

## **BULGARIAN NATIONAL STRATEGY FOR INFORMATION SOCIETY**

The Information Society (IS) is the result of the changes caused by the usage of the new Information and Communication Technologies (ICT) in the entire social life. The technologically developed countries adopted their own national strategies and programmes for transition towards the Information Society. The European Union (EU) adopted a strategy for IS together with the Action Plan presented by the European Commission "The European Way to the Information Society". Such strategies and programmes are developed by almost all countries from Central and Eastern Europe as well. These acts outline the integrated framework for IS and encompass key directions as telecommunications, scientific research and development, innovations, competition, medium-scale and small-scale enterprises, economic and social cohesion, intellectual property, data protection, electronic commerce, international relation and cultural exchange.

### **The main characteristics**

of the Information Society are as follows:

- ?? distribution of high intellectual technologies on the basis of computer information technologies in all economic and social activities;
- ?? high employment in the services sphere - over 50% of all working population;
- ?? sharp increase of the amount of the data exchanged whose mastering by traditional means only is impossible;
- ?? depopularisation of specific social and economic processes - small series production, market segmentation, disintegration of part of the big industrial companies, etc.
- ?? increasing the role of the individual - the changes in the labour nature and in the management increase the individual's responsibility;
- ?? support of the qualification level in the dynamically changing world which requires from the people in IS to get educated and self-educated during their whole life;
- ?? globalisation, economic and social cohesion - conditions are established for building „borderless society“, elimination of the "distance" factor, movement to social homogeneity.

The global information policy development is based on the following **principles**: support of the competition; encouragement of private investment; definition of an adaptive regulatory frame work; provision of free access to networks; development of universal information services; ensuring equal rights for access to the information resources;

- ?? provision of diversity in the information content, preserving the cultural and linguistic differences;
- ?? admitting the necessity of global cooperation and special attention to the less developed countries.

**In building the IS, Bulgaria should find an adequate national expression for the implementation of these principles.**

### **The National strategy for IS development specifies**

the main aims, priorities and actions for building IS in our country combining the national interests with the IS conception worked out by the European Union. In accordance with the National strategy a programme is under way under the following conditions specific for our country:

- ?? consolidation of the democratic system;

- ?? European and Euroatlantic integration;
- ?? development of market economy.
- ?? currency board.

### **THE MAIN AIMS OF THE STRATEGY**

are as follows:

- ?? to bind the development of our country with the IS characteristics and principles;
- ?? to point out the common national priorities for transition to IS in economic, technological, social and legislative aspect;
- ?? to outline the main activities necessary for the IS transition;
- ?? to serve as a basis for development of a National programme for realisation.

### **THE MAIN NATIONAL PRIORITIES**

in the establishment of the IS are as follows:

- ?? building of a national universally available information and communication infrastructure;
- ?? introduction of modern ICT in the management, economy, education, culture, health care, national security system, ecology;
- ?? development of ICT industry as a leading branch;
- ?? approximation of the IS legislation to the respective EU legislation;
- ?? creation of high qualification specialists for IS;
- ?? preparation of the society for adequate realisation in IS.

This strategy is developed in accordance with the Programme of the Bulgarian Government "Bulgaria 2001 " and its execution encompasses the period until 2006.

As a result from

### **THE STRATEGY REALISATION**

the following is expected:

- ?? stable growth and effectiveness of the economy;
- ?? higher employment in the state and private sector;
- ?? improving the standard of living;
- ?? consolidation of democracy and the legal state;
- ?? accelerated integration in the European and Euroatlantic structures;
- ?? increasing the effectiveness of the state management and extensive involvement of the citizens in the decision-making process in accordance with the strategy for building modern administrative system of the Republic of Bulgaria;
- ?? broadening the access of the citizens to information and the possibilities for free communication;
- ?? preserving the national traditions, culture

and identity.

The realisation of the National strategy for IS is funded by various sources - state budget, funds under international programmes, various contracts, donations, investment from private and state sector, etc.

