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*e*Europe Benchmarking Report

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1. INTRODUCTION

The Lisbon European Council set the objective for the EU to become the most dynamic knowledge based economy in the world by 2010. The *e*Europe Action Plan 2002 - endorsed at the Feira European Council in June 2000 - is a central element of this strategy to transform the European economy.

The overall objective of *e*Europe is to bring Europe online as fast as possible. In pursuing this objective the Action Plan targets three areas:

i. cheaper, faster and secure Internet

ii. investing in people and skills

iii. stimulating the use of the Internet

The *e*Europe Action Plan is built upon a methodology which consists of accelerating legal measures; re-focusing existing financial support programmes; and benchmarking. There have been two previous reports, one to the Nice European Council and one to the Stockholm European Council[1], to assess progress in the execution of the Action Plan. These reports have mainly described the various policy measures, in particular progress in legislation, and assessed their impact. Since then, information about progress made has been regularly published on the *e*Europe website.[2] Benchmarking has only been rudimentarily looked at in these reports as both the definition of the benchmarking methodology and data collection took some time. This Communication is predominantly devoted to benchmarking. An update on progress in the various actions can also be found on the *e*Europe website.

The objective of this Communication is (i) to give a first comprehensive overview of the benchmarking results, (ii) to compare policy progress with market developments, and (iii) to draw some conclusions for the final year of the *e*Europe Action Plan and to consider if further action is needed after 2002.

2. MEASURING PROGRESS OF *e*EUROPE 2002

2.1. Benchmarking approach

The Lisbon European Council established that progress towards the knowledge based economy should be monitored through an 'open method of co-ordination'[3]. Benchmarking national performances is a key element of this approach. Benchmarking works within a political context, in this case the *e*Europe action plan and also within the wider framework of the Lisbon strategy. It must be designed in a way to be relevant to policy decisions. Benchmarking is not an end in itself and it is not a purely statistical exercise.

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1 Nice: **The eEurope Update**, COM(2000) 783, November 2000; Stockholm: **Impacts and Priorities** COM (2001)140, March 2001.

2 http://europa.eu.int/information_society/eeurope/benchmarking/index_en.htm

3 The commission has recently presented its review of overall progress in the Lisbon Strategy ("The Lisbon Strategy - Making change happen" COM(2002) 14).

Therefore this benchmarking exercise is linked to the specific action lines of *e*Europe. It is based on a list of 23 indicators which were discussed with Member States and endorsed by the Council on 30 November 2000[4]. On the basis of these indicators the Commission has launched a data collection exercise. For data collection, the following guidelines were applied:

i. **One methodology for all Member States**[5].

ii. **Data should be recent**: Internet statistics quickly become dated and lose their relevance to policy development.

iii. **Data to be cross-checked with existing data sources** from Member States, notably statistical offices, other international institutions such as the OECD, and private sector studies.

iv. **Data covers all 15 Member States** and Norway and Iceland[6] and, where possible the US, which gives additional results for comparison.

Data related to most of the indicators can now be presented and analysed. Detailed data tables are available on the *e*Europe website[7] and the communication will focus on the most salient points for policy making.

2.2. Internet penetration

The assumption behind the 64 targets of *e*Europe was that they would have an impact on Internet penetration and eventually Internet use which are central objectives of *e*Europe. **This section will therefore first review where the EU is in Internet penetration** before the following chapters show what progress has been made in the three action areas.

Internet penetration is measured in two ways: how many private households have access to the Internet; and, how many people use the Internet regularly whether at work, at home, at school, or elsewhere.

Internet penetration in EU households increased from about 18% in March 2000 to 28% in October 2000, 36% in June 2001, and now, in December 2001, stands at 38%. This means the rapid take-up during 2000 and early 2001 may have reached a plateau. The next measurement in May 2002 will test if this is true. Available national statistics seem to confirm this trend.

The slowdown in Internet take up may be explained by the fact that Internet connections are linked to the availability of Personal Computers which sets an upper ceiling to penetration. Internet through TV sets and mobile devices remains marginal but may grow rapidly in future. The EU countries with the highest penetration levels have reached Internet penetration rates of around 60% of households and further growth will be limited. The fact that they may no longer be driving EU Internet take-up may also explain the slow down in EU growth.

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4 13493/00 ECO 338.

5 Ideally, the complete and harmonised data would have been provided by the National Statistical Authorities. However, this was not possible in the time available which meant that the Commission collected the data.

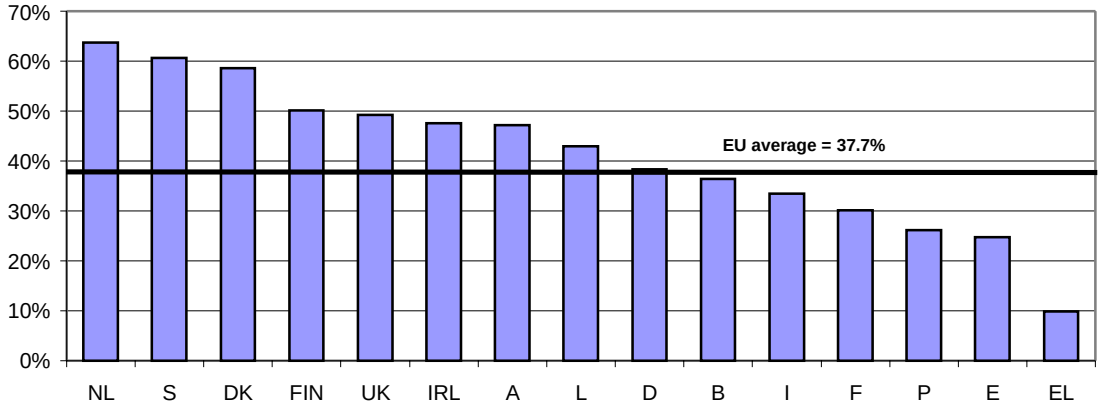
6 Benchmarking was financed by the PROMISE programme in which both countries participate.

