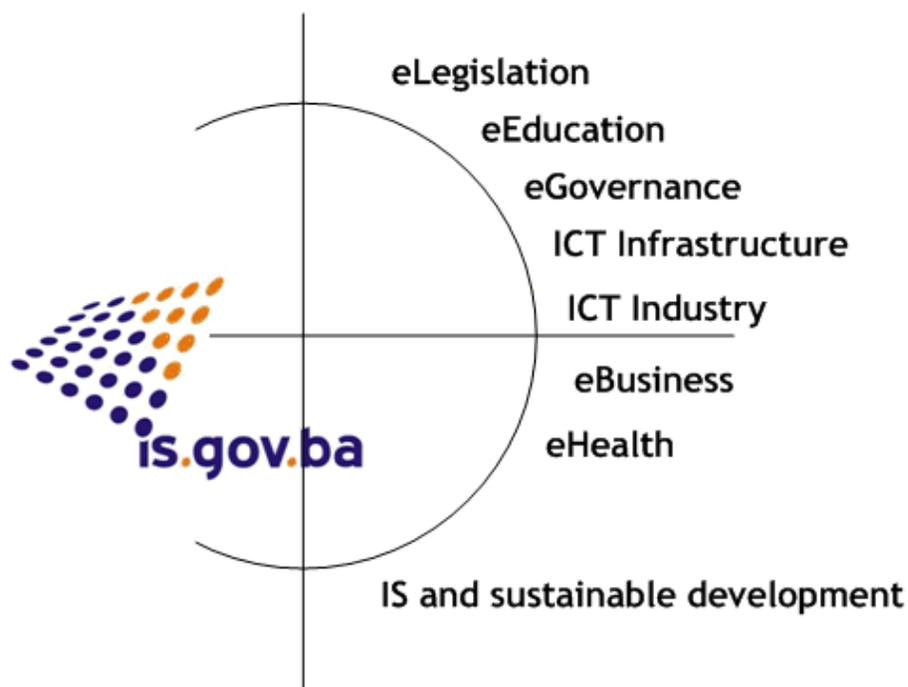




Council of Ministers of Bosnia and Herzegovina
Vijeće Ministara Bosne i Hercegovine
Савјет Министара Босне и Херцеговине



Policy of Information Society Development in Bosnia and Herzegovina



COUNCIL OF MINISTERS OF BH

UNITED NATIONS DEVELOPMENT PROGRAMME

Project: BiH ICT Strategy (Development of Information Society)

Document: **POLICY FOR DEVELOPMENT OF INFORMATION SOCIETY IN BOSNIA AND HERZEGOVINA**

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Starting from a commitment for a development of Bosnia and Herzegovina as a modern society with economy and governance based on know-how, and able to become involved into the European integrations and also to become their integral part,

Bearing in mind that the application of information and communications technologies (ICT) and building of information society is:

- fundamental for the overall development and future of Bosnia and Herzegovina,
- a strong means for building of confidence and more intensive regional collaboration,
- a key means for a decrease of developmental discrepancy between Bosnia and Herzegovina and European Union and the only path that will enable Bosnia and Herzegovina to take a worthy place within the united Europe;

Taking into account the interests of both public and private sectors, as well as institutions and business companies, and all the other social groups and every single citizen of Bosnia and Herzegovina;

Recognizing that:

- only information societies, where know-how and timely, encompassing and correct information happen to be the basic governing resources can ensure a progress and future for all the citizens,
- a divide between a level of development between societies, social groups and individuals is in a direct proportion with the divide about the level of application of information and communications technologies (digital divide),
- Bosnia and Herzegovina must act proactively and quickly towards a decrease of technological and developmental discrepancy, because the process of transition from a industrial into information societies in the developed countries has already gained impetus and is in at an advanced stage;

Respecting and taking into consideration all the similar initiatives, activities, projects etc. in Bosnia and Herzegovina, such as, for instance:

- Policy of Bosnia and Herzegovina Telecommunications sector, the Law on Communications, and the establishment and activities of the Regulatory Communications Agency,
- Poverty Reduction and Development Strategy Plan of Bosnia and Herzegovina (PRSP),
- Realization of complex information systems, notably within the state sectors (such as CIPS Project),
- The establishment of Ministry of Communications and Transport, Agency for Statistics of Bosnia and Herzegovina, and Agency for Measurements of Bosnia and Herzegovina,
- Initiatives for the establishment of Information Society Development Agency,
- the analysis of the current state of informatisation and the possibilities for application of information and communications technologies (BiH ICT Forum), and the analysis of the readiness (eReadiness Assessment) of Bosnia and Herzegovina for building of information society, as having been done within the projects of the Forum for information and communications technologies with the support of UNDP, etc;

