Priority: **INFORMATION SOCIETY –Greece**

An Executive Summary

The Greek government attaches a particular importance to promoting the information society (IS) in Greece. It considers that new information and communication technologies constitute an essential tool for an open and effective government and for the improved competitiveness of enterprises. They create new ways of work, new skills, and the need for continuous learning and adaptation of the education system. At the same time they allow for a better quality of life with the provision of improved health, transport and environmental services, and contribute to the promotion of cultural heritage and of the Greek language. The government's concern is to ensure that the emerging Information Society will be a society for all, without discrimination between information haves and have-nots, safeguarding citizens' rights and the freedom of expression and information.

With the aim of promoting the IS in a coherent and integrated manner, a separate Operational Programme for the Information Society (OPIS) is proposed in the framework of the present CSF. This is an innovative horizontal programme, cutting across government departments, which aims to implement the essential features of the White Paper of the Greek government entitled « Greece in the Information Society » of February 1999. It also follows through the eEurope initiative and the conclusions of the Lisbon Summit of March 2000.

However, the development of information society applications is not an end in itself. It can only succeed as part of a wider determination to achieve efficiency and modernity, an open society, and a better quality of life. It is essential for this reason that information society actions are fully integrated into the design and implementation of all aspects of development action and are not restricted to a specific funding priority. The CSF Monitoring Committee should give specific guidance on this point to sector and regional Monitoring Committees especially in relation to the definition of project selection criteria, and the monitoring and evaluation of development impact.

Overall, it is proposed to mobilise in the OPIS about 2.2 billions of Euro of public funding during the next seven years. This represents a level of expenditure equivalent to that mobilised by the most ambitious regions in Northern Europe in the previous period. Even though it will be a challenge to spend such a large amount of resources well, it is certain that very determined efforts are needed to close the gap between Greece and the other EU countries concerning information society applications.

At present, total expenditures in information and communication technologies represent nearly 4 % of GDP, below the EU average, but growing at over 16% every year. PC and Internet penetration at 15% and 5% respectively remain low but are expected to grow considerably. A fundamental precondition for success is the rapid completion of the liberalisation of the telecommunication services market. This is expected to lead to significant reductions in the average cost of telecommunication services which, for business users in particular, remain expensive, as well as to further improve the quality and range of services offered . There is also a great potential for increased use of information and communication technologies (ICTs) in the public administration, in schools and in the workplace, which for the moment remains limited.

This operational programme will have the following lines of action:

A. Education and culture

Building on actions funded in the 2nd CSF, the aim is to create an educational system adapted to the digital age, characterised by greater use of new technologies in education, the networking of schools, universities and the educational community (including administrative units), well-trained teachers and students, as well as the development of digital educational content. It is also intended to use ICTs for the promotion of Greek culture and civilisation, through the documentation of the cultural heritage and the protection of the Greek language.

Following the recommendations of the *e*Europe document, all Greek schools should have access to the Internet and multimedia resources, with adequate web –based support services, by end 2001. Special efforts should be made in favour of youth in less favoured areas by giving them access to public centres. By end 2002, all teachers should have been individually trained as necessary in the use of Internet and multimedia resources. By the end of 2003, the target should be that all pupils leaving compulsory education are digitally literate. The success on all these objectives depends on putting new implementation methods in place in order to accelerate the realisation process. PC penetration amongst students and teachers could also be encouraged through low-cost purchases of equipment.

Educational staff should be trained and continuously informed on new technologies. Appropriate multimedia educational and training software applications need to be developed. Securing a high quality of multimedia education depends largely on the existence of appropriate pedagogic and scientific material. It will therefore be important to develop and disseminate tutorial multimedia material, to promote the certification of scholarly software applications, to create digital libraries connected to the appropriate networks, as well as to establish tele-education centres for teachers and students. Socially disadvantaged groups should not be excluded from the Information Society and computers should serve as a tool for their special education.

Another priority is to supply, by the end of 2001, fast Internet for researchers and students, by continuing the upgrade of the academic Greek network.

Priority will also be given to the application of ICTs in the field of culture. Through accelerated procedures and institutional adaptation where appropriate, emphasis will be given to using information technology and networks for the scientific and administrative documentation and management of Greek cultural heritage (including for managing intellectual property rights), the promotion of Greek culture (ancient and modern) and civilisation using modern communications networks, and the support of new forms of cultural expression that use IT-based media.

B. Public administration and quality of life

This line of action aims at creating an open and effective government, offering better services to citizens and firms, in an environment of greater access to public information and transparency. It is also aimed at using information and communication technologies in fields such as health & welfare, the environment and transport in order to improve the quality of life for citizens.

