plan points to self-regulation a possible solution to this problem and fosters the development of codes of conducts applicable to e-commerce transactions, supporting on line alternative disputes settlement mechanisms.

The SIBIS survey gives a picture of the development of "codes of conducts" and "self regulatory mechanisms" enforced in the EU countries so far.

Some of the initiatives highlighted operate on an international context.

In 2000 the Portuguese presidency launched the European Extra-Judicial Network (EEJ-Net) , a sort of follow up of the Commission Communication of "Out of court settlement of consumer disputes" presented in 1998. EEJ-Net will give consumers access to alternative disputes resolution schemes in other member states through National Clearinghouses. National Clearinghouses act as one-stop national contact points, provide information about the national bodies responsible for out of court settlement procedures, act as information resources for consumers wishing to access to disputes resolution systems in a EU countries. The British Government demonstrated a strong commitment on this issue, setting among its priorities the creation of a clearing house in the UK. On this purpose, the British Department for Trade and Industry has reached an agreement with NACAB (Citizens Advice Bureau) that will form the UK clearing house.

The Webtrader Code is another cross-border initiative applicable on voluntary basis by companies selling their products online. It is implemented by a network of consumer organisation active in 6 countries: Belgium, Spain, France, Italy, the Netherlands and the UK. This initiative, supported by the European Commission, has developed the "Web Trader Logo" that indicates the commitment of the actors participating to the network to respect consumer's right in on-line transactions. In particular, this code – valid for those suppliers who voluntarily undergo the quality certification procedures - obliges its subscribers to undergo the settlement procedure organised by the Web Trader network.

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The SIBIS survey evidenced a growing interest by EU countries towards self-regulation issues: 7 EU countries have adopted a code of conduct regulating e-commerce transactions: Austria, Denmark, France, Germany, the Netherlands, Portugal and UK. Most of these measures were launched recently: only the Netherlands and Germany have launched self regulation activities during 1999, before eEurope.

Not surprisingly, consumer-and-industry associations are the most active in the promotion of self-regulation initiatives.

In Austria, Germany and the UK, public bodies play a key role in e-commerce self regulation activities. The German Chancellor co-ordinates Initiative D21; the Electronic Communication Bill gives the UK government the power to set up regulation schemes on electronic communication in case self-regulation fails.

Tab. 21   Availability of code of conducts regulating e-commerce transactions and of alternative disputes resolution schemes within the code

	Policy Progress Evaluation	Code of conduct on e-commerce transactions	Alternative dispute resolution system foreseen by the code of conduct
Austria	●●●	■	Yes
Belgium	●	▲	Yes
Denmark	●●	■	Yes
Finland	●●●	■	
France	●●●	■	n.a.
Germany	●●●	■	No
Greece	●	▲	n.a.
Ireland	●	▲	
Italy	●	▲	n.a.
Luxembourg	●	▲	
Netherlands	●●●	■	No
Portugal	●●●	■	Yes
Spain	●	▲	Yes
Sweden	●	▲	
UK	●●●	■	Yes

■ = existing
▲ = currently under discussion
?   =   no explicit activities identified
●   =   activities planned, but not yet started
●●   =   activities launched, but no progress yet visible/measurable
●●● =   activities launched and underway with some measurable progress already achieved
☑   =   mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

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Tab. 22   Which stakeholders have subscribed this code of conduct?

Country	Industry associations	Consumer associations	Retailers	Internet Services Providers	Others
AUSTRIA	X	X	X	X	X1
DENMARK	X	X	X	X	X2
FRANCE	X	X	X	X	
GERMANY	X	X		X	
NETHERLANDS	X	X	X	X	X3
PORTUGAL		X	X		
UK	X	X			

Source: SIBIS consortium

1   in Austria: Federal Ministry of Justice, federal Ministry of Economic Affairs and Labour
2   labour organisations
3   scientific research organisations

E-commerce self regulation: country profiles

Austria

Code of conduct on e-commerce
The **Austrian E-Commerce Quality Label** attests the will of Austrian companies – on a voluntary basis – to comply with a set of quality criteria when processing electronic transactions with consumers. Its main objectives are: to allow consumers to identify reliable online shops; to strengthen consumer confidence in e-commerce; and to establish a mechanism to solve disputes rapidly and efficiently through an out-of-court arbitration body. The Austrian E-Commmerce quality label was initially supported by the Austrian Chamber of Commerce (that provided the initial funding of 40,000 Euro for setting up the initiative) and the Federal Ministry of Economic Affairs , that initially contributed with about 30,000 Euro.
Bodies promoting e-commerce self regulation
The "**Internet Ombusdman**" is an institution managed by OIAT (Austrian Institute for Applied Telecommunications) in co-operation with VKI (Austrian Consumer Information Organisation). The VKI is Austria's leading consumer protection organisation, upholding the rights of the consumers and guaranteeing that they get legal recognition. The Internet Ombusdam provides information about new aspects of shopping on the Internet in order to give increased security for e-commerce by means of extensive information and quality standards. When problems arise, consumers and businesses can approach the Ombusdam directly.

Belgium

Code of conduct on e-commerce
The Federal Government has signed a convention with the Federation of Chambers of Commerce and industry professional associations, to conduct pilot projects of a code of conduct foreseeing alternative disputes resolution schemes.
Initiatives promoting e-commerce self regulation
Agoria – the major Belgian industry association including the ICT industry, has published in 2000 a self-regulation code of conduct. A similar initiative has been launched by **Fédération des Enterprises de Belgique** (FEB).

Denmark

Code of conduct on e-commerce
Retningslinier for E-handelsfondens elektroniske mærkningsordning, is a code of conduct introduced in February 2001, with the aim of supporting the development of e-commerce in Denmark through defining a common set of rules for the operators.

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Finland

Code of conduct on e-commerce
"**Consumer protection in distance contracts**" is an amendment to the Consumer Protection Act that went in force in June 2000.
This Act was implemented by the Ministry of Justice supported by industry organisations and a consumer rights protection organisation, in order to strengthen the consumer protection in e-commerce and other distance contracts. This regulation has been implemented together with other complementary laws such as Personal Data Act.
Initiatives promoting e-commerce self regulation
The **Finnish Direct Marketing Association** and the **Federation of Finnish Commerce and Trade** are particularly active towards the development of e-commerce self regulation schemes.

France

Code of conduct on e-commerce
The **Charter for Electronic Commerce** has the goal to encourage companies to subscribe a code of ethics when dealing with electronic transactions.

Germany

Code of conduct on e-commerce
"**Convention on the Identification of Providers in Electronic Commerce with Consumers**", approved in December 1999 focuses on the regulation of e-commerce and consumers protection. But this is only one out of the many codes of conduct in force in Germany. Each of them deals with different aspects of the e-commerce regulation; but no integrated code concerning *all* the aspect dealing with e-commerce has entered into force yet.
Initiatives promoting e-commerce self regulation
Initiative D21 is practising self-regulation by developing quality criteria of e-commerce providers. It comprises leading market sector companies and an advisory council, under the leadership of German Chancellor. In parallel with "Initiative D21" is active the team "**Ehrenkodex E-Commerce**" setup by the Federal Association of E-Commerce (Bundesverband E-Commerce). This workgroup focuses themes related to e-commerce; a team of the Bundesverband E-Commerce is planning joint activities with D21 Initiative.
Finally, it is worth to remember that - in Germany - schemes for alternative dispute resolution are often offered by private market providers, such as "Trustedshops".

Greece

Code of conduct on e-commerce
A code of conduct regulating e-commerce transactions is currently under discussion.

Ireland

Code of conduct on e-commerce
A set of rules about e-commerce transactions is currently under discussion. Moreover, Irish department of Trade, Enterprise, Employment and is planning to enforce the Electronic Commerce Directive 2000/31/EC by January 2002.

Italy

Code of conduct on e-commerce
Italian AIIP – Internet services providers association – is planning to issue a revised version of the first draft of code of conduct previously issued. The code – now operating among ISP on a voluntary basis – fixes basic rules regarding liability of ISP, intellectual property rights, and other aspects related to the provision of commercial services through the Internet.
The new draft will particularly focus on consumer privacy protection, spamming and unsolicited forms of advertising.

Luxembourg

In June 2001 has been launched a project which promotes security, confidence and information for users. In particular, the project will create a quality label, a code of conduct and implement an e-commerce observatory for Luxembourg.

Netherlands

Code of conduct on e-commerce

Model Code of Conduct for Electronic Commerce (the "**Dutch Code**"), issued in November 1999.