Following European and other worldwide initiatives, such as Government on-line initiative (G7, 1995), eEurope Action Plan (Feira, 2000, as having been passed on the basis of the conclusions from Lisbon at the level of Prime Ministers of European Union member-states), plan Europe+ for the informatisation of countries in the process of candidacy for accession into the European Union, a global world initiative for the Information society development, under the auspices of United Nations, etc;

Reaffirming the readiness and commitment for a realization of requirements and concrete actions that spring forth from the *Agenda for Information Society Development* (October 2002, Belgrade) having been adopted by the Southeast Europe countries, and which represents the global action plan for a harmonized informatisation and the quick development of the region;

Confirming its readiness and commitment for a realization of requirements and concrete actions, springing forth from the *Agenda for Information Society Development* (October 2002, Belgrade), which had been adopted by the Southeast European countries, the signatory of which is also Bosnia and Herzegovina, and which represents the global action plan for a harmonized informatisation and the region's fast development.

Understanding and accepting the specific role of the Council of Ministers of Bosnia and Herzegovina, Governments of the Entities, Parliamentary Assemblies and other relevant political subjects for, above all, a creation of suitable environment for the accelerated development and building of Information Society in the form of adoption of adequate policy, strategy and concrete activities;

The Council of Ministers of Bosnia and Herzegovina passed the document

Policy for Development of the Information Society of Bosnia and Herzegovina

as *the framework and basic document*, in accordance with which the future legislation, acts and other regulations will be passed in the process of building and development of information society, and also upon which the future decisions will be taken on the development directions, action plans and priorities at the level of Bosnia and Herzegovina and its entities.

1. VISION AND GOALS

1.1. Bosnia and Herzegovina shall, by following the European processes, and with an accelerated application of information communications technologies build a modern economy and society, where information, knowledge and human resources are of vital importance.

1.2. Citizens of Bosnia and Herzegovina in information society will be enabled to accept new tasks and technologies, and a quick and simple access to desired information will be made available to all of them. The work of government bodies will be transparent, and services rendered cheap and efficient. Companies will be involved in a high profit development and application of advanced technologies. Bosnia and Herzegovina will become a part of developed Europe and a member-state of European Union.

1.3. The application of know-how and ideas for the development of Bosnia and Herzegovina's information society will create conditions to enhance the development of education, health services, economy, governance and the standards of living of all the citizens of Bosnia and Herzegovina

The development of information society of Bosnia and Herzegovina will transform the current underdeveloped economy and society into a middle-developed economy and society, capable of integration into European Union until the year 2010.

1.4. The information society development goals, through a wide application of information and communications technologies, as defined in this policy are as follows:

- the increase of know-how and abilities of citizens to live in an information society,
- a creation of new market environment, new business processes, know-how and adequate means of organization,
- the increase of cost-effectiveness, competition, quantity and quality of services rendered and products manufactured, as well as the application of innovation in economy, government, etc.
- the increase of investments and employment,
- a development of information and communications technologies industry (software, engineering, hardware, consultancy),
- a development of small and middle-sized companies,
- reaching of a sustainable economic development along with a protection of environment,
- the increase of standards of living of citizens,
- a harmonized development of information society, including distant (rural) areas,
- the increase of gross national product,
- reaching preconditions for European and regional integrations.

2. BASIC PRINCIPLES AND COMMITMENTS

2.1. **Free flow and access to information.** Bosnia and Herzegovina will develop as a democratic society, where there will exist a free flow of public information and a possibility to access them, under the equal conditions for all the citizens, business firms and institutions, as well as there will be a possibility for a quick and simple communication of citizens (in both ways) with political structures, the state level and local authorities. The access to and the free

flow of information can only be limited by law, in order to secure the privacy of personal data, business secrets and related issues.

2.2. Equality and a lack of discrimination. Bosnia and Herzegovina will provide for all its citizens, private and public sectors, the universal communications services, i.e. low costs use of communications infrastructure and services, particularly the Internet, under the same conditions for all, and in order to avoid 'a digital divide' among them.