On a national level the **IS activities are coordinated, organised and controlled** by the Coordination Council on IS problems to the Council of Ministers. The information policy is accomplished through reciprocal actions of different institutions and through interaction with the European Union, Central and Eastern European countries, etc. **The National strategy for IS development is an act upon which information strategies are developed** outlining the aims, priorities and actions for the particular sectors. Despite the leading role of the state in the IS establishment so far, it should not dominate entirely over the other participants.

The strategy treats **the main national priorities in the following areas:**

- ?? **open management;**
- ?? **technological basis of IS;**
- ?? **new economy;**
- ?? **investment in the future;**
- ?? **man above all;**
- ?? **standardization and IS;**
- ?? **IS law;**
- ?? **Incorporation of people to the IS principles.**

## **Open management**

**The management is a main sphere of new ICT application. The activity of the state institutions shall be put on a modern technological basis for achieving:**

- ?? effectiveness, increased productivity of human labour;
- ?? decreasing the cost price of the public services performed by the administration;
- ?? public control over management, decrease of bureaucracy, limitation of corruption, realisation of the right to information, and, in long-term aspect, development of new forms of citizens participation in the decision-making process;
- ?? application of the rich experience of the private business in the IT area;
- ?? effective communications in the administrative cooperation in the process of incorporation of Bulgaria to the EU,

**A state policy should be laid down concerning the services on the basis of the information available to the institutions and categorisation of the information:**

- ?? information for free public usage;
- ?? information for paid usage on individual applications;
- ?? classified information by law. **It is necessary to elaborate a single act for the unified principles of activity in all bodies of the public administration.** This act shall ensure the independence of the different institutions in development and usage of the systems, including the contents of the information, meeting general standards and procedures. The mechanism of public procurement in the ICT area should be optimised. Gradually the exchange should become mostly paperless as:
  - ?? the administration provides possibilities for telecommunications connection of the citizens and economic subjects with its various bodies;
  - ?? the legal force of the electronic document and electronic signature is settled and the legal barriers before the electronic exchange of official documents is removed;
  - ?? the issue of electronic reference books for the administration acts is organised, as well as for the structure, rights and addresses of the particular bodies, the services offered by them time schedule of the citizens obligations, etc.

**Electronic versions of official state publications should be created, for example Official Gazette, and the legal importance of the official carriers of legal information should be settled.**

**The accelerated computerisation of the legal system should continue** and a possibility for telecommunications exchange of the courts with state institutions, public registers, etc. is to be provided. **At automation of the Constitutional Court activity,** data bases with its decisions and their translations in the main European languages should be established and the possibilities for telecommunications exchange of information with similar institutions for constitutional control should be developed.

**On automation of the notary activities, unified standards should be established, as well as a connection with the single national cadastre,** introducing unified technologies for notary activities and unified automated system for the notary deals.

**The Unified information system for counter-action to the crime should be built at accelerated rates,** which is to help the coordination of the struggle against the organised crime

and corruption. The system aim is to integrate the data available to the competent departments, financial, tax and customs bodies.

**It is necessary to assess the existing public registers and to apply the EU standards for building public stores of information regulating the access to them.** To envisage creation and maintenance of public registers, including:

- ?? unified public register for natural persons, extending the existing system for unified civil registration ESGRAON according to the needs of the society at this stage and the EU requirements to the registers containing personal data;
- ?? unified public register for legal persons, including the economic subjects, political parties, non-profit organisations, their branches and sections.

On the basis of a unified identification code to make a transition to united usage-of the existing statistical, tax, legal, customs, insurance and other data bases and to envisage fast and simple procedures for single registration of the legal persons for the purposes of the legal, tax, customs, insurance bodies.

**The security of the communications and the protection of the data are central issues for the information provision of the management.** To envisage complex programmes for security of communications in management at different levels: technical (hardware and software), organisational, contractual, normative. Through successive application of the programmes for security, to limit the possibilities for destruction or change of the data by failure in the processing facilities, storage or submission of data, unauthorised access to information or tampering with it.