The initiative, supported by ECP.NL (Electronic Commerce Platform – Nederland) intends to provide a generic framework for a code of conduct, designed to increase trust in eCommerce. This measure proposes also a number of examples suitable to serve as building blocks in drafting a code of conduct.

Initiatives promoting e-commerce self regulation

ECP.NL is an independent non-profit partnership between players with an interest in fast introduction of e-commerce. Among the stakeholders participating to the initiative: users, suppliers, government agencies intermediary organisations and educational establishments.

Portugal

Code of conduct on e-commerce

Pro Teste DECO – Web Trader code has been promoted by DECO – Portuguese Consumer Association.

Spain

Code of conduct on e-commerce

The " Asociación Española de Comercio Electrónico" (AECE) is currently working on an ethical code for the regulation of e-commerce transactions. This initiative, supported also by the Agencia de Protección de Datos, has the principal aim to establish a procedure for dispute resolution. The stakeholders involved in this project are: industry associations, consumer associations, retailers as well as internet services providers.

Initiatives promoting e-commerce self regulation

The Spanish associations **AECE (Asociaciòn de Comercio Electrònico)** and **SEDISI (Asociaciòn Espanola de Empresas de Tecnologias de la Informaciòn)** are working also on the aspects related to the e-commerce self regulation.

Sweden

Code of conduct on e-commerce

In Sweden the Legislative Proposal by the Ministry of Industry, Employment and Communications: E-handelsdirektivet will implement the EC directive on e-commerce. Among the key relevant objectives, the regulation foresees systems for alternative disputes resolution.

Initiatives promoting e-commerce self regulation

Svensk Handel and **Handelns Utredningsinstitut** have undertaken initiatives to promote e-commerce policies and the development of common standards.

UK

Code of conduct on e-commerce

Tscheme Code of Conduct, approved in July 2000.

Initiatives promoting e-commerce self regulation

Tscheme is an independent no profit industry-led body set up to approve services and provide confidence in e-commerce. The initiative is supported by AEB – Alliance for Electronic Business. Tscheme is a voluntary framework for accrediting electronic trust providers. In the UK the main preference is for self regulation but, the Electronic Communication Bill gives the UK government the power to setup its own scheme if self-regulation fails to deliver.

In the UK is active **TrustUK**, a joint no profit venture between Alliance of Electronic Business and the Consumers' Association, endorsed by the UK Government to foster consumer trust in Internet trading through the approval of online codes of practice.

4.1.2.   E-commerce and SMEs

Action 7.5
Encourage SMEs to "Go Digital" through co-ordinated networking activities for the exchange of knowledge, best practices, e-commerce readiness and benchmarking. "Reference centres" could help SMEs to introduce e-commerce into their business strategies.
Deadline: end 2002

SMEs are often mistrustful towards the opportunities of developing e-commerce activities. The Commission has long manifested a particular interest in supporting their way to the digital economy and - in line with the eEurope Action Plan - launched in March 2001 the GoDigital initiative, specifically focussed on SMEs.

SIBIS considered a useful task to give a picture of the policy measures launched on a national level and specifically addressed to support SMEs in the development of e-commerce activities.
Basically, the SIBIS survey has confirmed a strong commitment by all the EU countries in support of e-commerce among SMEs.
With the exception of Austria, Belgium and the Netherlands - who are currently discussing similar initiatives - all the EU countries have approved at last one measure aimed at supporting e-commerce. Some out of these initiatives are specifically addressed to SMEs. Nevertheless, France, Germany and the UK have been the first to undertake an action in support of e-commerce on a national level, long before the launch of the eEurope Action.

Basically, it is extremely difficult to set a comparison among the approaches evidenced by the SIBIS survey, since there are relevant differences among their content and – in general – the context they're operating in.

Besides national level initiatives, there are several regional and local level initiatives.

On a local level Chambers of Commerce are particularly active. Some of the local initiatives foresee the participation of private partners, under with the sponsorship of public bodies.
The approach mainly applied by most of the local initiatives analysed is that of providing consulting services to SMEs in order to help them identifying their needs and defining their marketing strategy when undertaking e-commerce activities.

Tab. 23 **National and regional policies/programmes supporting SMEs to "go digital"**

	Policy Progress Evaluation	National umbrella action plans to support SMEs to "go digital"	Regional/local programmes supporting SMEs to "go digital"
Austria	●	▲	■
Belgium	●	▲	■
Denmark	●●●	■	■
Finland	●●●	■	■
France	●●●	■	■
Germany	●●●	■	■
Greece	●●●	■	■
Ireland	●●●	■	
Italy	●●●	■	
Luxembourg	●		
Netherlands	●●●	▲	■
Portugal	●●●	■	■
Spain	●●●	■	■
Sweden	●●●	■	■
UK	●●●	■	■

■ = approved

▲ = under discussion

? = no explicit activities identified

● = activities planned, but not yet started

●● = activities launched, but no progress yet visible/measurable

●●● = activities launched and underway with some measurable progress already achieved

☑ = mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

Policies in support of e-commerce among SMEs: country profiles

Austria

National policies

In autumn 2000, the Federal Ministry of Economic Affairs (BMWA) launched the **e-Business Initiative** and set up 7 expert work groups to develop suggestions for concrete measures and activities to promote the diffusion of e-business among Austrian enterprises. The expert groups submitted suggestions including: promotion of officially acknowledgeable authentication systems and of an e-security handbook for SMEs, launch of an integrated incentive package (e-biz for SMEs) and of the state prize "e-business award Austria". Support to data collection and studies on the new economy and of the action line "e-biz for clusters" – using the automotive cluster in Austria as an example.

Regional or local

eConsulting services to SMEs, an initiative promoted by WIFI (Wirtschaftsforderunginstitut, the branch of WKO Chamber of Commerce) offering vocational and further training courses.

TELEFIT Roadshow, promoted by the Chambre of Commerce with support of Austrian technology and communication providers. It offers information on how to effectively plan and launch a presence on the Internet. From September to December 2001 the TELEFIT tour will stop in about 40 locations all over Austria.

"**e-proFIT Roadshow** " is a pilot project by the Styrian Chamber of Commerce specifically addressing SMEs in order to demonstrate them how they can use e-business solutions for production, trade and commerce.

Other local activities have been promoted by regional branches of the Chambers of Commerce: **Go-2-Internet**, supported by the Chamber of Commerce Vienna and the **initiative E-Commerce for all** of the Carinthian Chamber of Commerce.

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Belgium

National policies
The **EIC Campaign**, co-ordinated by the Chamber of Commerce of Brussels, is currently under discussion.

Regional or local
On a local level are active Agence Wallonne des Télécommunications (AWT), Agoria (industry association) and UNIZO, an SME association.

Denmark

National policies
.dk21 – A new strategy for Denmark's industrial policy – Regeringens erhvervsstrategi .dk21 represents the strategy for the Danish industrial policy. The topic of e-commerce in SMEs is part of it.

Regional or local
IT Light House in North Jutland is a project aimed at increasing SMEs' information competence. The total funding of the project is approximately 200,000 Euro.

Finland

National policies
The NetMate programme operated on a national level during the period 1998 – 2000. It is now continued on a regional level.
This initiative, supported also by TEKES - National Technological Agency – was launched with the aim of increasing the knowledge and the use of electronic commerce among Finnish SMEs.

Regional or local
Regional **NetMate** initiatives.

France

National policies
The Mission for Electronic Commerce, launched in October 1997, deals with several aspects related to the e-commerce. Part of the mission of this policy was to encourage SMEs in the use of the Internet for commercial purposes.

Regional or local
In France operates the **Charter for Advice on the Electronic Commerce**, promoted by the Chambers of Commerce. It specifically addresses SMEs who are getting involved in electronic commerce. The Paris Chamber of Commerce launched a website to help SMEs to use ICT.
The French Ministry of Regions has regional activities for helping SMEs developing ICT.

Germany

National policies

Within the initiative **Centers of Excellence for Electronic Commerce** – Konpetenzentren fur den elektronischen Geschaftsverkehr - 24 regional Centres of Excellence have been created since mid 1998 to act as information centres in order to support SMEs in the introduction of electronic commerce. Funding is 4,000,000 Euro.

German Internet Prize (Deutscher Internet Preis) is awarded to SMEs that have developed innovative Internet applications. The focus of the contest changes from year to year: in 2001, the focus is on "logistics". The award covers the period 2000 – 2005. The prize is around 50,000 Euro every year.