2.3. Multiethnicity and multiculturality. In the process of information society building and development specificity and diversity of Bosnian and Herzegovinian society will be respected and observed, as well as the history, culture, tradition and custom and achievements of all the peoples living in the country.

2.4. Stimulation of research. A development and application research in the field of information and communications technologies will be supported by a selective stimulation measures, notably in the form of customs and tax exemptions.

2.5. Education. The basic 'digital' literacy, or the know-how about the features, potentials and the ways of use of information and communications technologies, will be deemed as elementary segment of literacy among the citizens of Bosnia and Herzegovina. The use of advanced information and communications technologies will be considered as a standard means in the educational processes and functioning of educational system.

2.6. Competition and market. A quick development of information society and the application of information and communications technologies in Bosnia and Herzegovina will be enabled through a promotion of sound and fair competition and the open nature of market through the processes of de-monopolization and liberalization.

2.7. Rational use. Mechanisms for a harmonized planning and rational spending of material and financial resources will be secured, and the State and other institutions and organizations will direct them towards the information society development in view of a current difficult economic and social situation in Bosnia and Herzegovina.

2.8. Legal framework. The information society building and development will be followed by a timely adoption of appropriate legislation and other legal documents for all the aspects of application of new technologies and processes that are being introduced and promoted in compliance with and in accord with the existing legislation in Bosnia and Herzegovina, as well as with the documents and legislation of European Union.

2.9. Promotion Of .ba Domain And The Local Internet Exchange Node. The Council of Ministers will promote and support (through diverse benefits and the reduction of users' costs) the use of B&H .ba Top Level Domain, and the creation of national Internet node by allowing the connection to such a node based only on bill of costs principle.

The Council of Ministers will, in terms of adequate and transparent use, make the basic guidelines and assign the institutions that will perform administrative and technical management of **.ba** domain according to the envisaged guidelines, as well as functioning, on a non-profit basis, the national Internet node.

2.10. International collaboration, co-ordination and standardization. In view of the process of globalization and integration in Europe, it will be of enormous importance to develop the information society in harmony with these processes through an international

collaboration and co-ordination and with the application of international standards. In order to make the process a success, it is indispensable to increase constantly the number of those who apply the standards and provide a continuous education of relevant subjects.

2.11. The needs of future generations. In the process of information society development the current environment and setting that the present generation will hand over to the future generations must be constantly reviewed. The needs of the future generations ought to be accepted, but they must not be endangered by the priority meeting of the current needs and their present proponents and interest groups. In addition to the adequate application of information and communications technologies a special attention should be paid to the systemic support to education, primary health care, the protection of environment, etc.

2.12. Follow-up and evaluation of information society development. The follow-up of information society development will be provided based on a realistic set of criteria and indicators. Gathering of data in order to obtain the desired indicators must not burden considerably either a public or private sector.

2.13. Keeping of quality human power. Keeping of quality human power and highly skilled specialists in the fields related to the information society development and the end of considerable brain-drain into the more developed countries through a creation of stimulating environment for living and work will be deemed as the long-term priority of Bosnia and Herzegovina.

2.14. ICT business orientation. The government will influence with its decisions a creation of setting suitable for the establishment of ICT industry (telecommunications equipment, computer equipment, computer software and the software for telecommunications needs) and the development of ICT business (service providers, application providers, contents-oriented providers, etc.).

2.15. Partnership between private and public ownership. With a promotion of private property in the form of partnership between the private and public sectors in the information society development a positive environment will have been created for both the local and foreign investments, the level of employment will increase, resources for research and innovations will be mobilized, and economy and government will directly benefit from it.

2.16. eGovernment. The promotion of eGovernment will enable all the citizens, organizations and institutions a simple and low costs access to governmental services, acts and documents, rendering of cheap and quality administration services through integrated networks, as well as a better efficiency of civil service. A reform and transformation will secure the government to be at full disposal and service to citizens and economy.

2.17. Promotion of investments. In order to increase the level of use of information and communications technologies (in the public sector, economy, organizations, non-governmental organizations etc.), as well to provide a stimulation to ICT industry, governments will support in a continuous way the existing ones and promote the new investments in the form of exemptions and various while purchasing and introducing information and communications technologies. Customs duties and tariffs on the imports of information and communications technology equipment will be decreased.