7 http://europa.eu.int/information_society/eeurope/benchmarking/index_en.htm

Internet use in the whole population is higher than that shown by household penetration rates. In November 2001, almost 50% of the population (over 15 years) used the Internet either at home, at work, at school, in public access places or on the move. Over 80% of Internet users go online at least once a week. In absolute numbers there are nearly as many Internet users in the European Union as there are in the USA. Usage has increased in all different locations but by far the highest growth is in use at home. However, growth in Internet penetration in Europe has last year still been slower than in the US.

Chart 1 shows **Member States** Internet penetration in November 2001[8]. A group of 3 countries leads the EU with household penetration rates of close to or above 60% and 4 others are significantly higher than the EU average[9]. There are 4 countries within 5% points of the average whilst 4 countries are well behind the EU average. Greece is an outlier with penetration of less than 10% a figure which remained stable over the past year. The leading Member States are better placed than the US which can be considered as a benchmark for Internet penetration. The results are generally encouraging but there remain areas of slow growth and big differences between and

CHART 1



Source: European Commission (Eurobarometer, December 2001)

within Member States. For example, 40% of women use the Internet, in comparison to 56% of men. This difference changed only marginally during the last year: in October 2000, 35% of women and 50% of men answered that they used the Internet. Internet usage is particularly high amongst young people, those with higher education and those who live in a city.

Internet penetration in businesses is far higher than the household rate and now almost 90% of enterprises with more than 10 employees have got an Internet connection. More than 60% have a website. A notable exception is Portugal where Internet penetration in businesses only reaches two thirds of all enterprises and only about a third of companies have their own site. More detail on Internet use by businesses is given in the discussion of eCommerce below.

8 Note that surveys are based on telephone interviews. Households without a fixed telephone can be considered not to have an Internet connection at home. Therefore, penetration rates tend to be slightly overestimated.

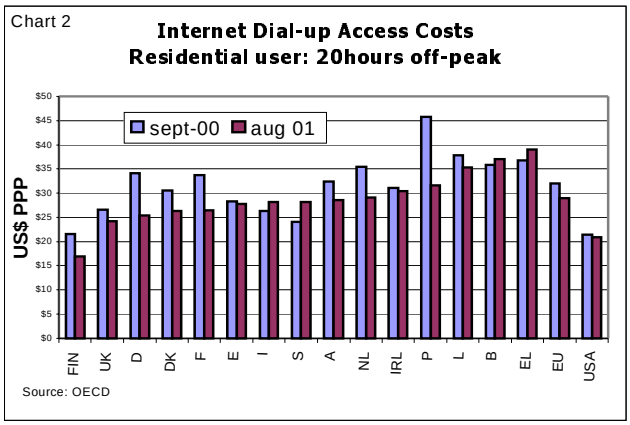
9 This is a weighted average based on the national populations.

The conclusion is that several EU Member States should make more efforts to create a more favourable environment for higher levels of Internet penetration. By the end of 2002, a minimum of 30% household penetration and an EU average of 50% could be achieved.

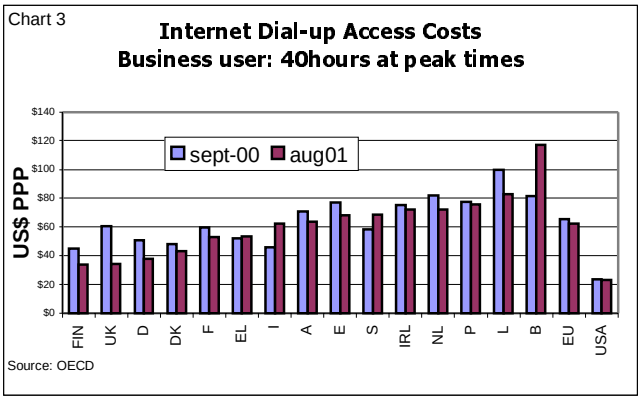
3. CHEAPER, FASTER AND SECURE INTERNET

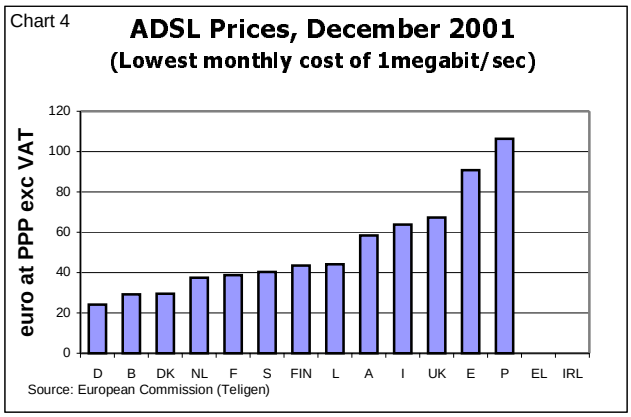
3.1. Cheaper, faster Internet

More competition is driving prices down



Internationally available statistics have shown a clear inverse relationship between Internet price and penetration. However, the objective of a cheaper Internet should not be confused with Internet at an artificially low or subsidised price. The approach of *e*Europe is to stimulate competition to drive prices down to competitive levels away from monopoly prices. This has proved successful as regards Internet access by a standard dial-up telephone line. Prices for Internet access by standard telephone have been going down continuously and substantially in the last two years. A Commission survey, carried out in November 2001, found that for a typical residential user, i.e. 20 hours of usage off-peak, monthly costs are now between €10-20 for the cheapest offer in most Member States, including call charges. **Thus, the marginal costs of Internet access for a PC owner have become small**, but still remain significantly higher than in the United States They are also much higher for broadband Internet access. A first overview of the costs for broadband access can be found in chart 2.



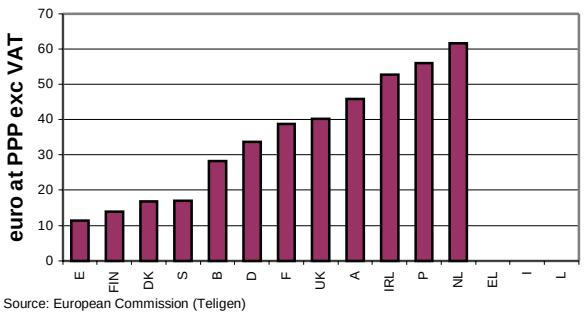


Competition not only drives down prices but also leads to innovative pricing models. One example is the introduction of 'unmetered'[10] Internet access in some EU countries (e.g. the UK).