Among the other initiatives, the **Internet Prize of German Handcraft** - launched by the Federal Ministry of Economics and Technology, with the aim to identify and promote the use of ICTs by the crafts – and **Electronic Commerce Network** (Netzwerk Elektronischer Geschäftsfverkehr), that   helps SMEs to include artisan businesses to use the Internet.

Regional or local

In Germany there are several initiatives active on a local level: **Promotion Programme IC Technology** (Brandeburg), **Kompri** – Promotion Project for the use of New Media (Saxony), **Electronic Commerce Offensive NRW** (North Rhine-Westphalia), **Innovation Prize 2000** – ICT (Hesse); **E-ComHamburg** - Initiative for Electronic Commerce for medium-sized Companies (Hamburg) and the **Programme supporting the use of ICTs** (Bremen).

Greece

National policies

The Programme **DIKTYOTHEITE** has been launched by the Greek government, with the aim of supporting training, to avoid digital divide among SMEs and helping them to familiarise in the digital era. The programme covers the period 2000 – 2004; funding is 130,000,000 Euro.

Regional or local

Programme Diktyotheite is implemented also in each of the 13 regional "peripheries" of the Greek state and run under regional industry-led consortia.

Ireland

National policies

E-commerce Awareness Business promotes awareness and take up of e-commerce among SMEs, particularly amongst those active in services sectors who depend heavily on telecommunications. The policy covers the period 1999 – 2000 and has been financed by EU Structural Funds.

Openup and **Empower.ie** have been supported by Department of Enterprise, Trade and Employment initiatives. Openup is a government resource for ebusiness initiative addressed to Irish SMEs in the manufacturing sector. It will accelerate the implementation of e-business strategies by using case studies of fast track companies that have successfully moved – part or all of – their business on the line environment. Case studies will be backed up by Industry experts outlining best practice methods of implementing e-commerce and – e-business. Empower.ie is a portal site that will allow Irish businesses to cost-effectively and efficiently create an online presence for their business.

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Italy

National policies

In April 2001, the Ministry of Industry launched a public call offering financial support to a selected number of e-commerce portals. The funding will support 60% of the ICT investment expenditure – ICT equipment, consulting services, personnel training – that will have to be developed and completed within 24 months. The selection will have a preference for consortia and associations of SMEs. The initiative is financed by the **FIT – Technological Innovation Fund**

The amount of the FIT is annually assigned by the Ministry of Industry. For the development of e-commerce, FIT will receive a funding to be allocated as follows: 73% to cover tax deductions for enterprises developing their business through e-commerce; 27% to grant ICT equipment investment funds to textile, shoe and clothing sectors enterprises that introduce relevant technological innovation within their internal organisation.

The **e-commerce Action Plan** identifies 7 areas of intervention to support the e-commerce in SMEs: training (ICT courses for 45,000 entrepreneurs, 100 multimedia centres for technical assistance by Chambers of Commerce); training programme of 3,000 specialised trainers and incentives to enterprises creating 300 vertical portals and high-technological content start-ups.

The Ministry of Foreign Commerce launched in February 2001 the "**Online interactive forum**" that provides information on simplification of international trade processes.

Luxembourg

Although there are no specific actions, a project has been adopted by the ministry of economy to create an innovation observatory consisting of clusters of businesses representing platforms to collect and diffuse innovation through an internet portal.

Netherlands

National policies

The Dutch Lower Chamber is currently discussing the plan "**Nederland gaat Digitaal. Het MKB in de digitale delta**" – The Netherlands go Digital. SMEs in the digital delta. This is a combination of 3 programmes: **Sp.OED advice** (help SMEs on "Electronic Highway" by providing experts' advice); **Nederland gaat Digitaal** (stimulate use of ICT for SMEs that fall behind) and **Over de Drempel** (stimulating ICT use among retail trade and handicraft businesses).

The plan is planned to go life in 2002 ; its funding is 22,600,000 Euro for the next 3/5 years.

Regional or local

There are several initiatives undertaken by municipalities. As an example, the project "**InnovationNet**" for the development of a sophisticated Website with virtual communities around the topic "Innovation".

Funding of "InnovationNet" is 3,000,000 Euro.

Portugal

National policies

The **Operational Programme for Economic Activities – POE** - Programa Operacional da Economia, covers the period 2000 – 2006. The operational programme will strengthen productivity and competitiveness of enterprises by supporting their participation to the global market and promoting new potentials of development. This will be done by means of supporting investment projects involving SMEs, modernising their technological infrastructure and supporting training initiatives.

Regional or local

Madeira Operational Programmes and **Azores Operational Programmes**.

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Spain

National policies
The programme **ARTE/PYME II** support SMEs (especially those based in less favoured regions) to go digital in order to avoid loss of competitiveness. It was launched in February 2001 and will cover the period 2001 – 2003. Total funding is 55,300,000 Euro.

Additionally, there is an agreement between the Ministerio de Ciencia y Tecnologia and the Consejio Superior de las Camaras de Comercio; it will devote 2,480,000 Euro in support of the Information Society and e-commerce among Spanish SMEs.

Regional or local
There are several projects active on a local level: **Proyecto Habilis** and **Proyecto ECITT** (Cantabria); **Proyecto CERESNET** (Extremadura); **Proyecto APTAPYME** (Navarra) and **Programma KONEKTA ZAITET** (Pais Vasco).

Sweden

National policies
Svea is a project funded by the Community for Electronic Business – GEA in October 2000 in order to educate SMEs on how to use internet for business. The target of the project is to train 100,000 SMEs by 2003.
Regional or local
The **Svea Project** operates also on a local level through regional projects. Both public and private organisations take part in the project directed to the SMEs.

UK

National policies
UK Online for Businesses was launched in 1999 with the final goal to help all businesses to get online. The period covered is 2000 – 2003 and funding of the initiative is 35,000,000 Euro.
Another programme, **Technology Means Businesses,** was started in 2000 to help SMEs to understand the importance of technology. The initiative is sponsored by the DTI, BT, Compaq, Intel, Microsoft and the Institute of Management.

Regional or local
The **SBS** runs a network of outlets nationwide called Business Links for promoting eBusiness among SMEs. The **Local Partnership Fund** is training advisers to go out to companies and identify needs. The Fund's entity is 8,000,000 Euro over 4 years.

Tab. 24   Policies supporting e-commerce in SMEs: main goals

	Information/ awareness raising/thematic portals/ interactive fora	Training/ workshops	Tax deductions	Awards/ funding/ prizes	Centres of excellence/ information centres/business incubators	Workgroups of experts
AUSTRIA	X			X		X
FINLAND	X					
GERMANY	X			X	X	
GREECE	X	X				
IRELAND	X					
ITALY	X	X	X	X	X	
LUXEMBOURG	X					
NETHERLANDS	X	X				
PORTUGAL	X	X		X		
SWEDEN	X	X				
UK	X	X	X	X	X	

Source: SIBIS consortium

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Tab. 25   Policies on promotion of e-commerce in SMEs by type

Part of national industrial policy
.dk21 - A new strategy for Denmark's industrial policy - Denmark   - FIT – Technological Innovation Fund – Public Finance Programme 2001 – 2004 – Italy   - POE - Operational Programme for Economic Activities – Portugal
Action plan/policy for e-commerce
- Mission for Electronic Commerce – France   - Empower.ie – Ireland   - e-commerce Action Plan – Italy   - UK online for businesses – UK
Action plan/policy for e-commerce in SMEs
- e-Business and SMEs - Austria   - NetMate – Finland   - Centers of Excellence for Electronic Commerce – Germany   - German Internet Prize (Deutscher Internet Preis) – Germany   - Diktyotheite - Greece   - E-commerce awareness business – Ireland   - Openup – Ireland   - Call from Ministry of Industry for E-commerce in SMEs – Italy   - The Netherlands go Digital. SMEs in the digital delta – the Netherlands   - Agreement between Ministerio de Ciencia y Tecnologia and Consejio Superior de las Camaras de Comercio – Spain   - Svea – Sweden   - Technology Means Businesses – UK
Action plan/policy for e-commerce in SMEs in disadvantaged areas
Programa ARTE/PYME II – Spain

Source: SIBIS consortium

4.1.3.   Public procurement

Action 7.8
Establish electronic marketplaces for public procurement Deadline: end 2001

On line procurement of goods and services purchased by public administrations is expected to bring benefits in term of transparency, efficiency and administrative savings. On this purpose, eEurope - among the actions finalised to accelerate the e-commerce - sets as a priority the establishment of marketplaces for public procurement.
The SIBIS survey demonstrates that the EU countries are particularly active towards the achievement of this goal: all of them have launched policies or regulations focussed on public e-procurement, with the exception of Austria, Belgium, Luxembourg, Spain and Portugal who are currently discussing initiatives to be undertaken.