2.18. The role of media and Public broadcast system (PBS). The role of media is recognized, and particularly the Public Broadcast System, as a rather important one in the

information society development. The role is especially important in the sense of access to information, as well as to a dissemination of know-how about the information society technologies towards broad segments and strata of society, and, notably, towards those of them who happen to live in rural parts of the country and do not have a simple a low costs access to information and communication technologies.

2.19. The role of family in a local community. Through the support to use of information and communications technologies, local communities will promote the new forms of family life and the involvement of a family into the society. The family, as the basic pillar of the society's development, will create new environments for a lifelong learning, work at home, the mobility of communications and the publication of documents that promote the positive role of the family in the new society.

2.20. Local matters and cultural sustainability. Bosnia and Herzegovina will work on models that provide non-discriminatory access, storing into memory and distribution of its heritage and know-how from the field of culture through information society technologies towards the Bosnian-Herzegovinian society as a whole, specially those rural communities that happen to be separated in a physical and cultural way from their central environments. The creation of setting through the establishment of foundations and the opening of Internet forum will secure the full support of electronic publishing of local cultural artefacts, and the digitalization of heritage.

2.21. Health. The model "Health for All" will be in te focus of development of Bosnian-Herzegovinian health care system, with a particular attention to be paid to the introduction of information and communications technologies into health care institutions, and the concepts of telemedicine, telephysicians and ePharmacy.

2.22. Persons with special needs. A full participation into the information society will be provided for persons with incapacitation, senior citizens and other persons with special needs, both in the process for the information society creation and in the use of information society benefits.

3. AREAS OF DEVELOPMENT

ICT Infrastructure

3.1. ICT Main Road of Bosnia and Herzegovina. In order to have a quality communication, a wider scope and a safer exchange of data, and the exchange of video and other broadband signals, Bosnia and Herzegovina will build an ICT Main Road, with a considerable gigabyte capacity, based on optical media, digital systems transfer and the most recent technologies (such as IP/MPLS). The ICT Main Road will provide at the State level for the government institutions and business firms a quick and broadband communication, internal interconnecting of parts of Bosnia and Herzegovina's territory, a connection with the neighboring countries, etc.

3.2. Broadband access network. Network operators at local and regional levels will provide to its users broadband, interactive, multimedia, intelligent and mobile services with differentiated attributes (such as video at request, a fast access to Internet and Internet

telephony), and which can be rendered in the form of technologies of the following types: xDSL, HFC, FTTx and WLAN.

3.3. Access to Internet. Network operators and service providers will secure, through rendering of a universal service, the access to Internet for every single citizen of Bosnia and Herzegovina.

2.5G and 3G network services and mobile IP communication for the mobile Internet will be provided for some groups of users, notably those who come from business environment.

ICT Main Road operators will provide virtual private networks services, based on Internet, for corporate and other systems with secure Internet protocols.

3.4. Network and information security. Network and information security is important and indispensable for a functioning of information society, and particularly in the eBusiness segment. That is why service providers must be able to provide such a service to all, and notably to business users of infrastructure and network services, which require the security and privacy in data and information transfer through the introduction of security protocols and appropriate forms of protection.

3.5. Introduction of new information and communication technologies. In the process of building of ICT infrastructure the introduction and application of technologies which will provide e-type services need to be supported. One should also support: technologies transfer, foreign investments and other types of collaboration for investments into the manufacturing that can provide, at least, some partial needs for hardware equipment and software products for the realization of previously mentioned commitments.

3.6. Connection with other policies. In order to achieve progress envisaged a close connection between information and communications technologies, as well as with other telecommunications technologies and services, demands a strict implementation of Telecommunications Sector Policy regulations, primarily those that refer to the processes of liberalization and privatization, and the issues related to universal services and a revision of tariffs and prices.

ICT Industry

3.7. Industrialization in the area of information and communications technologies. Information society development will be followed by the industrialization in the area of information and communications technologies, especially in the software industry segment, through both the public and private sectors. Small and middle companies in the private sector will be especially supported, and their production and business connections with the public sector, and the eventual exports.

3.8. Creation of environment. The Council of Ministers of Bosnia and Herzegovina, as well as the governments of the Entities, will influence with their respective decisions the creation of environment suitable for the information and communications technologies industry, with the intensive use of human power, space, geographical position resources, and other potentials of Bosnia and Herzegovina.