To this end, interdepartmental bodies should be created which in coordination with the particular institutions, economic subjects and non-governmental organisations have to prepare a national programme to solve problems like:

- ?? problem 2000;
- ?? denomination of the national currency;
- ?? introduction of EURO and harmonisation of the national payment documents with the EU requirements.

**The new ICT achievements should be used at full extent in the process of preparation of Bulgaria for a membership in the EU** creating specialised data bases reflecting the activities of the institutions on preparation of the country for membership and to build effective telematic connections with the respective EU institutions.

## Technological Basis Of IS

The decisive condition for IS realisation is provision of access of the citizens to modern, effective and high-quality telecommunications and information services at affordable prices. To this end a universal service shall be provided. Its important aspect is the public access to the plain telephone service via public phones providing free access to the national emergency services.

From the point of view of the universal access, **main priorities in the development and modernisation of the national telecommunications infrastructure** should be the development and improvement of the quality of the traditional services, the integration of the networks for data transmission with the global networks, mass transition to integrated services digital networks (ISDN), introduction of new distributive, interactive and multimedia services based on new high-speed or alternative transmission media to the subscribers, for example, cable television, gradual transition to ATM networks on the basis of optical transmission systems from synchronous digital hierarchy using satellite telecommunications (VSAT systems, low and medium orbit satellites, mastering the position on a geostationary orbit which Bulgaria possesses for building national multifunctional satellite system).

These priorities can be realised through a **universal network** whose fast completion should continue. The modernisation of the national network should be accomplished by gradual putting into operation of **new digital capacities** and gradual replacement of the analogue equipment. In places with low density of subscribers and with complex terrain the problem with the frequency

provision of the radio systems for **wireless fixed access** should be solved promptly and in a flexible manner. The gateways and network architectures on the basis of European or international standards should be specified precisely.

**Further development of Internet in our country** will allow increasing the interconnection among people, support of audio and video real-time connection. The telecommunications possibilities of the Bulgarian Telecommunications Company should be used for creation of proper infrastructure in the country according to the world requirements, to pursue a relevant legal and financial policy for encouraging the utilisation of the network and for increasing the competition among the Internet service providers. The national academic information network should be expanded for development of the education and the research activity and for multiplication of the experience in our country, part of the expenses being subsidised by the state. Popularisation of the Internet possibilities is also necessary. Special measures for ensuring protection from non-sanctioned access in accordance with the international standards shall be taken.

In the process of laying down a strategy for the **information technologies** (development in our country during the incorporation of the country to the EU, the following factors should be taken into account: globalisation of the economy, the local economic infrastructure, servicing in the public sphere, the changes in the nature of work, in the quality of the specialists, in the structure of the work force market, etc. The main national priority in the ICT area should be the production development (design and implementation) of information technologies from Bulgarian manufacturers. The restoration of the traditionally strong positions of Bulgaria in this area will ensure a national basis for our participation in the international labour distribution, it will be an important source for national income and will retain a lot of young and skillful specialists in the country.

## **New Economy**

### **The IS realisation requires changing the priorities, restructuring and ICT introduction in the economy.**

**The information industry** is an important factor for the economic development of the country. So far basic activities in this area are assembling of computers, trade with computer systems, development of software products, individual assemblies and components for the instrumentation, security systems, etc. A change in the structure and organisation of the research and development activities is needed, as well as in the products structure. Their development is a prerequisite for integration of Bulgaria in EU and it has a positive social, ecological and regional impact.

**The small and medium enterprises operating in the ICT area** should be encouraged aiming at additional development of the information and telecommunication infrastructure.

The main priority in the **information technologies** area shall be the consolidation of Bulgaria as a producer of computer and communications systems and facilities and software products.

**The electronic commerce** should be developed which provides performing all commercial activities in an electronic way encompassing the stages of information, negotiation and payment.