Stimulating competition was the central goal of liberalisation of the telecom sector on 1 January 1998. Since then, the state of competition in the market has

10 Unmetered access means a fixed price is paid regardless of how long is spent online.

Chart 5



Source: European Commission (Teligen)

been monitored by the Commission Implementation Reports[11]. Recently, a new regulatory package for electronic communications services has been agreed which, when transposed into national law by Member States in Spring 2003, will further strengthen competition.

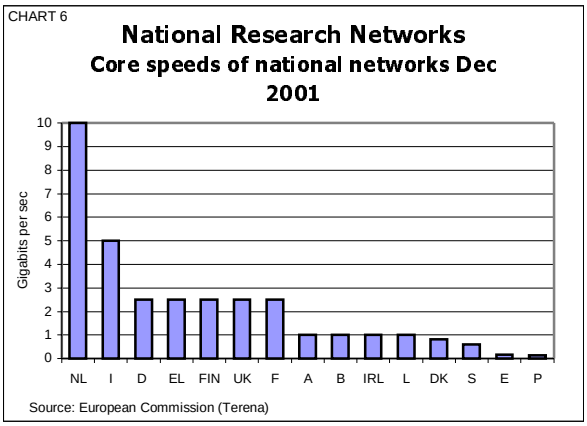
Internet is slowly becoming faster

A slow Internet has some major obstacles for a rapid commercial use. The speed of Internet is an obstacle for two reasons. The time taken to search through alternative multi-layered web sites deters people either because of the inconvenience or the expense. Secondly, through TV, people are used to multi-media and audio-visual rich content. This cannot be offered adequately over the Internet of today. The Commission has recognised the importance of broadband Internet access as a "key factor for improving the performance of the economy" in its Report to the Spring European Council in Barcelona[12].

The backbone infrastructure of the Internet is generally very fast fibre optic rings laid into the ground. The problem is the legacy of narrowband infrastructure which connects this backbone to homes. This is gradually being tackled by ADSL[13] which along with cable offers a first step towards broadband. Other alternatives are also emerging through satellite, interactive digital TV, broadband fixed wireless access, fibre connections to the home; but as yet they remain insignificant.

Available figures on the number of residential broadband connections indicate that broadband roll out varies widely between Member States: Germany has more than 2 million ADSL subscribers, Belgium almost 500,000 and the UK has 250.000 whilst in Greece there are no broadband services available. Not surprisingly, it is those countries with extensive cable TV networks[14] which lead in Internet via cable modem. These countries also benefit from the competition between cable and ADSL providers. Unbundling has only brought limited competition to ADSL supply but some incumbent operators have opted for a positive marketing strategy for ADSL to establish market share in the face of competition from cable.

CHART 6



Source: European Commission (Terena)

Fast research networks: a special case

*e*Europe has tackled one particular aspect of broadband by creating a high speed backbone for universities and research institutes. Research networks can be used as a testbed for new Internet

11 http://europa.eu.int/information_society/topics/telecoms/implementation/annual_report/7report/index_en.htm

12 "The Lisbon Strategy — Making Change happen", COM (2002)**14** and the supporting **Staff Paper,** SEC(2002) 29, 15.1.02.

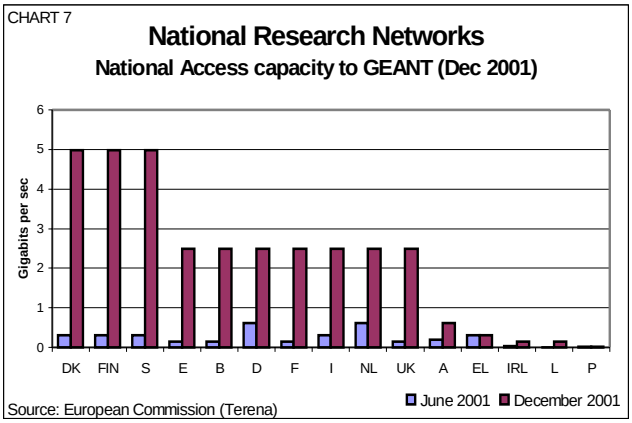
13 Asymmetric Digital Subscriber Line: a technology which converts a normal, copper-twisted pair telephone cable into a high speed downstream digital line.

14 E.g. Belgium and the Netherlands have a cable penetration of more than 85% of households.

technologies and they are expected to pull demand for more bandwidth.

The Commission has co-funded the work of 27 national research and education networks, including all Candidate countries, to upgrade their network. In December 2001, the GEANT[15] network, after a major upgrade, reached a maximum speed of 10 Gigabit/s. **This European research network has now become the fastest in the world, offering the widest geographic coverage (32 countries)**. It is a much needed infrastructure tool for the establishment of the European Research Area. An important goal of the Lisbon strategy towards the most dynamic knowledge-based economy in the world has been realised with the high-speed interconnection of more than 3000 research and educational institutions. This increase of European backbone capacity allowed national research networks to significantly increase their access capacities to the backbone (cf. Chart 7).

Despite this success, the core speeds of national networks vary significantly between Member States as shown in chart 6. This has an impact on the possibilities for researchers to exploit the capacity of the European research network.



The *e*Europe Action plan aimed to interconnect high-speed research networks not only to universities, but also to schools. Most universities are connected, occasionally with innovative solutions (such as wireless campus networks) but few schools. As a result more efforts are needed to further upgrade national networks and to interconnect more learning facilities to these networks.