The governmental structures will, especially, do the following:

- adopt and promote the appropriate industrial standards,

- create programs that aim at revoking the custom duties on the imports of production materials and components for all kinds of communications and information equipment, which will be used in the ICT production,
- stimulate a decrease of interest rates on loans and credits invested into the production which happens to be in the function of informatization (by giving subsidies to banks, etc.),
- decrease the taxes on turnover of products and services in this area,
- develop the modalities of providing tax and other exemptions for every new work place open in this area,
- support a creation of technological parks, etc.

3.9. **Basic products.** The production development related to telecommunications equipment and software for the use in telecommunications, manufacturing of computer hardware, software industry, ICT consulting and business activities of service providers, contents providers, application providers etc, will be duly supported.

eBusiness

3.10. **New economy.** Know-how and ideas will enable the economic development of Bosnia and Herzegovina, along with its natural resources and the assets of economy under the conditions of globalization, open and unrestricted competition, and a considerable technical and technological progress. Information society human power resources will constitute the main axis of the “*new economy*” (Internet and eBusiness) and the economic progress.

3.11. **Development of economy.** The development of economy will be quicker, better and safer if it is going to use the information society technology means. Communications and exchange of information among people will stimulate the economic development and reduce the business cycles, as well as enable timely operations, etc.

The information society development in Bosnia and Herzegovina will be the support to industry, products and services for a rapid and stable economic growth, as well as the integration of Bosnia and Herzegovina into global economic processes and into European Union.

3.12. **eBusiness.** eBusiness as the segment of information society defines a complex of technology, infrastructure, processes and products, which necessarily must take into consideration: the entire industries, applications, economic activities within the global market, and they consist of the ICT infrastructure, the financial sector’s infrastructure and the system of payment, as well as the infrastructure of distribution and delivery.

Infrastructure for eBusiness

3.13. **ICT infrastructure.** ICT infrastructure represents the indispensable means for all the firms, public and other institutions, households and individuals, when it comes to eBusiness. Requests for eBusiness justify the needs for faster changer in the ICT sector in terms of its organization, development and exploitation.

3.14. **The Financial Sector infrastructure.** The financial sector infrastructure and the system of payment is needed for eBusiness as the infrastructure that mediates between person who place their savings into banks and investors, it helps the payment system, but also in allocation

and discipline of capital for the increase of economic benefits both at the individual level and for the overall economy. The financial sector infrastructure represents, at the same time, the network for the implementation of monetary activities and transactions, which are the result of the country's macroeconomic policy.

The financial sector infrastructure will secure the transaction processes in eBusiness to take place in real time and in several different currencies at the national and international markets.

eBusiness participants demand fast, reliable and secure financial transactions, and this will be provided for.

3.15. Infrastructure of distribution and delivery. Infrastructure of distribution and delivery is an important connection between the electronic and the real market worlds. Some products and services are delivered in a digital manner, but the majority of products must be delivered in a physical way to the final destination. That is why the special attention ought to be paid for the infrastructure of distribution and delivery. Only the fast and quality delivery, with low costs, makes sense and helps eBusiness development.

This infrastructure will become modernized effective and efficient in Bosnia and Herzegovina. It primarily refers to transport and postal infrastructure, and services rendered by customs offices. The issue of digital deliveries not related to physical delivery of products and service will be addressed in a special way.

eBusiness directions

3.16. eBusiness directions. All eBusiness directions in business environment, and with all of their specific features, use the same basic infrastructure components of eBusiness, by developing **business to business (B2B)** and **business to consumer (B2C)** relationships. The basic eBusiness directions, which will be developed, are: eCommerce, eBanking, eBrokerage and e in production and business processes.

The aforementioned infrastructure is needed for all business activities, as well as security services, and the appropriate business environment with legislation.

eEducation

Education for Information Society

3.17. General information for Information society (information literacy). The educational system will promote and provide the overall information literacy of population, *especially in rural areas*. The new information curricula will be introduced towards such a goal into primary and secondary schools and universities, whereas the existing ones will undergo the process of innovation. Related to this issue, the necessary programs for school teachers' information education will be carried out. The information literacy programmes for a wide spectrum of population will be supported, *and particularly the programmes for the young generations*. One of the possible strategies of information literacy will be the use of library resources as contact/access points.