The transportation allows extensive introduction of ICT having two main purposes: specific realisation of information and managing computer technologies for solving urgent problems and creation of information environment contributing for the functioning of the most modern transport technologies. The priorities in the transportation area come from its relation with a considerable number of other branches (production, trade) and institutions (border control, customs). The existing centralised system for operative control of the main technological processes in the Bulgarian State Railways, air companies, the Shipping company Bulgarian Maritime Fleet and Bulgarian River Navigation should be developed. It is necessary to build Integrated general

transport systems for documentless control of the transport activity over the whole chain of relations "manufacturer - tradesman - shipping agent - transport agents - customs and other administrative bodies - banks - customer", for technological organization of the relations in the transportation process, for Information servicing of a border point and for documentless transmission of information EDIFACT.

The Introduction of IS in agriculture and among people working in it is expected to bring about positive economic and social results. A basis for that will be in-creasing the Information level within the agriculture workers and simultaneously they should acquire qualification and willingness to seek, find, interpret precisely and apply the Information they need for their specific economic activities. A programme should be created and realised for step-by-step training and convincing the people employed in agriculture in the necessity and usage and application of ICT together with provision of conditions for gradual creation of a respective infrastructure for ICT. It is advisable to create information systems for advice in various branches of agriculture (farming, stock - breeding, fruit - growing, etc.), for agro-market and agro-meteorological information. A dynamic register of the farm lands is necessary. The information in it (including graphical) will be used at different levels and by different offices - municipalities, tax offices, courts, notary offices, individual interested citizens.

## Investing In The Future

Education and science are the main national investment in the future. The preparation for IS requires from its citizens to have functional literacy on ICT and to use it in their everyday life and their professional activities. To this end the educational institutions shall ensure anyone graduating university to be acquainted and to be able to use basic ICT and anyone graduating from higher school to know and use ICT in their respective professional area. A new task is organising the preparation of the society members as a continuous process of education and self-education. This will lead to continuous and full deployment of everyone's individual capabilities, will contribute to overcoming the social isolation, to easier adaptation to the fast changing social environment and to decreasing of the regional disproportions. Tele-education, multimedia, tele-lectures and video-lectures and other forms will be used for the realisation of this process. This will require elaboration of educational materials and accessories in accordance with the new forms and methods of education. A mandatory condition is the provision of openness and broad access for anyone to the respective resources and educational services taking account of the national and cultural identity.

Under IS conditions a new model of development of the scientific researches should be built specifying new priorities and mechanisms of organisation and funding. The academic society should work out this model coordinating with the state institutions the priorities for the scientific and applied research in the areas relevant to IS and a mechanism for their realisation. New corporate forms of partnership between business, industry, educational and research institutions in Bulgaria for distribution of innovations and knowledge have to be part of this model. This way Bulgaria will become an attractive place for research and development and the leakage of young and highly qualified researchers abroad will decrease abruptly.

The education and the research and development **require modernisation of the library system and provision of broad access to it** and to its information resources. To this end it is necessary to establish telecommunications connections between libraries and to provide access to Internet.

**Bulgaria has to take an active part in the EU Fifth Framework for research, technological development and demonstration activities (1998 – 2002). Thus, the scientific and technological research which is basic to IS will become compliant with the standards of this programme and this will be of key importance to IS development in Bulgaria.**

**Man Above All**

**The IS creates a new dimension in the social policy as well, related to the possibilities for improvement of the quality of employment and the social integration of the people employed.**

New non-typical flexible forms of employment arise together with the traditional ones: partial work time, temporary contracts for a particular job, tele-employment. For their development, especially for the tele-employment, a legal regulation should be created. Thus the differences between the uneven groups on the labour market decrease (women, disabled persons, workers close to retirement, students, minorities, emigrants). The ICT potential should be used for encouraging higher standards for secure and healthy labour conditions settling a control system on them based on acceptance of new normative acts which ensure harmonisation of the Bulgarian law with **the EU directives and the ILO conventions**.