A more secure Internet

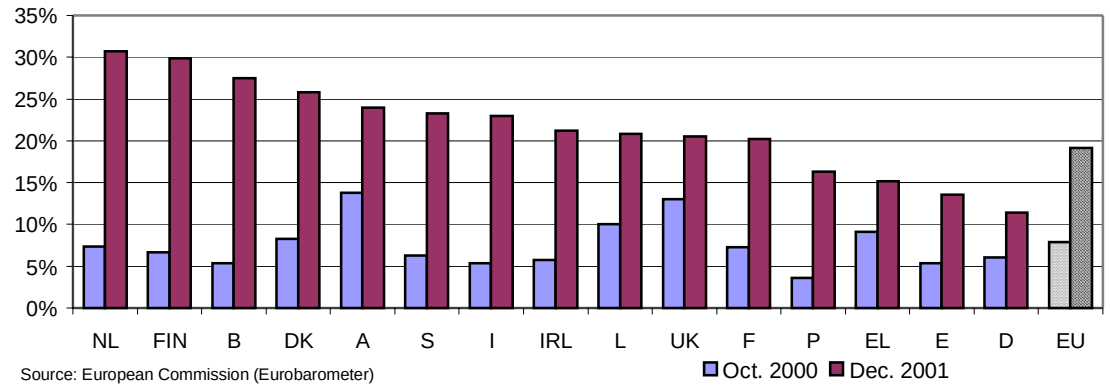
For computers and communication networks everywhere, security has become a major concern. During the short period of *e*Europe there has been a visible increase in threats and security incidents. Virus attacks in particular have become much more common as shown in chart 8.

*e*Europe also benchmarks the use of protection systems. Available statistics show how the number of servers equipped with an SSL[16]connection has increased considerably during the last year (see chart 9). However, no EU country has even half as many SSL servers per capita as the USA.

15 Gigabit European Academic Network (http://www.dante.net/geant)

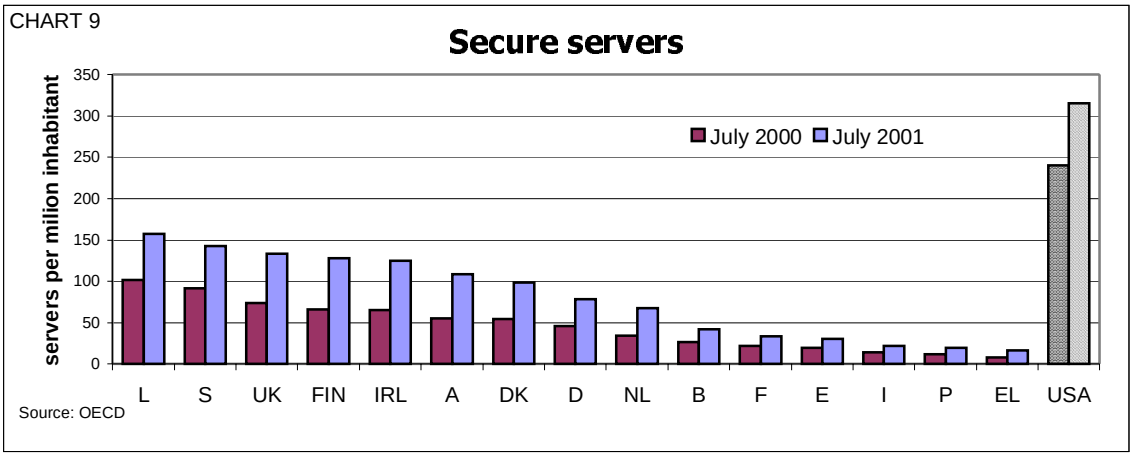
16 SSL is *secure socket layer*, a protocol for encrypted transmission over TCP/IP networks i.e. web sites starting https://.

CHART 8



Progress to improve protection against security threats is slow. An electronic signatures Directive[17] was adopted by the EU but use of this form of authentication is limited. The roll out of a more secure Internet Protocol is only slowly progressing. *e*Europe has triggered a major industry-led smartcard initiative backed by €100m research funding. The market prospects for smart cards, cards equipped with microprocessors or memory chips, such as bank cards, are positive and there is already the equivalent of 1 smartcard per person in Europe.

CHART 9



Against this background, the initial *e*Europe security approach has now developed into a more comprehensive approach of network and information security. On the basis of a Communication by the Commission[18] and a Council Resolution[19], Commission and Member States will take a series of measures in 2002 encompassing awareness-raising, technological support, regulation, international co-ordination. The establishment of a cyber security task force is envisaged and will allow the Union to give a more efficient response to security challenges in future.

17 Directive EC 99/93, entry into force 19.07.2001

18 COM(2001) 289 of 6 June 2001.

19 14378/01 of 6 December 2001.

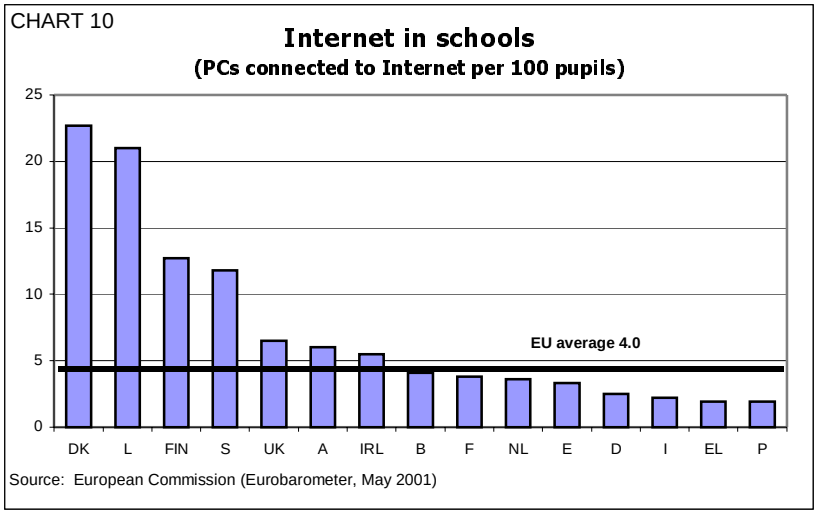
3.2. Investing in people and skills

This objective covers two essential elements of the Lisbon strategy: to give people the skills to exploit information and communication technologies; and, to ensure that no-one is excluded from the benefits of the information society.

Internet in schools

The public sector promotes skills development mainly through education. *e*Europe concentrates on infrastructure and access to the Internet whilst the *e*Learning initiative[20] promotes new ways of learning in the knowledge based society. Connecting all schools to Internet by the end of 2001 was an *e*Europe target. This was all but achieved in May 2001 when more than 80% of EU schools were on-line. However, being a student in a school connected to the Internet does not necessarily mean that one has access to the Internet. Neither does it imply that the Internet is being used for learning. In over 10% of schools connected, pupils did not have access as the Internet was being used for administrative rather than educational purposes.