Most of these policies and programmes can be viewed as a reaction to eEurope: apart from France – which included e-procurement as an issue in the eCommerce Mission - all the initiatives documented were started after the eEurope launch. Even if the EU countries seem really committed to this task, they complain about the strong difficulties encountered when adapting their regulatory framework for the public procurement procedures. In practice, most countries are only moving their first steps in this area and only a fraction of public procurements transactions passes through telematic networks.

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Tab. 26   Initiatives supporting e-marketplaces for public procurement

	Policy Progress Evaluation	Policies/regulations supporting e-marketplaces for public procurement
Austria	●	▲
Belgium	●	▲
Denmark	●●●	■
Finland	●●●	■
France	●●●	■
Germany	●●●	■
Greece	●●●	■
Italy	●●●	■
Ireland	●●●	■
Luxembourg	●	▲
Netherlands	●●●	■
Portugal	●	▲
Spain	●	▲
Sweden	●●●	■
UK	●●●	■

■   = approved

▲ = under discussion

?   =   no explicit activities identified

●   =   activities planned, but not yet started

●●   =   activities launched, but no progress yet visible/measurable

●●●   =   activities launched and underway with some measurable progress already achieved

☑   =   mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

E-markeplaces for public procurement: country profiles.

Austria

The Austrian regulatory framework is quite complex and the responsibility for public procurement procedures are split between federal administration and the Laender. There are currently 10 acts relevant for public procurement: one federal act (the Federal Procurement Act - BvergG) - and 9 regional acts. On April 2001, the Federal Act that implemented **BB-GmbH** (Federal Procurement Ltd) came into force. BB-GmbH is a company controlled by the Federal State represented by the Ministry of Finance and has been established with the aim of improving the efficiency in the public sector, conducting procurement procedures on behalf of the public administrations. Nevertheless, an amendment of the BVergG that will consider the specificity of electronic procurement procedures is planned to be approved by mid 2002; this act is expected to unify and harmonise the federal and regional acts already in force.

Belgium

Belgium doesn't have yet a regulation specifically addressed to e-procurement. Nevertheless, the Ministry of Public Function is currently preparing a policy measure on this issue. On the national level, the Ministry of Defence is implementing an e-procurement platform.

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Denmark

The plan **Electronic Shopping of the State** has been launched in December 1999 to promote the development of a portal enabling institutions to buy things online. This will allow public purchases to be centralised into one single portal, with administrative savings and lower prices.

Finland

The **Act of Public Procurement** was approved in December 1992 in order to facilitate and make the procurement procedures more efficient.
There are plans to approve a further amendment to the Act of Public Procurement concerning the creation of electronic marketplaces in 2002. Among the other initiatives already undertaken, it is worth to mention the public marketplace that the Finnish Ministry of Commerce and Trade is currently developing, planned to be launched by early 2002.

France

The **eCommerce Mission** was launched in October 1997. Part of it specifically focuses on electronic procurement. In particular, it set as a primary goal to put all public procurement contracts in electronic form. The eCommerce Mission had relevant implications on the existing regulatory framework. In particular, the French Government had to reform the legal code governing public procurement contracts in order to include the digitalisation of all formalities and adoptions of solutions for authentication and digital signatures.

Germany

The project **Public Procurement Online**, intends to switch the total procurement process to internet technology with the final goal of making the placing of public orders faster, cheaper and more transparent. The programme is currently on a pilot stage: in September 2001, three Ministries - the Ministry of Economics and Technology, the Ministry of Interior and the Ministry of Transport, Building and Housing – started this project. It is expected to be completed by mid 2002

Greece

The **National Programme for Electronic Procurement** was launched in March 2001 and is aimed at supporting e-procurement in Greece. The programme is currently in force and is planned to be completed by 2005. The financial investment devoted to this initiative is of 14,600,000 Euro.

Italy

e-Procurement is one of the key areas of intervention of the **eGovernment Action Plan**, presented in June 2000. The total sum allocated to the development of online procurement procedures – partially funded by the UMTS auction revenues – will be about 5,100,000 Euro.
In Italy the Financial Law for 2000 fixed guidelines applicable to the e-procurement of goods and services by public administrations and introduced online auctions in the Italian regulatory framework, permitting the publication of calls for tender and to place bids through telematic channels. The same principle has been confirmed by the Public Finance Programme 2002 – 2006 that centralised the purchase of healthcare goods and services through Consip, a company totally controlled by the Ministry of Economics and Finance accountable for the public sector purchasing of goods and services. The portal handled by Consip is therefore based on the "product catalogue with single vendor" business model. Consip has currently opened a bid for assigning technical development of a system for telematic auctions and the management of e-markeplaces for public procurement. Pilot projects are currently testing the business model of "aggregated expenditure" in 3 administration sectors: local administrations, healthcare and university.

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Ireland

The **Public Sector Tender Portal** went live in March 2001 in order to make public sector procurement transparent and efficient by putting all the relevant information on a website. The site provides a central source for procurement opportunities within the Irish public sector. On a daily basis, public sector opportunities are published for free on the site, that becomes a central facility for all public sector contracting authorities. The site displays a wide amount of information, including: tender notices, tender documents, contact names, procurement information and award notices.

Netherlands

One of the main objectives of the Action Plan "**Professioneel Inkopen en Aanbesteden**", approved in 1999, is to improve electronic procurement procedures by public administrations. This will be done through publishing electronically all public procurement documents by the end of 2001.

Portugal

In Portugal, on line procurement is one of the priorities of the **Operational Programme for the Information Society**. In fact, the Programme aims at ensuring as fast as possible, that at least 25% of public procurement is carried out through e-commerce transactions. Portugal is currently approving a measure that permits the electronic purchase of goods and services by public administrations in order to introduce e-marketplaces for public procurement in Portugal by 2002. In particular, in 2000 the Cabinet Resolution N.143 was approved defining criteria for allowing electronic purchasing of goods and services by Public Administrations. A Technical Advisory Group has identified legal obstacles to the development of e–commerce practices by Public Administrations.

Spain

Spain is planning to implement the e-marketplaces for public procurement in 2002 through the project **SILICE (Sistema de Información para la Licitación y Contratación Electrónica)**. Within this project operates the Consejo Superior de Informática (CIS) with many tasks: to gather the consensus of all the public bodies involved in the initiative; to establish minimal technical specifications for the interoperability of the different systems; and to guarantee the safety of transactions. These tasks will lead to the experimentation of a pilot solution that will demonstrate the feasibility of the project.

Sweden

Law of Public Tender was approved in 1992. One of its principles is to make public purchases efficient and information about public tenders easily accessible. A new proposal of emendation - presented in October 2000 – is currently under discussion and is expected to add relevant changes in order to enter into force during 2001.

UK

The **New Office of Government Commerce (OGC)** is leading the drive towards full electronic trading between government and suppliers. In fact, through the "**Modernising Government**" measure, the UK is targeting the ambitious goal of electronic purchase of 90% of low-value goods and services; this measure has been widely adopted by UK Government departments. OCG will publish an assessment tool which will help departments to measure their performance against this target.

4.2.   Government on line: electronic access to public services

4.2.1.   Civic Networks

Action 8.1 Essential public data online including legal, administrative cultural, environmental and traffic information.
Deadline: end 2002

The emerging information society forces public administrations to renew their internal organisation, improve their efficiency and - last but not least – re-think their traditional ways of communication with citizens and enterprises. In particular, the growing demand for public information easily accessible by citizens and firms is leading public bodies to promote official web-sites in order to make public information available through the Internet. This often happens on a local level.

On this topic, the SIBIS survey was focussed on the diffusion of websites created by municipalities in the EU countries. The content of civic web-sites differs significantly especially in term of the level of interaction of the local authority and citizens they permit. It is useful to distinguish "content" web-sites from "promotional" ones and web-sites that just disseminate information about the local authority's organisation, policies and services from those ones providing additional information and services to citizens and companies.

By putting local authorities' data on-line and by providing, in some cases, electronic access to public services, civic web-sites provide citizens with the great opportunity to participate actively in local democracy processes and, at the same time, give public administrations the opportunity to improve their transparency. For this reason the eEurope Action Plan aims to encourage the promotion of civic web-sites by the municipalities of EU countries.