3.18. Dissemination of know-how on the information society. Universities, schools, training centers, libraries and other institutions will be the centers for dissemination of information society technologies. Electronic media will be used for such needs, and, especially, for a raising of awareness about the need of accepting the information know-how and skills.

3.19. Specialist education for information society. The information society based on know-how requires the new kinds of human power. It includes not only the narrowly specialized information and communications experts, but also a wide variety of new occupations connected to a processing of information and know-how, or quite a different way of work on the already existing types of work places.

The University curricula will be revised and made more relevant to meet the new needs. They will also become more flexible in the sense of finer tuning the specialist disciplines, quicker responding to needs in demand from the working environment and more flexible in terms of a better treatment of interdisciplinary specialist areas.

3.20. Post-education for information society and lifelong learning. The information society technologies develop rapidly nowadays. One can expect several shifts of a few generations of technology during one's lifetime. That is why a lifelong learning will become an inevitable situation and a precondition for a quality living within the information society.

Possibilities for different categories of adults will be provided in order for them to obtain necessary skills and know-how for work and living in the information society through the introduction and promotion of lifelong learning concept. The lifelong learning will become the key factor in the increase of adaptability and a possibility of securing employment in the competitive economy based on know-how.

3.21. Academic and scientific research activities. One can not expect any progress or making of viable human power resources basis in a certain area without academic and scientific research activities. The academic and scientific research in the domain of Information and Communications technologies will be stimulated in a number of ways and, especially through a direct financing of research oriented towards the information society technologies. In addition to the direct support to academic and scientific research institutions, the government will stimulate both private and public sectors respectively in various ways to invest into the academic and scientific research sectors, and to make the academic and scientific research activities more applicable in conducting business activities.

3.22. Quality and standardization. All education curricula will become subject to quality assurance standards at the state level. They will have to be adapted to the European and other standards accepted worldwide. Next to the quality of curricula themselves, the standardization in the areas of teacher education, learning technologies, methods and related issues will be also supported.

Information and Communication Technology for Education

3.23. Connectivity to Internet and research and educational networks. All the universities and all the schools will have a broad band access to Internet. The State will support this connectivity both directly and indirectly in order to secure free-of-charge or low costs access with covering of minimal operation costs. The access will be provided also for the libraries, museums, records offices, institutes and similar institutions, which play an important role in the educational system.

The State will provide a development and functioning of national research and educational network, which will be connected to pan-European research and educational networks, and primarily to GEANT. The State will support functioning of the national and research and educational network not only in terms of providing of connectivity and services, but also

through financing of diverse development and academic and scientific research programmes and projects.

3.24. Development of platforms for different forms of electronically supported learning. Universities and the majority of schools will be able to offer different forms of electronically supported learning, including the access to virtual university campuses, and in order to achieve the maximum quality and efficiency of the educational system. The know-how will be offered in the form that can be accessed to through Internet and other electronic equipment.

The evolution of school and university plans and curricula will be supported in order for them to be involved into new ways of electronically supported learning. The diverse forms of educating teachers will also be supported in terms of mastering diverse methods and other techniques of electronically supported learning.

3.25. Advancement of computer facilities for teaching and academic and scientific research activities. Educational and academic and scientific research institutions will be supported by different sets of measures in efforts to enhance their own information and communications facilities. Purchase of computers, network equipment, software and other accessories will be supported and stimulated, including the development of high performance computation infrastructures, such as diverse computerized research platforms, GRID technologies etc.

3.26. Educational management information systems. The educational system and educational institutions will be stimulated and supported in the development and application of different information systems. These systems will be primarily intended for a rational management of educational institutions, but also towards better governance of the educational system as a whole.

3.27. ICT for Librarianship. Information and communications technologies and different types of library information systems will be used intensively in a wide spectrum of librarianship activities in public, school and special libraries, respectively. Networking of libraries on different territorial and functional principles will be supported.

eHealth

3.28. eHealth. Bosnia and Herzegovina will accept the new approach to a designing of health care protection through the application of new modern technologies, which, in practice, will mean a fundamentally different way of thinking about the process of health care, based on the use of the most recent ICT and computer support at all levels of health care system.