CHART 10



Source: European Commission (Eurobarometer, May 2001)

Attention must therefore shift to better connections and wider educational use. Internet alone is not enough. Schools must be equipped to allow convenient and appropriate use; Internet must be effectively integrated into curricula; and, teachers must be supported and trained to use the new tools efficiently. The key results of a Commission report [21] on Internet usage in schools can be summarised as follows:

i. On average, there are 12 pupils per off-line computer and 25 pupils per computer connected to the Internet. Half of these computers are less than three years old. However, there are considerable differences between Member States.

ii. Connectivity remains dominated by narrowband technologies: over two thirds of school connections are ISDN and the others mostly dial-up via a regular phone line. Broadband technologies are marginal, although ADSL and cable modem are now more widely used in a few countries.

iii. Whilst computers are now used by a majority of teachers, only a minority of them use the Internet for educational purposes. The main reasons given by teachers who do not use the Internet are poor levels of equipment and connectivity. Lack of familiarity does not seem to be a major problem. More

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20 COM(2001) 172.

21 Commission staff working paper: "*eEurope 2002 benchmarking – European youth into the digital age*" SEC(2001)1583 of 2 October 2001.

than half of Europe's teachers have been trained in the use of computers and the Internet, around 90% of teachers use a computer at home and approximately 70% have an Internet connection at home.

In conclusion, there is a small group of pioneer countries that are ahead in terms of equipment, connectivity and usage. These Member States are benchmarks for the Union and world-wide. There are a small number of Member States that are lagging in almost all areas. In spite of this mixed picture, introducing Internet in education remains a priority in all Member States and European teachers seem to be open and well trained. Ultimately, all pupils should be digitally literate by the time they leave school.

Working in the knowledge-based economy

More than half of EU workers use computers in their jobs, and this has grown by about a fifth since last year. Three out of four white collar workers are computer users. Digital skills are essential to the employability of workers in all sectors. However, people are not receiving the necessary training and only about a third of the EU workforce have ever had computer training for a job.

There are marked differences between the Member States in the proportion of their labour force who have received computer training. **However, in every Member State, the proportion is far lower than the proportion using computers in their work**. The implication is that even those countries with high levels of training need to expand the opportunities for the work force to obtain digital skills.

Training in digital technologies is necessary for all skill levels. Shortage of trained staff at expert level is particularly important as it presents a barrier to expansion e-business throughout the economy. Digital skills are the key to many of the new industries and services that are most likely to lead the recovery of growth. The impact of digital technologies on the type of skills required and the number of workers in possession of those skills will continue to be substantial, both within the sector itself and in the broad range of user sectors.

Analysis presented in the "*Benchmarking Report following up the Strategies for Jobs in the Information Society*"[22] underlines that information technologies help the vast majority of users to work more productively and to better combine work and private life. In particular, the report provided further evidence for the benefits of telework. In December 2001, the report of the 'High Level Task Force on skills and mobility' recommended that Member States should encourage public/private partnerships to better monitor the demand for computers and e-business skills. These partnerships shall also help to define and prioritise the skills to be matched notably against industry requirements, to generate detailed skills profiles and related curricula and training facilities, as well as to promote e-learning.

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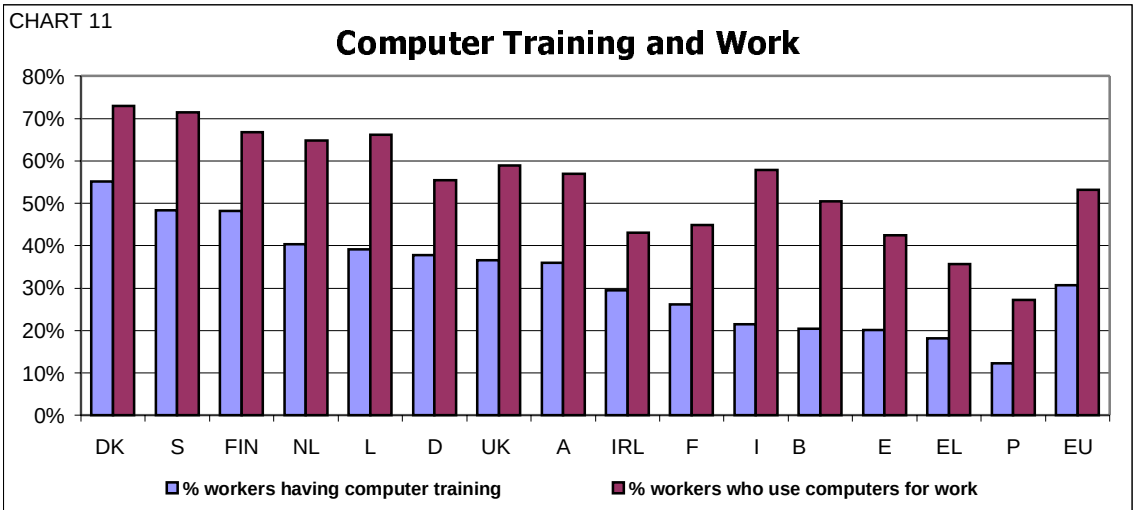
[22] Commission Staff Working Document "Benchmarking Report following-up the 'Strategies for jobs in the Information Society'", 7.2.2001, SEC (2001) 222; this and the other documents quoted in this section can be consulted at: http://europa.eu.int/comm/employment_social/soc-dial/info_soc/esdis/index.htm. As a follow-up to this working document, the Commission will deliver a report on "Information Society jobs: quality for change" with the support of the ESDIS high level group.

The number of people currently teleworking remains small. In November 2001, less than 2% of the work force were teleworking regularly and just over 3% teleworking occasionally. However, nearly a quarter said they would be interested in teleworking and this proportion was fairly constant across all Member States. Thus the highest proportion interested was in Denmark with 28% and the lowest was the UK at 15%. Denmark has by far the highest share of teleworkers at 17% of the workforce, a figure three times the EU average and nearly 50% higher than the next Member State.