The data reported should be read taking into account the different concept of "municipality" adopted by the EU countries. Furthermore, it has to be considered that some EU countries such as Italy, Spain, Germany and Austria are characterised by a large number of very small municipalities (<5,000 inhabitants) which often are on the Internet through district web-sites or common platforms. Nevertheless, it has to be considered that civic networks are more diffused among big municipalities: the presence of a "virtual meeting point" is particularly necessary in bigger municipalities, where citizens are not likely to communicate directly and information is transmitted more easily.

The results of the survey show that Sweden, Finland and Denmark have the highest penetration of civic websites; the lowest penetration (15%) has been registered in Italy and Spain, countries with a very similar number of municipalities (8,100 in Italy and 8,097 in Spain) and both characterised by a high percentage of small towns.

However, many websites provide only limited content and interactivity. A Eurobarometer survey of spring 2000 of local government showed that although 56% of local authorities had a website (confirming by and large the results of the SIBIS survey), only 28% had electronic versions of official forms and only 8% allowed citizens to send back the forms by e-mail. The path towards real transparency is still long

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Tab. 27   Civic webs in the EU countries, 2001

	AUSTRIA	BELGIUM	DENMARK	FINLAND	FRANCE	GERMANY	IRELAND	ITALY	LUXEMBOURG	NETHERLANDS	PORTUGAL	SPAIN	SWEDEN	UK
How many civic web sites are there in your country?	*~1887**	295	*270**	*400***	36762	4382***	26	1191*****	39	*>200*******	189	1200	289	401
How many municipalities are there in your country?	2359	589	275	448	36762	13931	34****	8100	118	537	308	8097	289	467
% (No. of civic web-sites/ No. of municipalities)	**~50%**	**50%**	**98%**	**89%**	**100%**	**31%**	**76%**	**15%**	**33%**	**>37%**	**61%**	**15%**	**100%**	**86%**

*   estimate of SIBIS consortium
**   in 1999
***   in 2000

****   here considered local authorities at council/city level
*****   municipalities with >than 5.000 inhabitants
******   estimates of SIBIS consortium
Source: SIBIS consortium

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4.2.2. On line tax payment

Action 8.2
Member States to ensure generalised electronic access to main basic public services.
Deadline: end 2002/2003

Generalised access to public services is a key priority in the eEurope Action Plan. According to Eurobarometer there is a continuous increase in the number of citizens who contact government agencies through the Internet, and even more who would like to do so. But the Commission is worried that public administrations often remain too much stuck in traditional ways of working: "Modernising the public sector is no longer primarily a matter of introducing new technologies: working practices and rules must be changed to realise the benefits of technology"[7]. The Member States have endorsed a list of 20 basic public services (12 for citizens and 8 for businesses) which must be offered by all public administrations. This list will also be used to benchmark progress using a four stage framework:

1. posting of information online
2. one-way interaction
3. two-way interaction
4. full online transactions including delivery and payment.

Income tax declaration, notification and assessment is the first of the list of these services and one of the most relevant, because of the possible improvements in quality of service from the point of view of citizens and in efficiency from the point of view of government. Online fiscal services have therefore been targeted as a priority of egovernment plans by many countries. SIBIS survey focused on these services as a key example of how countries are progressing in the introduction of egovernment.

Tab. 28 **Do you contact your public administration via the Internet?** (% of Internet users respondents)

Regularly	10.3%
Occasionally	20.4%
Rarely	9.6%
Dont'know - no answer	59.8%

Source: Flash Eurobarometer . 88 - October 2000

According to our survey, online fiscal services are being implemented in most countries. Tax return forms are available online for download in all the EU countries, except in Luxembourg where VAT return and other tax forms will be available on-line in 2002. In Austria and the Netherlands tax return forms can be downloaded online, but it is not possible yet to file and pay taxes through the Internet.

Concerning online tax return submission, the situation remains still highly heterogeneous among European countries, both in terms of type of taxes payable as well as of tax payers qualified to use the facility. Beside countries where both companies and private citizens are allowed to file and pay taxes on line (e.g. Italy), there are countries where only self-employed people and businesses can submit tax return forms online (e.g. Finland, Ireland).

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[7]   eEurope Impact and Priorities, March 2001

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Tab. 29   On line availability and submission of tax return forms, in 2001

	Availability of tax return forms online for download	Submission of tax return forms online
Austria	X	
Belgium	X	X
Denmark	X	X
Finland	X	X
France	X	X
Germany	X	X
Greece	X	X
Ireland	X	X
Italy	X	X
Luxembourg	planned	
Netherlands	X	
Portugal	X	X
Spain	X	X
Sweden	X	X
UK	X	X

Source: SIBIS consortium

On line tax payment: country profiles

Finland

At the moment only companies are allowed to submit tax return forms online, while the possibility for private citizens to pay taxes through the Internet is currently being tested.

Germany

Online tax declarations have been made possible by the ELSTER project, which developed a software system that provides forms for tax declaration submission. Nevertheless, the ELSTER project is not operative in all German Länder yet.

Ireland

In Ireland the interactive "**Revenue On-Line Service**" (ROS) allows self-employed people and businesses to perform several operations: to view their current income tax, employer tax and VAT position. Self-employed can file and pay online income tax return as well as file and pay VAT return forms.

Italy

Professionals, private enterprises and their legal and fiscal representatives are obliged to submit tax return forms on line, through the telematic service "**Entratel**", while private citizens and small enterprises are free to choose if to pay taxes through the Internet or not.

4.2.3.   Digital Signature

Action 8.7 - Promote the use of electronic signatures within the public sector.
Deadline: end 2001

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Security and privacy concern tend to prevent users from using the internet for exchanging documents. Therefore, security is a main concern not only for e-commerce transactions but also for the exchange of documents between citizens and public administrations.

A valid solution to this problems is provided by digital signature that – beside guaranteeing the integrity of a document - makes it possible to carry out secure electronic transactions through certifying the identity of the sending party and the authenticity of the information. Therefore, its development and diffusion is considered crucial for more efficient and transparent dealings between citizens and businesses.

In order to exploit the opportunities offered by digital signature, the European Parliament and the European Council issued the Directive 1999/93/EC which sets out the EU framework for the use of electronic signatures, promoting their legal recognition within EU countries.

In line with the European regulation, eEurope promotes the use of electronic signature within the public sector.

A necessary pre-condition to the diffusion of digital signature in EU countries is the availability of a national regulatory framework enforcing digital signatures: the SIBIS survey analysed the regulatory framework in force in EU countries.

Almost all countries have enacted a law/regulation creating the legal framework for the implementation of electronic signature. Those countries which still haven't issued any act on electronic signature yet (Finland, Netherlands and Sweden) are expected to take steps by 2002. Italy was the first country to approve a regulation introducing digital signature. Presidential Decree No. 513, in fact, was approved in March 1997, long before Directive 1999/93/EC.

However the adaptation of the regulatory framework is not a guarantee of implementation and in most countries actual usage of digital signature is still rare. Main implementation problems concern the role of third parties guaranteeing the validity of the digital signature and the complexity of the process allowing to register a digital signature.

Tab. 30   Implementation of digital signature regulation

	Policy Progress evaluation	Up to/in 2000	In 2001	Under discussion
Austria	●●●	■		
Belgium	●●		■	
Denmark	●●●	■		
Finland	●			▲
France	●●●	■		
Germany	●●		■	
Greece	●●		■	
Ireland	●●●	■		
Italy	●●●	■		
Luxembourg	●●		■	
Netherlands	●			▲
Portugal	●●●	■		
Spain	●●●	■		
Sweden	●			▲
UK	●●●	■		

■	=	approved
▲	=	under discussion
?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

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The implementation of electronic signature: country profiles

Austria

The Federal Electronic Signature Act (19 August 1999) provides a legal framework for the usage of electronic signatures and for the provision of related technical services. This Act regulates the rights and obligations of users and service providers, sets technical requirements for certification services and states the mechanism of supervision compliant with the regulatory framework.

Belgium

The **Law on digital signature and certification services** (9 July 2001) has been enacted in order to comply with the EU Directive 1999/93. Namely it aims at creating a legal framework for the implementation of electronic signature and certification services.

Denmark

Fra Isenkram til Indhold (31 May 2000) sets, among the other goals, the objective to remove barriers that limit the use of electronic signatures, while **Law 417: Lov om elektronisk signatur** (31 May 2000) creates the legal framework for the implementation of electronic signature.