The first priority is to use information technology to improve the quality of service offered to citizens and firms by the public administration, at central, regional and

local level (Government on line). Back-office IST should be funded as part of projects improving services to citizens in defined and verifiable ways. This involves developing on-line applications (including public tendering and procurement procedures) as well as using ICTs to streamline and re-engineer procedures and communication within and between government departments, covering all of public administration and especially the fiscal and finance, social insurance, justice, regional development and emergency services areas. It also involves the continuation and completion of relevant actions from the 2nd CSF. The goal is to offer a range of basic services on line by 2003.

In this context, special emphasis should be given to the reorganisation of labour market services, according to the action plan referred in the framework of the Human Resources priority in co-ordination with the managing Authority of the IS operational programme.

A second priority is to support the administration of the Structural Funds and of the transition to the Euro at every level of government.

A third priority is to use ICTs in support of a wider strategy for providing higher quality health and welfare services to all citizens and reforming the management of the health sector and its budget. The aim is to create a completely revised health and welfare system supported by information society applications. This involves, inter alia, linking health professionals and managers to a telematic health infrastructure for prevention, diagnosis and treatment, linking regional and local health centres including centres in remote, island and rural areas to medical services in the main centres, developing telemedicine applications, electronic systems for the elderly and the disabled, as well as systems for secure and confidential access to networked patient information.

As a fourth priority, a grant scheme should be set up to finance innovative pilot actions involving public administrations at a regional and local level, on the basis of a merit-based competition. The lessons learnt from these pilot actions will be actively disseminated by the structure responsible for managing the scheme.

A fifth priority is to set up and support geographical and environmental mapping and management information systems, linking central to regional and local government.

Finally, a sixth priority concerns "intelligent transport" through the introduction of telematics applications, in co-ordination with the MA of the transport OP in order to ensure complemetarity in relevant actions. This involves making effective use of traffic management and information services in land transport, supporting the development of air control systems and electronic reservation systems in air transport as well as incident management systems ("search and rescue") in sea transport.

These priorities will be implemented through integrated packages involving training and reskilling as well as the purchase of hardware and software, and mobilisation of external expertise. In this direction, the OP will support the creation and operation of an IS Observatory, whose main task will be to support the IS policy process (through benchmarking studies etc) and increase public understanding of the IS.

Special attention should be paid to the constitution of the teams responsible for preparing and implementing action plans, and to the commitment made by senior management to successfully implement the administrative and management changes that must accompany the introduction of modern office and telecommunication systems.

C. Employment and social inclusion

This line of action aims at creating an environment with increased employment opportunities for all in the Information Society, by supporting enterpreneurhsip and job creation related to the application of information society technologies in established and emerging sectors of the economy, upgrading the IT skills and employability of the workforce, and helping develop new forms of work such as telework.

In terms of training, the OPIS will focus on the development of basic IT skills for the wider population as well as on helping to close the existing skills gap in the IST professions. Special training packages and multimedia materials in the Greek language will need to be developed. The opportunity should be taken to develop more flexible arrangements, make good use of libraries, community centres and other suitable facilities. The action could be linked to reinsertion into the labour market where appropriate. A special action should be developed to promote the understanding and use of information society applications and Internet amongst women, the elderly, and amongst socially disadvantaged groups.

Active ICT labour market actions will be supported through promoting employability by combined training and employment promotion actions, through actions for the acquisition of working experience in ICT firms (trainees), through the promotion of employment in specialised ICT sectors for young graduates or tailored to specific disadvantaged categories of persons and women and through the promotion of tele-work and tele-training pilot applications, especially for geographically remote areas and the islands.

It will also foresee the financing of « spearhead » projects, selected on a merit basis by open competition, which promote new training methods and materials, delivered by new forms of partnership between business and the education and vocational training structures. Quantified targets for training actions will be set in the OPIS.

D. The digital economy

The aim is to help the development of the "new economy" in Greece, through fostering the creation of new firms, the emergence of new sectors, and increased productivity and competitiveness throughout the economy. In this context, the OPIS will promote:

- The use of ICT applications by SMEs (in the primary, secondary and tertiary sector) in order to increase their productivity and competitiveness

- The use of e-commerce in order to turn companies into e-businesses, both on national and international markets

- The development of a regulatory framework that facilitates electronic transactions in an environment of privacy and consumer confidence.

- The strengthening of the infrastructure support for *e*-businesses (providing for example certification, prototyping, networking and information services).

- The introduction of electronic tendering procedures, including by public administrations by 2003

- The development of the content industry by the creation and diffusion of multimedia products (e.g. based on ancient and modern Greek culture, tourism, etc.)

- The start up of high-tech SMEs in the field of ICT applications and services through the development of venture capital, incubators and other mechanisms.

- The use of ICT applications for energy-saving and environmental protection in business activities

- teleworking systems

- solutions for businesses located in remote or island areas

The medium-term productivity and competitiveness of the "digital economy" depends on the synergy between the science, technology and production systems and their capacity for continuous adaptation and renewal. In order to assist this process, the OPIS will promote:

- Partnerships between businesses, and between business and higher education and research establishments, relating to the development or business use of information society technology applications, for example relating to personal navigation, electronic learning environments, alternative organisational environments for knowledge-intensive work, business networking and smart cards

- The upgrading of the high-speed research network, of advanced telematics services and of the ICT infrastructure of research establishments

- The creation and dissemination of digital content and information (databases, libraries, etc.) relating to research needs and the education of new researchers in the ICT sector.