Participation for all in the knowledge-based economy

The Lisbon strategy stressed the need for an inclusive knowledge-based economy

CHART 11



Source: European Commission (Eurobarometer, November 2001)

and *e*Europe aims to realise an "Information Society for all". Differences persist regarding access to the Internet and digital skills - between men and women, employed and unemployed, high and low-incomes, highly educated and less educated, old and young. The Commission is promoting its strategy on e-inclusion as part the overall social inclusion strategy.[23]

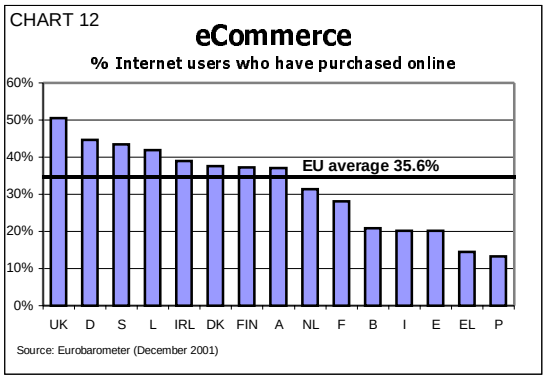
One of the *e*Europe targets in this context was the establishment of Public Internet Access Points (PIAPs) as a means to provide affordable Internet access. On the basis of available information on the number of PIAPs in Member States it can be said that their number is on the rise and that they are well accepted. Almost 6% of Internet users also access the Internet from PIAPs. A recent Commission study showed that the main motives for using a public facility to access the Internet are the absence of an Internet connection at home or at work, better equipment and faster connection at the PIAP and the low or zero costs of most PIAPs. Eurobarometer data also underlined the particular benefits of PIAPs for disadvantaged people (e.g. 19% of users have a low-income and 12% of them are unemployed). As a result, PIAPs effectively serve the purpose of making the Internet more accessible and more affordable.

23 Commission Staff Working Paper "e-Inclusion. The Information Society's potential for social inclusion in Europe", 18.9.2001, COM (2001)1428 and Council Resolution of 8 October 2001 on "'e-Inclusion' - exploiting the opportunities of the Information Society for social inclusion", OJ 2001/C292/02.

3.3. Stimulate the use of the Internet

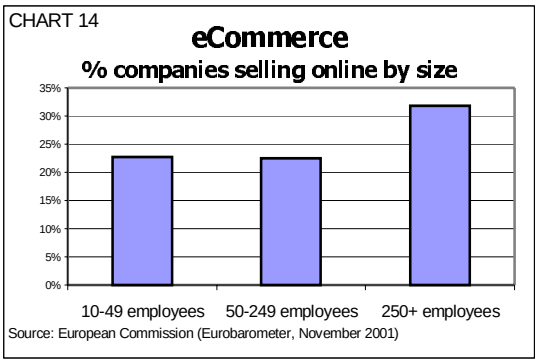
This section covers actions designed to increase Internet use: eCommerce, public sector services and content, and online health services.

eCommerce growth slower than expected

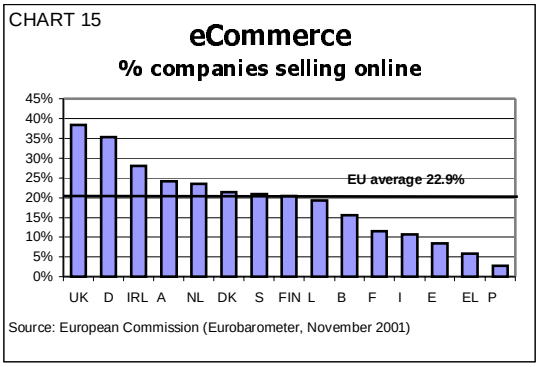


Final demand from consumers for electronically traded goods and services has grown only slowly over the past year. In October 2000, 31% of EU Internet users had purchased online and this rose to 36% by November 2001. This slightly underestimates growth in absolute numbers, as the number of users increased by nearly a quarter. However, only 4% of users classified themselves as frequent purchasers and this is a major problem for eCommerce.

There are variations between Member States in the proportion of Internet users who have purchased online. The pattern broadly corresponds to that of Internet penetration, higher proportions in northern Europe, lower in the south. The relatively higher online consumption of the UK and Ireland may reflect the greater availability of English language services online. UK and Ireland may also benefit from greater familiarity using credit cards. In Germany, greater experience of offline catalogue shopping may raise the propensity for online shopping.



There are also indications that many willing shoppers do not complete their shopping due to high shipping/delivery costs. Increasing competition in the postal sector would certainly contribute to lower prices for delivery.



Another factor is trust, how confident are consumers in being able to obtain redress in the event of an online dispute[24]. Wider use of self-regulation by means of codes of conduct and

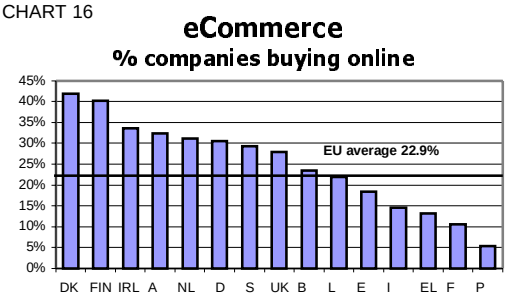
24 The Commission is tackling this through an e-confidence strategy focused on promoting good business practice (including a specific initiative to establish standards for on-line trading), backed up by alternative dispute resolution and the ultimate safety-net of effective access to justice for consumers through the formal legal system.

online dispute resolution could simplify procedures and also make cross-border commerce easier. The Commission has tried to encourage their use in the eCommerce Directive[25], but as yet the proposals have not been taken up sufficiently in the market. Lack of trust works against small firms as large companies benefit from their brand image. This may be another explanatory factor behind the greater online consumption of anglophone countries who are perhaps more easily targeted by large US companies.

Interestingly, nobody forecast the enormous success of eCommerce based on direct links between private buyers and sellers (peer-to-peer, P2P), which seems to appeal to a large share of Internet users. Whether or not P2P can provide a useful business model for B2B will be demonstrated in the months to come. *e*Europe will measure its development.

As for the supply side of eCommerce, overall take-up by businesses is still relatively slow. On average, around 20% of European companies buy and sell over the Internet, with Germany, Ireland and the UK spearheading the sales part and Denmark and Finland strong on the online purchasing side. Big companies are buying and selling more online than small companies and the services sector is clearly in the lead as regards the use of the Internet to sell or purchase goods and/or services.