Finland

Finland is currently discussing a draft bill of the "Act on Electronic Signature" with the final goal of implementing digital signature in the beginning of 2002.

France

Law n. 2000-230 (13 March 2000) makes digital signatures legal.

Germany

Law on the framework conditions for electronic signatures and on the amendment of further rules (22 May 2001) sets binding character of legal procedures on the Internet.

Greece

The **Presidential Decree No. 150/2001** (approved in June 2001) has been enacted in order to fulfil the requirements of the EU Directive 1999/93 of the European Parliament and the Council.

Ireland

The Electronic Commerce Act, approved in November 2000, provides also a legal framework for legal recognition of electronic signatures and certification services.

Italy

The **Presidential Decree No. 513/1997** (10 November 1997) - the main legislative reference for the implementation of electronic signature in Italy - establishes criteria and means for implementing the creation, storage and transmission of documents via computer-based systems. The final goal of the law is to go for a Public Administration Unified Network by exploiting the opportunities offered by digital signature. In fact, the electronic signature is expected to provide relevant advantages both for public and private bodies permitting a rationalisation, simplification and acceleration of public administration services.

Luxembourg

The Règlement Grand Ducal relatif aux signatures èlèctroniques (1 June 2001) creates the legal framework for the use of electronic signature.

Netherlands

The act **Richtlijn Electronische Handtekening** - aimed at introducing the digital signature into the Dutch regulatory framework - has been presented in 1998 and is still under discussion.

Portugal

The Decree-Law 290-D99, Juridical basis of electronic documents and of digital signatures (2 August 1999). This Decree intends to create a safe context for the certification of electronic documents. It also sets the rules related to creation and exchange of electronic documents, to digital signatures and introduces an accreditation entity. An Accreditation Authority (supervised by Ministry of Justice) and the Accreditation Technical Board have been created in September of 2000. The technical infrastructure has been developed at the beginning of 2001. However, the qualification levels of digital signatures of Decree-Law n. 290-D/99 didn't match with those of Directive 1999/93/EC of the European Parliament and of the Council (13 December 1999). Portuguese regulation has to be adapted to the European Union legislation, which will be done before the end of the current year.

Spain

Real Decreto-Ley 14/1999 sobre firma electronica (17 September 1999) . This act regulates the use of the electronic signature: it recognises its juridical authenticity and the defined rules for certification services.
Reglemento de Acreditacion de Prestadores de Servicios de Certification y de Certificacion de Determinados Productos de Firma Electronica (21 February 2000) is aimed at achieving a suitable degree of safety, quality and confidence in the certification services in order to guarantee consumers' rights.
In 2001, the Government has begun to elaborate a preliminary draft bill for regulation of services of the Information Society and Electronic Commerce, according to the Directive 2000/31/EC on electronic commerce, and to the Directive 98/27/EC, on protection of the rights of the consumers.

Sweden

The government bill entitled **Qualified Electronic Signatures**, was presented by the Ministry of Industry, Employment and Communication to the Swedish Parliament. The bill is one of the measures set out in the action programme "An Information Society for All" (1999/2000:86). The proposal entails the implementation of the EC Directive on a Community Framework for Electronic Signatures (1999/93/EC)

UK

Electronic Communication Act 2000 (25 May 2000) has the key objective to help the creation of a legal framework for electronic commerce in the UK.

4.3.   Health online

4.3.1.   Telematic networks in healthcare

<div style="border:1px solid black;">

Action 9.1
Ensure that primary and secondary healthcare providers have health telematics infrastructure in place including regional networks.
Deadline: end 2002

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The eEurope Action Plan strongly supports the provision of online access to healthcare information to citizens as well as to medical doctors. Citizens like using the Internet for accessing health-related information, while practitioners need reliable tools for exchanging information with their patients, but also for getting updated health data and information.

The SIBIS survey gives a picture of the development of ICT networks in healthcare through investigating the availability of a physical infrastructure enabling medical doctors to access to the Internet and summarising the measures launched in the EU countries (which partly reflect the countries' commitment towards the diffusion of telematic networks in healthcare).

The Internet penetration among practitioners is quite high: the percentage of general practitioners owing a PC who have access to the Internet ranges from the 52% of Portugal to the 100% of Netherlands and Finland (Source: Flash Eurobarometer 104, June 2001).

The SIBIS survey investigated all medical doctors (general practitioners and specialists) access to the Internet. The picture shown is extremely heterogeneous with 100% of medical doctors in Austria and Denmark and a 95% in the UK with an access to the Internet. Greece has the lowest diffusion of the Internet among medical doctors, with only 6% of medical doctors having access to the Internet.

This results partly mirror the availability of Internet connections in hospitals: Austria (100%), Denmark (100%) and UK (91%) have the highest percentage of hospitals connected to the Internet, together with Finland, Germany, Portugal and Spain .

The implementation of ICT in healthcare infrastructures is a main concern in almost all EU countries. With the possible exception of Belgium, all EU countries have launched or are planning initiatives and projects finalised to exploit ICT in healthcare networks. In Greece, Ireland and Portugal this issue is not covered by nation-wide initiatives, but several local projects are currently successfully ongoing.

Tab. 31   Policy measures supporting telematic networks in healthcare

	Policy Progress Evaluation	Policy Measures
Austria	●●●	■
Belgium	?	
Denmark	●●●	■
Finland	●●●	■
France	●●●	■
Germany	●●●	■
Greece	●●	∗
Ireland	●●	∗
Italy	●	▲
Luxembourg	●●●	■
Netherlands	●●●	■
Portugal	●●●	■
Spain	●●●	■
Sweden	●●	∗
UK	●●●	■

■	=	existing
∗	=	local projects
▲	=	planned
?	=	no explicit activities identified
●	=	activities planned, but not yet started
●●	=	activities launched, but no progress yet visible/measurable
●●●	=	activities launched and underway with some measurable progress already achieved
☑	=	mission fully completed, i.e. objective has been realised and is documented

Source: SIBIS consortium

Tab. 32   Percentage of hospitals and medical doctors connected to the Internet in 2000

	% of hospitals connected to the Internet	% of medical doctors with an access to the Internet
AUSTRIA	100%	100%
BELGIUM	n.a.	25% [1]
DENMARK	100%*	100%*
FINLAND	100%	50%[2]
FRANCE	n.a.	43%
GERMANY	over 90%	49%
GREECE	30%	6%
IRELAND	80%	52%
ITALY	n.a.	53%
LUXEMBOURG	n.a.	52%
NETHERLANDS	90%	60%
PORTUGAL	100%	n.a.
SPAIN	100%	n.a.
SWEDEN	n.a.	n.a.
UK	91%	95%

* in 2001
[1] professional users in 2001
[2] doctors with access to the Internet from home
Source: SIBIS consortium

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Tab. 33   Internet usage by general practitioners

	% of general practitioners using the Internet (among those owning a PC)
Austria	78.5%
Belgium	76.9%
Denmark	87.9%
Finland	100%
France	90.4%
Germany	55.8%
Greece	52.4%
Ireland	67.1%
Italy	72.4%
Luxembourg	68.5%
Netherlands	100%
Portugal	52.7%
Spain	60.3%
Sweden	95.4%
UK	91.5%