E. Communications

The national communications infrastructure constitutes the backbone of the Information Society. Its development will ensure fast, friendly and cost-effective storage, handling and processing of digitised information and thereby allow the development of the variety of products and services that together characterise the Information Society. The goal is the creation of an environment for the widespread provision of advanced telecommunication and audio-visual services at low cost.

The provision of necessary structures in remote and rural areas should be ensured not only by appropriate regulatory conditions attached to competition in a liberalised market but also by promoting the demand for telecommunications services in such areas by means of the access of private citizens and businesses to infrastructure provided for public sector use.

In general, actions will be implemented in an environment where the telecommunications sector is fully liberalised, competition is promoted, and open calls procedures are used. Major emphasis is given to providing better services, lower prices and more bandwidth by means of introducing greater competition in local access networks. The purpose is to have telecommunication infrastructures available, in analogy with roads. It is in this context that the *e*Europe document asks Member states to commit themselves to undertake measures ensuring the following results by the beginning of 2001:

*   Offer unbundled local loops (by mid-2001)
*   Reduce the leased lines tariffs significantly
*   Lighten the licences granting requirements.

In parallel, for clear progress in this direction, measures consolidating the liberalisation of the market will be financed such as parks for antennas, equipment for controlling emissions and managing the frequencies spectrum, equipment which will permit the best possible regulation of the telecommunications sector and the more efficient monitoring of the market, in order to promote and support the regulatory authorities in the emerging liberalised market and to protect the environment and intellectual property rights.

CSF 3 will finance local access networks infrastructure. The relevant terms of reference should describe the localities needs and the services they ask for (without technological preference). Service providers, which offer alternative conditions in small cities and rural areas should arrange these local telecommunications infrastructures.

In addition to initiatives for the development of local access network infrastructure, broadband services for the public sector, special actions for elderly and disadvantaged persons, and demonstration projects for certain new technologies can also be financed.

A priority should be given to provide IS access to the people in less favoured regions by using, as IS access points, the existing postal agencies in remote areas. The continuation of funding for the reorganisation and modernisation of the postal services will be based on an approved action plan, preparing for liberalisation of the market.

Implementation of the Information Society O P

This OP has the particularity of being implemented by many implementing agencies (IA), opposite to a classic sector OP. The main actors will be the following:

The **Monitoring Committee of the OP** (MC), with tasks as described by the regulation and implementation provisions in the CSF, which is constituted by representatives of involved ministries and bodies and social partners appointed by common ministerial decision. .

The **Single Managing Authority of the OP** (MA), with tasks as described by the regulation and implementation provisions in the CSF, will function under the supervision of a Special Secretary or General Secretary and be led by a "co-ordinator".

An **IS Observatory** of personalities and high level experts, which will be in charge, *inter alia,* of, importing the international state of the art, disseminating best practice methods, assisting the exchange of experiences, know-how and information, providing training tools, commanding and supervising benchmarking studies, and forecasting skill needs and skill gaps for information society applications. The Observatory should work in close consultation with EU-wide and regional co-operation platforms such as, LOCREGIS and IRISI.

One or more **Implementing Organisations** should be created in order to assist government agencies and other institutions in implementing actions of the OP. The detailed operation of such a structure (or structures) will be defined in the operational programme.

The precise procedure for managing and financing individual services through the OPIS will be detailed in the OPIS. The MA will act as the "umbrella" for the management of all actions funded in this OP. Individual projects will be either directly managed by the various implementing agencies or alternatively their management will be delegated (ensuring quality verification) to the Implementing Organisation(s). Action plans will be financed for individual services on the basis of a "business plan" approved in advance. External expertise will be extensively used. Competitive tendering for projects should be used where appropriate in accordance with EU and national legislation. Clear milestones should be established in every action plan so as to avoid slippage in budget or timetable.

Special emphasis must be given to a wide awareness and information action in order to disseminate the potential of IS applications and services amongst the population.

The implementation of the above mentioned objectives could be measured through a set of indicators, the most significant of which are:

INDICATORS	STARTING POINT	VALUE AT STARTING POINT	OBJECTIVE 2006
Internet users/100 inhab.	2000	5	50
Nb of pupils per PC	2000	51	10
% of schools connected to internet	2000	5	100
Nb of PCs per 100 civil servants	2000	15	50
% of health centres connected	2000	0	100
% of SMEs doing electronic commerce	2000	?	15
% of population covered by systems of frequencies spectrum control	2000	5	80
% increase of employment posts in the IS domain	2000	(48750)	80
IS expenditure as % of GDP	2000	4.1	6.2