CHART 16



source: European Commission (Eurobarometer, November 2001)

In six Member States, more than 30% of all enterprises purchase some or all of their supplies via the Internet, with Finland and Denmark above 40%. At the other end of the scale, only 5% of Portuguese and 10% of French enterprises use the Internet to purchase their supplies. The percentage of companies selling online varies from more than 30% in the UK and Germany to less than 10% in Spain, Greece and Portugal. The same level of disparity applies to the use of electronic marketplaces[26] where figures range from 3% of companies in Portugal to 21% in Germany.

These results confirm both other benchmarking results and the conclusions drawn from measuring Internet penetration and Internet access costs. In those countries with a high level of Internet penetration and low Internet access costs, more companies use the Internet to buy and sell online than in less advanced countries.

The fact that fewer companies sell than purchase online is probably because of the higher costs of online selling. Buying only requires a connection and a credit card whereas selling requires a website to be set-up and maintained with adequate security[27] and possibly logistics organisation..

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25 Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market

26 Internet sites using software that allows multiple buyers and sellers to carry out simultaneously commerce transactions over the Internet. These sites take a number of forms, such as catalogues, auctions or exchanges. Some are set up by sellers, others by buyers and still others by third parties.

27 In this context, the Commission will launch in 2002 an "e-Business Market Watch Function" as part of the Go Digital initiative, with the task of monitoring the state of e-Business in Europe using selected

Citizens online not inline

Putting government services online brings benefits to consumers and to governments. For consumers, it greatly increases the utility of the Internet by providing them with easier access to information and reducing the time spent on transactions with government. Governments stand to benefit from reducing costs of service delivery.

Most Member States have adopted or are in the process of adopting **eGovernment** strategies for the provision of online services for citizens and businesses[28]. The *e*Europe target was to have all basic services available online by the end of 2002. The Internal Market Council agreed to a definition of basic services covering 8 services to business and 12 to citizens. Progress in getting these services online was monitored by a detailed survey[29] that investigated 10,000 public service providers in the EU.

The survey defined four levels of online service delivery ranging from simply providing information to full electronic delivery and submission of forms including authentication. The results are shown in chart in which the average level of online availability for the 20 services is converted into a percentage.[30] The key findings are:

i. Services provided by a single administrative unit have higher levels of online service delivery. For example, income tax is generally the responsibility of a centralised treasury office. It can be put online with a single application suitable for all tax payers and has the highest average score of any service. Other centrally co-ordinated services that scored highly are job search, VAT, corporate tax and customs declarations

ii. Services provided by decentralised local agencies are less well developed. In this case some service providers may have well developed online systems but average performance was brought down by those not yet online.

iii. Complicated administrative procedures require important back office reorganisation to transform complex transactions into simple procedures. Chart 17measures the availability of services online i.e. the extent to which the front office is online. It therefore takes no account of back office reorganisation which is where the major cost savings of online delivery are realised.

On the demand side, government services are one of the main areas of information sought by Internet users. Nearly a half of European Internet users have visited government sites. However they mostly just obtain information or download forms.

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indicators to measure its impact. In the context of Go Digital, the Commission also carries out a benchmarking exercise on the adoption of e-business for SMEs.

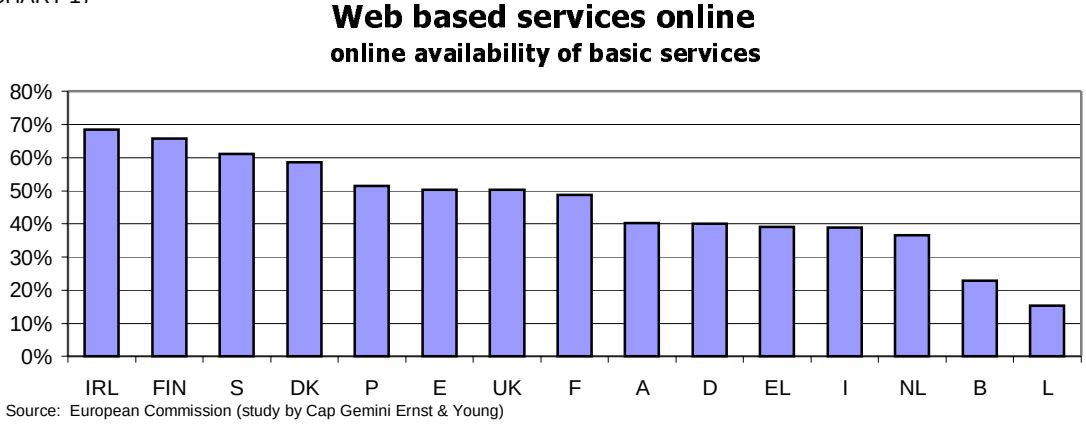
28 Cf. http://europa.eu.int/information_society/eeurope/egovconf/index_en.htm for information on the eGovernment conference organised jointly by the Commission and the Belgian Presidency at which ministers from 28 countries adopted a ministerial declaration.

29 The methodology of the study and the full report can be found at: http://europa.eu.int/information_society/eeurope/news_library/index_en.htm

30 The percentages indicate the average level to which the 20 services are available based on a four stage classification. Level 1 is information only; stage 2 is when forms can be downloaded and submitted online; stage 3 full processing of forms including authentication and stage 4 secure online transactions. These are translated into percentages and averaged across the 20 services. The chart measures the availability of services online i.e. the extent to which the front office is online.

Less than 10% of users have submitted forms. **Government services should be made fully interactive as quickly as possible**.

CHART 17



Source: European Commission (study by Cap Gemini Ernst & Young)

In addition to electronic service provision, there is also the issue of governance "*Publishing council agendas over the Internet, electronic voting or e-mail addresses for politicians will not by themselves stem falling voter turnout,* […] *or recreate confidence in public institutions and decision-making structures*".[31] eGovernment can only be a tool to achieve more open, more participatory, more accountable, more effective and more coherent governance (cf. ministerial declaration of the eGovernment conference in Brussels on 29-30 November 2001 which also states that increasing attention should be given to the provision of pan-European eGovernment services).