Source: Flash Eurobarometer 104, June 2001

Tab. 34   Internet usage by general practitioners

Source: Flash Eurobarometer 104, June 2001

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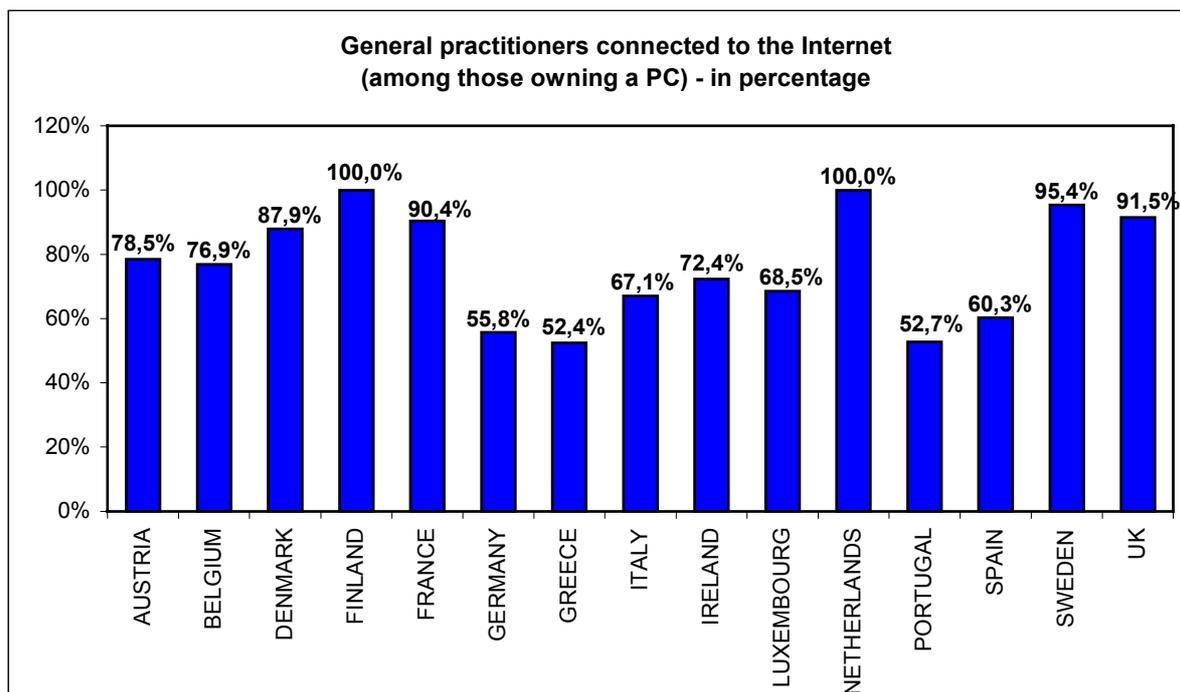
Telematic networks in healthcare: country Profiles

Austria

In Austria most of the initiatives establishing telematic networks for healthcare are regional. An indicative example is the **"Vorarlberger Gesundheitnetz** (VGN) – Network for healthcare in Vorarlberg Land". VGN was launched in 2000 in order to permit the exchange of medical data between practitioners and laboratories in hospitals, e.g. the transmission of test results from medical labs to practitioners. In July 2001, 187 out of the 350 practitioners in Vorarlberg were connected to the "Gesundheitnetzt" and - on average - about 37,000 data sets are transmitted per month via the network, which was set up and is operated by the VTG – Vorarlberger Telekommunicationsgesellschaft. It is worth to remember that in 45% of medical doctors having an access to the Internet use it on professional purpose (source: SIBIS consortium). Furthermore, numerous pilot projects have been launched in the healthcare sector during recent years. They mainly cover: co-operation with laboratories, hospital information systems, general networking between different medical specialities, expert communication networks, picture transmission to support remote medical findings, videoconferencing and tele-education. Most of these projects involve hospitals. Their goal is either to connect one hospital to doctors assuring extramural treatment of their patients, or to interconnect different hospitals in a region.

Belgium

In Belgium the Federal Ministry of Health has been working since 1998 with universities, associations and the private sector on the **Electronic Medical File (EMDMI workgroup)**. Four themes are being discussed: new legislation, training for health providers, software certification, deployment and security of the network.
It is interesting to note that the percentage of the Belgian hospitals with a website is currently about 20%.

Denmark

The "**National Strategy for IT** "i Sygehusvæsenet 2000-2002" was launched in December 1999 with the aim to promote the development of IT in Danish healthcare services. This strategy also plans the connection of all medical practitioners and hospitals to the health data network before 2002.

Finland

"**Satakunta Macro Pilot**" is an experimental project, that has been carried out in the area of the City of Pori in the region of Satakunta. This project was started in November 1998 and it was intended to go on till the end of the year 2000, but it was extended until 31 August 2001 and to more regions, including Helsinki. Its main objective consists of developing communications within the health- and social-care services. Part of the Macro Pilot developed and tested ICT-based seamless models and a municipal co-operation in the provision of healthcare services.

France

The "**Mission pour l'informatisation du système de santé**" was launched on 31st December 1997 with the aim to co-ordinate all the Information society initiatives relating to healthcare.

Germany

The German health system is largely self-governing. It is administered by organisations representing the statutory health insurance funds, doctors and non-medical health professionals, hospitals, pharmacists, pension funds and occupational accident insurance institutions. In June 2000 these organisations formed the "**Action Forum for Telematics in the Health Service (ATG)**", with the aim to develop a quality-assured, decentralised and expert-based network to build the basis for a comprehensive health information network. Current actions of this Forum are dealing with electronic patients' records, cost benefit assessments of telematic applications, legal issues and economic incentives and patient information systems.
Furthermore, the "**Initiative for Health Telematics Germany**" (Initiative Gesundheitstelematik Deutschland) promotes the development and implementation of telematics in healthcare services.
Among the regional activities worth to be mentioned, the "**Centre for Telematics in Health Service NRW**" which intends to create a comprehensive communication and co-ordination platform. In addition, there is a variety of pilot-projects focused on teleconsultation for emergency treatment, picture transmission to support remote medical findings, videoconferencing, co-operation with laboratories, expert communication networks and hospital information systems.
Beside the "Action Forum Health Information System", in Germany operate other networks: DGN, Deutsches Gesundheitsnetz Service GmbH (German Health Network); HOS (Multimedica Online Services); SECANET Medizinverbund, and CliNet e V.

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Greece

In Greece there is no specific nation-wide measure encompassing telematics' network in healthcare, although there are various pilot project in the field of healthcare focusing on telematic applications and offering services in remote areas, e.g. Greek islands.
With regard to the connection of hospitals and of medical doctors to the Internet, between 2000 and 2001 the percentage has grown- respectively - from 30% up to 50% and from 6% up to 10%.

Ireland

A number of telematic projects are currently running in the healthcare sector. Many of them are being partly funded by the EU while some part of local initiatives. These projects several areas of e-health: information search and retrieval, asynchronous consultation/diagnosis, online presence, distance monitoring/surveillance.
Between 2000 and 2001, the percentage of hospitals connected to the Internet has grown from 80% up to 100% and the share of medical doctors with an accessed to the internet has increased from 52% to 67.1%.

Italy

In Italy the art. 87 of the Economics and Finance Programme Document for 2001-2004 and the Budget for 2001 include (among the other areas of action) the "Computerised management for medical, pharmaceutical, specialists and hospital prescriptions". On 11th September 2001, following the guidelines of this document, the minister of Healthcare presented to the Social Affair Commission the draft of a new project for implementing the use of Internet in Healthcare. The main idea behind the draft is to create a network connecting all doctors by e-mail in order to create a secure system of pharmacological watch.

Luxembourg

Since 1988, important efforts have been undertaken in Luxembourg in order to support the development of telematic networks in the healthcare sector. In 1995, once recognised the need for computerisation and communication for healthcare, the Ministry of Health launched the "**Lux HealthNet Project**". It started as a pilot project with the aim to develop a value added sectorial network offering all kinds of telematic services to all the professionals working in HealthCare and Social Security.
The Phase 2 of the Project is now being undertaken: its key objectives consist in providing secure access and email, management of data exchange, tele-radiology applications, information systems to hospitals and tele-maintenance of software and databanks.

Netherlands

In November 2000 the Dutch Ministry of Health, Welfare and Sport (VWS) developed the "**Beleidsbrief en Actieplan ICT in de Zorg – Action Plan ICT in Health**" with the aim of creating a standardised framework for medical decision support systems and transparency. Its funding amounts to about 100,000,000 Euro.

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Portugal

In 1996 was created the "**Rede Informàtica de Saùde (RIS)** - Health Information Network", that connects all entities supervised by the Ministry of Health. This nation-wide network is mainly supported by the "**Programa Saùde XXI - Health XXI Programme**", co-financed by the EU Third Community Support Framework Package funds (III CSF). Its key objectives can be summarised as follows: to connect the different entities of the healthcare sector, to disseminate medical and administrative information between healthcare institutions and to allow them to access central databases. But all potentialities of the Portuguese Health Information Network haven't been implemented yet.

Spain

The "**Plan de Telemedicina**" is the strategic plan of the Spanish Ministry of Health. It has been approved in 1999 and contains the guidelines for the implementation of telematic networks in healthcare. As a result of this Plan, several hospitals have started telematic pilot projects, e.g. the Fundacion Hospital Alcorcon has developed a project with the objective to set online the following services: appointments, diagnosis, surgery and radiology.

Sweden

In Sweden there is no specific national measure in the field of telematic networks in healthcare, but several projects are currently ongoing.