**The ICT application in the health care will have a significant effect.** A national computer health network should be launched, based on national information and communication infrastructure. It will allow to exchange information among physicians, hospitals, pharmacies, laboratories and pharmaceutical enterprises and the various health departments and organisations, while the patients, especially disabled persons from villages and border regions, will be able to get connected with the health offices and to receive directions by specialists in emergencies. The Introduction of electronic cards with data about the medical status of the patient, treatment, medical images, results from analyses, etc. should be implemented as a priority.

**The culture** is becoming an area where the newly created global market and the dropping out of geographical and state borders are very strongly manifested. The management of the culture should use fully the ICT possibilities through standardisation of the criteria and information technologies for processing the information about cultural monuments, creation and updating of data bases with cultural monuments, telecommunication access to data bases for the national cultural heritage. Priorities in this area are overcoming of the communication and ideological isolation of the national culture, creation of competitive Bulgarian culture as a market product, representing the national cultural funds through the modern communications, creation of public adaptation for respecting the copyright and the other Intellectual property rights, support of traditionally authentic and unique cultural traditions and preservation of the cultural variety. Special attention should be paid to the Bulgarian language as a „small language" and to the ICT possibilities for representing Bulgarian works in other languages in the related world.

The following trends are exhibited in the **media** integration to the Information Society standards:

- ?? gradual withdrawal of the state with its regulating forms from the media space and rehabilitation of the public role of the individual;
- ?? dropping out of the ideological control and development of technological facilities -for control over unlawful and harmful contents;
- ?? convergence of electronic media, telecommunications and computer technologies.

Unlike some areas in economy where the state still has the leading role in their putting on a modern technological basis, in the electronic media area the state should arrange through legislation the liberalisation of the media space and, ensuring the constitutional rights of the citizens, to give freedom to deployment of processes like:

- ?? depopularisation: strengthening of the regional communication should continue, through the license policy of the regulatory bodies to encourage the development of radio stations, air and cable televisions both with national and regional coverage, to strengthen the independence of the regional centres of the Bulgarian National Television and the Bulgarian National Radio;
- ?? interactivity: through creation of specialised media applications to activate the personification of the emissions and to broaden the activities of social importance as tele-education and real-time conference public discussions programmes for people of non-equal positions, etc.;

- ?? extensive usage of contemporary technological solutions as digital technologies, satellite transmission of programmes, etc.
- ?? globalisation: to combine the free reception guaranteed by the legislator and relay of foreign radio and television programmes in order to extend the possibility for access to the world culture with the Bulgarian presence in the global media space.

## **Standardisation : REVOLUTIONARY CHANGES ARE AHEAD**

**In the standardisation area IS imposes not merely corrections, but revolutionary changes: re moving the mandatory nature of the standards** and ensuring **independence** of the national standardisation bodies from the executive power, i.e. putting the standardisation on a **broad public basis**. A **close interaction** of the national bodies with the international and regional organisations should be provided, the procedures should be simplified and the **international and regional standards should be adopted** as national ones. Thus, the necessary globalisation and compatibility of infrastructures and technical systems will be guaranteed.

As the standardisation is closely related to the areas of certification and accreditation, another first-rate task is the creation of a modern **system** for teste and certification which through its accreditation system is to serve as a basis for the mutual recognition within the single European market.

**The state departments should** reconsider their **technical normative acts and the harmonised stan dards referred in them**. Only through clear definition of the so called "regulated area" where the authoritative bodies can by technical regulations establish well-grounded barriers to trade the mutual relation between technical normative acts and the standards related to them can be established in the way adopted in the EU and painlessly to achieve voluntary applicational standards.

**The new standardisation legal frame shall allow introduction of international and European standards in our country in the original language by the method of adding a title page in Bulgarian or by the method of referencing.**

**In organisational aspect it is necessary to create a public standardisation body and to transfer step** by step rights and responsibilities for organisation and carrying out of the national standardisation on the basis of the suggested new legal frame of this activity.