Health online

Health professionals use the Internet more and more as a means to communicate with their patients. The results of two surveys show that considerable progress has been made in Internet take-up by general practitioners. In June 2001, 60% of all primary care providers were equipped with an Internet connection, compared to 48% in May 2000. In the same period, communication with patients via e-mail has become much more common: the percentage of general practitioners using the Internet to communicate with patients rose from 12% to 34%.

Health-related information on the Internet is among the most frequently accessed information on the Web. A recent US survey showed that teenagers and young adults consult the Web for health-related information as much as they download music and play games online, and more often than they shop online[32]. As with all other web content, the content of web sites providing medical and other health-related information is not subject to any checks on the accuracy of the information provided. A list of quality criteria for health-related web sites would therefore be useful to set minimum standards for the operation of those sites. The Commission intends to publish a Communication on this issue later this year.

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31 Council of European Municipalities and Regions on eGovernance (28.11.01).

32 cf. "Generation Rx.com: How Young People Use the Internet for Health Information", a survey carried out by the Kaiser Family Foundation in October 2001 (http://www.kff.org/content/2001/20011211a/).

4. CONCLUSIONS

This report shows how the *e*economy is emerging in Europe[33]. It displays sharp contrasts and a mixed picture as regards the arrival of the information society in EU Member States. The main policy conclusions to be drawn from the benchmarking exercise are the following:

i. There are indications that EU Internet penetration might settle below US level. It therefore seems necessary to give more policy attention to alternative platforms for Internet access, such as mobile communication devices and digital TV.

ii. *e*Commerce faces particular difficulties. It is growing, but much slower than expected and seems to be mainly taken up by well-established companies. An urgent review is required to identify obstacles to *e*Commerce take-up. This benchmarking exercise can be the starting point for better monitoring of the economic impact of the legal framework.

iii. Broadband has started slowly and choice is mostly limited to two platforms. The attempt of *e*Europe to widen the availability of platforms has not made much progress.

iv. Many Member States are too far behind leading EU Member States in Internet penetration and use. More efforts are needed to close the gap. Differences in Internet and broadband take-up reflect an EU North-South divide. Structural funds and regional benchmarking are addressing this dimension of the information society. To stimulate access to broadband networks and to benefit from the economic potential of the *e*economy, support to investment should continue to be given.

v. Member States have made substantial progress to give schools Internet connections. However, efficient usage in schools is still at the beginning. Member States need to upgrade Internet connection to broadband, increase the number of Internet connected computers available to pupils, and place greater emphasis on Internet use for educational purposes, in line with the targets proposed in the Commission's report to the Spring European Council in Barcelona.

vi. Benchmarking results show the growing security concerns and support the political decisions that have been taken. The Council resolution on the creation of a cyber security task force should be rapidly implemented.

vii. More and more people use computers in their job, but many of them without being formally trained. To reach the benefits of the Internet, training needs to be expanded and workers be given the opportunity to acquire digital skills which is also an important objective in the European employment strategy.

viii. Socially disadvantaged people are still lagging behind in computer access and training. Thus, promoting 'e-Inclusion' remains a priority for *e*Europe. Accessibility to information and communication systems for people with disabilities should be a particular concern with a view to the year of people

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[33] It confirms the conclusions of the recent Communication by the Commission on the impact of the e-economy on European enterprises (COM (2001)711, November 2001).

with disabilities in 2003.[34]

ix. The ministerial declaration of the eGovernment conference, together with the benchmarking survey should give political momentum to the development of online public services and to the identification of the needs for these services at pan-European level. This will have to be complemented by a focus on back-office reorganisation, the creation of electronic marketplaces for public procurement and investment in new equipment in administrations. The Commission considers to propose in 2002 a Directive which will facilitate the objective of wider exploitation of public sector information.

x. Internet uptake by doctors has made significant steps forward. Online information on health issues is met with brisk demand. The establishment of quality criteria for health related websites and the monitoring of their implementation would contribute to confidence-building and increase health web offerings.

xi. Candidate countries will have become members of the EU by the year 2010, target date of the Lisbon strategy. If the enlarged EU is to reach its Lisbon objective, the Candidate Countries need to be fully integrated into the process[35].

This benchmarking report is only a first step. Progress is not always measurable over a short time. Measurements have to be carried out continuously to see the speed at which development takes place. This report will therefore be a reference for future assessments.

Benchmarking is a learning process. Statistical methodology and practical studies were improved during the process and still need to improve further. A crucial advantage of *e*Europe benchmarking over other measurements is the comparability of results which follow a single methodology in all EU countries.

The focus should now shift to the policies behind the quantitative results. What are the examples for best practices? Member States need to see and compare different approaches and solutions. The thorough analysis of examples also requires the willingness to learn from each other.

Benchmarking also needs to be put into the long-term perspective of the objectives set in Lisbon for 2010. At the outset, *e*Europe was designed as a short term measure. A direct, immediate impact was felt necessary. Benchmarking indicates that technology can move fast, that penetration of Internet can explode, but that societal change takes more time. It requires organisational changes, a shift in mindsets, modernisation of regulation, different consumer behaviour, and political decisions.

When the *e*Europe initiative was launched, it was foreseen as an action to get Europe online quickly. Overall it has been a success and contributed to many more people and most companies now being connected. Benchmarking has highlighted new problems in relation to usage: connections are too slow and broadband is needed to

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34 With the support of an expert group, the Commission will present a report on e-Accessibility by the end of 2002.

35 An action plan for the Candidate Countries, *e*Europe+, launched at the European Council in Stockolm, will be benchmarked to monitor progress in the Phare Candidate Countries.

stimulate new services and help accelerate the growth of eCommerce; schools are connected but the Internet is not yet part of the pedagogical process; government online has far to go before full electronic transactions are possible. **These findings indicate that *e*Europe should be continued beyond 2002 and shift its focus more towards effective usage and availability of the Internet,** in line with the Spring Report.

Whilst all this takes time, 2010 is just around the corner. The *e*Europe concept needs strengthening to encompass more demand-side issues, such as awareness, confidence, security and public services in order to pave the way for the 2010 objective.