UK

In UK the Information Strategy for the NHS (National Healthcare Sector) was published in September 1998. Despite its principle objectives and strategy remain, much of the reform necessary to translate the NHS plan into practice requires an updated and progressive consideration of how to make the best use of IT in healthcare. This plan, "**Building the Information Core: implementing the NHS plan**" - approved in January 2001 - provides this update. It outlines the necessary information and IT infrastructure investment required to deliver the NHS plan and support patient centred care and services.

4.4.   European digital content for global networks

4.4.1.   Public sector information

Action 10.1
Launch a programme to stimulate the development and use of European digital content on the global networks and to promote the linguistic diversity in the information society, including action to support exploitation of public sector information and establish European collections of key datasets.   Deadline: end 2000

The eEurope plan supports the uptake of new technologies for the creation of new content and the digitalisation of materials, in order to enhance the accessibility of public information. Public sector information covers many fields: from financial and business information to legal and administrative sources, from scientific, technical and cultural data to geographical information. In the past, EU countries have not always been able to exploit the real opportunities offered by online distribution of content through global networks.

The Commission is strongly committed to supporting public content exploitation. In its Communication on eEurope 2002 "*Creating a EU framework for the exploitation of public sector information*", the Commission concentrates on the internal market of public sector information and proposes actions to overcome the market barriers to their exploitation existing on the European level. In particular, following eEurope the Commission launched the eContent Programme, that builds on the results of the INFO2000 programme to support market oriented projects and stimulate the diffusion of pan-European standards for the exploitation of public sector information. The eContent programme is based on 3 action lines: to improve access and expand public sector information, to enhance content production and to increase the dynamism of the content production market.

The Commission is also supporting projects related to the provision of public sector information within the IDA II Programme (specifically focussed on the interchange of data among public administrations and European institutions) while - within the eEurope framework - it is supporting the exchange of best practices and comparative case studies.

In order to investigate the approach of the EU countries towards this topic, the SIBIS survey analysed policy measures and other initiatives launched in the EU. Almost all EU countries have launched initiatives and defined their strategy towards the exploitation of public sector information. The initiatives indicated by the EU countries usually include more than one area: the programmes indicated by Austria, France, Germany, Ireland, Italy, Portugal, Sweden and UK are particularly focussed on the distribution of legal and administrative information, while some of the initiatives launched in Germany, Italy, the Netherlands are more oriented to the distribution of cultural and geographical content.

Denmark and the UK have applied a very similar approach to convey public interest information to their citizens: both countries' governments launched portals delivering administrative information of interest for all citizens, starting from everyday "life episodes".

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Tab. 35 **Availability of national and/or regional programmes or strategies supporting exploitation of public sector information**

Austria	■
Belgium	■
Denmark	■
Finland	■
France	■
Germany	■
Greece	■
Ireland	■
Italy	■
Luxembourg	■
Netherlands	■
Portugal	■
Spain	n.a.
Sweden	n.a.
UK	■

■ = existing
Source: SIBIS consortium

Exploitation of public sector information: country profiles

Austria

Although there is not a single-document programme summarising the government strategy to support exploitation of public sector information, there are several remarkable and promising initiative going on in this area of e-government. Austria offers quite advanced online services; for example, the **Legal Information System of the Republic of Austria** (RIS) is available on line, free of charge. Within the RIS, the **JUDOK** database offers free-of-charge access to the judicature of the Supreme Court, the State Court and selected courts in other countries.
Also the Real Estate Register and the Trade Directory are available on line, but users are charged a fee.
Finally, the edict file database gives free-of-charge access to official insolvency notifications, to edict information form the trade directory and - from January 2002 - auctions' results.

Belgium

The Federal Government's "**Information Society and e-gov**" Plan - approved in October 2000 - includes the exploitation of public information in all sectors. Currently there are concrete plans for the federal ministries of Justice and of Finance.

Denmark

In Denmark the Ministry of Research has established a web portal containing information about the Danish Society "every-day-life" aspects.

Finland

A government portal, including areas of administration, documentation and public tenders, is currently under construction. Other portals and websites are available for special groups like immigrants and other minorities (Swedish speaking and lapplanders).

France

In France there are ministerial plans for digitising public data and putting them online as well as projects for putting services of general interest on the Internet. There are plans to allow migration of telematic services onto the Internet and provide virtual administrative forms and plans for implementing an internal electronic message service and interconnecting it with the interministerial services.

Germany

In Germany there is not a single programme summarising the German government's strategy to support the exploitation of public sector information, although there are some interesting ongoing initiatives. Among them, the most significant are **Media@Komm** and **Bund.de**, both driving transparency and access to public sector information resources. The former is a focus project of the Federal Government for the implementation of virtual town halls and market places and is part of the umbrella programme "Innovation and jobs in the information society of the 21st century". Implementation of single projects within Media@Komm started at the beginning of 2000 and is supposed to be completed by the end of 2002. In total, more than 100 types of transactions between citizens and public administration are planned to be applicable on the digital network. In particular, there are plans to make information available from public registers online, by electronic signature within the Media@Komm.

The latter initiative, - Bund.de - consists out of the development of an all-encompassing service portal of the German Federal Government which offers a number of e-government services. This portal has links to public information providers and databases, including "ATKIS" (Official Topographic-Cartographic Information System), "GeoMIS-Bund" (Meta-information system about geographic information of the Federal Administration) and the "Meta Information System of the BKG" (Federal Agency for Cartography and Geodesy), which offers access to basic geo-data from several federal states.

Greece

A working group on Digital Content has just been established within the framework of the Greek e-business Forum at the Ministry of Development.

Ireland

On 11th April 2001 the initiative "**Metadata-Towards a Common Standard**" was launched. This is the *draft* Irish Public Service metadata framework document setting out the standard for tagging online information resources. Metadata deployment will assist the users in finding relevant information available on Public Service websites more easily and more quickly. The main point of the document is to recommend the Dublin Core metadata element set as the basis of an Irish Public Service metadata standard to be applied by Public Service organisations providing information and services online. The draft document has been made available so that interested parties can comment on the proposals. The Irish Government Metadata Consultation Group will consider all comments before approving the final standard.

Some other efforts have been made in relation with the exploitation of public sector information, such as the digitalisation of public services with the launch of a new electronic system aimed at providing greater public access to a wide range of state/administrative services (e.g. the **Public Service Broker**), and actions aimed at improving the electronic delivery of Government information and services to the business community (e.g. the **BASIS Project**).

Italy

In Italy the **Action Plan for the Information Society**, approved on 16th June 2000, the **e-Government Action Plan** of 23rd June 2000 and the **e-Commerce Action Plan** of 16th June 2000 focus, among the other goals, on the exploitation of public sector information. In particular, the "e-Government Action Plan" foresees the development of a web portal that will allow citizens to access Public administration databases. This task will be carried out though the definition of common standards to be applied by Public Administrations web portals, together wit the creation of a list of the contents necessary to be provided by Public Administrations through the Internet. The document particularly stresses the importance of creating a unified portal able to host all existing collections of norms and legislation now spread in different portals. Among the other portals that the e-Government Action Plan announces: one portal for certification services, one for employment services and another one specifically addressed to services for enterprises. With regard to cultural content, the Action Plan for the Information Society intends to support the creation of a "culture portal" and to complete the National Library Service, through connecting Italian libraries and multimedia training centres to the Internet.

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Netherlands

The main focus of the exploitation of public sector information is represented by cultural and scientific heritage, parliamentary publications and reports. Public services for companies and social insurance administration services are also available online.

Portugal

The **Cabinet Resolution No. 65/99** established the availability on the Internet of publications, formularies and all information produced, in full respect of intellectual property and in order to support the accessibility of the citizens with special needs. Furthermore, the Operational Programme for the Information Society includes actions in the field of the exploitation of public sector information Sub-programme 3 "Open State": To modernise Public Administration"), namely by systematic usage of communication and information technologies in management, processing, archiving and information exchange between public services, citizens and economic and social agents.

Sweden

In Sweden information in the area of justice and democracy are available on the Internet.

UK

The UK strategy is to get all public sector information online. The first priority is central government services and is called "**The ukonline.gov.uk**". The information is focused around "life episodes", which enable the users to access all the information they need about a particular event without having to understand the workings of government or departmental delivery structures. There are currently nine "life episodes": moving home, going away, dealing with crime, having a baby, death and bereavement, learning to drive, looking after someone, looking for/getting a job and pensions and retirement. Two further "life episodes" are due for delivery by the end of 2001.

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