## **IS Law**

In the Information society the importance of the legislation related to the information and its usage increases. The legal arrangement of the following is of significant importance for the IS:

- ?? information resources management;
- ?? ICT industry;
- ?? telecommunications;
- ?? electronic media;
- ?? International data transfer;
- ?? access to information, confidential information, information inviolability of the citizens;
- ?? data protection and information exchange security;
- ?? computer crimes;
- ?? intellectual property;
- ?? library and archive activities;
- ?? management information systems, etc.

The legal arrangements of the information relations shall develop:

- ?? **simultaneously with the process of approximation of the legislation** of the country to the EU law, taking account of the trend to borderless telecommunications,
- ?? **in a modern way** and according to the contemporary ICT development,

- ?? **in a flexible way** taking account of the increasing economic importance of the Information as a commodity; the universal nature of the information as part of the human labour, education, leisure time and way of life; the convergence of the information sectors - information industry, electronic media, telecommunications.

The development of the information legislation should allow creation of favourable conditions for stable economic growth of the country and for increasing the quality life **of the people**.

The grounds of the legal arrangements of the "**Information Society services**" should be established consecutively as an uniform activity encompassing the existing and arising new types of services provided remotely, by electronic means and on individual consumers' demand. Such services are, for example:

- ?? professional services provided by telecommunications means;
- ?? Interactive entertainment services;
- ?? electronic libraries, electronic periodical press;
- ?? electronic commerce, financial transfers;
- ?? electronic notary office;
- ?? remote educational services, etc.

As regards to the "Information Society services" the principle for the free movement of goods and services should be applied in view of including Bulgaria in the single liberalised European market.

The legal arrangements of the **intellectual property** is another area where the technological development is of first - rate importance. The advance in the technologies allowed the subjects to copyright to be reproduced in an electronic way and to be disseminated in a telecommunication way. Ahead are issues like:

- ?? rights on domains;
- ?? rights on software;
- ?? rights on data bases;
- ?? rights on integrated circuits topologies, etc.

The Information Society is accompanied by specific negative phenomena - **computer crimes and crimes in electronic media which are to get their legal regulation**. Computer crimes are crimes with respect to networks and communication systems as unauthorised access to information, damaging data, erasure of records of liabilities and unjustifiable enrichment, using services without payment, abusing information systems. There is an increase in the crimes for which the telecommunications networks are favourable environment as pornography, violence, race discrimination in networks, money laundering, organising dangerous actions for the public as explosives manufacturing, assaults, etc. It is necessary to introduce effective penalties for such crimes which have to be applicable in cross-border networks.

For stimulating the development of the high - tech productions and services a favourable investment climate should be guaranteed by the legislation and the export of high-tech products should be encouraged. The creation of high-tech parks should be arranged by the legislation as organisational forms for accelerated development in this area.

## **Incorporation To IS**

The Information Society is a society for all. For the successful transition of our country to IS, acquainting the public with the technological, economical, social, cultural, ethical, regulatory, etc. aspects of the new ICT, with the advantages and risks of IS is decisive.

Through different means and channels (media, literature, expositions) **the broad public should be systematically informed about different** problems of IS, their importance, the possibilities of the modern ICT and the risks accompanying them, as well as about the national and international initiatives held.

**The optimisation of the social and economic spheres as a result from ICT usage** contributes to the incorporation to IS. Through them the "distance" factor, the differences with regard to ethnic, religious, language, sex, health status, etc. are overcome, the state - owned

and the private sectors are stimulated for high-quality and express servicing of the citizens, the possibilities for education and self-education during the whole life are enriched, new types of working places are opened, better work conditions and conditions for increasing the standard of living are created.

The transition to IS is a global world process. Due to its nature **IS stimulates the interaction among different states in view of their incorporation to the global Information Society.**