3.29. Health for All. The model “Health for All” will be in the focus of Bosnia ad Herzegovina’s health system development. By the introduction of new ICT into the health system of B&H society, the more successful exchange of information will be achieved between the health professionals and patients. Organization boundaries will be effaced, tele- and continuous care within the public and private sectors will be enabled, increase the use of computer-based protocols and guides, health electronic data will be introduced, paper communication will be reduced, the health professionals’ skills will be improved, and, finally, Internet and other web technologies will be introduced into the everyday use with the goal of improving the health status of the entire population in Bosnia and Herzegovina.

The user will be in the very system of health care system. The user will be allowed to take more part in the very planning, development and use of the health care system. The government will develop policies and strategies that will promote the rights of patients and the participation of citizens in the decision-making processes in health care, as well enable them to be well informed.

3.30. Information systems in health care. By the application of modern ICT in health care sector, information system in the sector will be developed. It will be user oriented, and supported by all the participants in the health care system. The reformed health care system, with the application and use of ICT, will stimulate the development of a consistent public health and pharmaceutical information systems, as well as the health management information system in Bosnia and Herzegovina.

3.31. Networks. The integrated information network development within the health sector will be supported health Intranet). The development of all the other networks that lead towards a realization of a single, integrated information network in health care will also be supported. Governments, ministries of health, Health care insurance institutes and health institutions will secure the necessary resources for the establishment of an integral health information network as a precondition for a successful development of health information systems.

3.32. Research. Health research will be supported and stimulated, as well as the information and communications systems. They will enable a better support for again of, the effective use and dissemination of know-how as the support of health for all policy. The research development in the health sector and medicine for the evidence-based decision-making will be promoted, as well as enabling of multiple use of knowledge and know-how. The research of information technologies in health and medicine will be promoted. It means the development and support for a wider user of telematics/telemedicine in the public health and patient protection.

3.33. Telematics. Medical telematics in the future B&H eHealth will enable teleconsultations within the country (urban/rural) and outside the country in the form of teleconferencing, telepathology, teleradiology, and with the final goal of the establishment of future tele-care for the users who have deliberated to use them. telematics in the field of scientific research will be directed to solving of medical problems such as: joint work and interactive and mutual influence of researchers, the access to leading institutions, specialists and their knowledge, a free access to information and educational databases, the development of new telematic technologies and the way of their application, expertise and evaluation and the assessment of efficiency of application, especially in medicine and pharmacy. Telematics will also help in the rational use of health institutions network and bring closer the top services to the end users.

3.34. Standards. Health care information systems in Bosnia and Herzegovina will be based on the open, compatible and standardized elements. The standards will be defined, which will represent the framework for concepts, design and health information system development in Bosnia and Herzegovina. Health information will be authorized through the appropriate legislation and protected from unauthorized access.

3.35. Health system reform support in Bosnia and Herzegovina. The use of new ICT in health care will directly support the reform processes for the establishment of a modern health care system in Bosnia and Herzegovina.

eGovernment

3.36. Government reengineering. A transformation of government on the basis of application of information and communications technologies into eGovernment will enable the government and public services to come closer to the needs of citizens, business systems and non-governmental organizations. It will increase the work efficiency and the quality of services rendered by the government, along with the decrease of costs. The term “Government” in this document will refer to the Council of Ministers of Bosnia and Herzegovina, the entities and cantonal governments, ministries and the local government organs.

3.37. Technological and development bases. The overall concept of eGovernment development and implementation will be based on the current technological trends and technologies, above all on the Internet technologies. In order to protect investments and secure mutual operational framework, solutions based on the open standards will apply, wherever necessary and justified. “Open source” reliable software products solutions will be also stimulated. The unique methodology for the government information systems development will be developed and adopted. They will support the standardized programme solutions and equipment in order to achieve the fastest and most rational implementation.

3.38. eGovernment infrastructure. The existence of modern communications infrastructure, based on optical transmission lines, is the indispensable precondition for the eGovernment implementation. In order to provide the electronic exchange of information and documents at all the horizontal and vertical organization levels of Government, the Government communications infrastructure will be secured, with access points for all the organization units, based on the modern transmission technologies, and with suitable possibilities for a gradual enhancement of transmission facilities within the particular network segments. eGovernment contact points to Internet, for the communication with citizens, business systems and non-governmental organizations will also be provided. eGovernment communications infrastructure will be the part of the national communications infrastructure of Bosnia and Herzegovina.

eGovernment information infrastructure will encompass web application servers, data and transactions servers, management of systems for storing the data (storage management), edge servers, as well as security servers and directories’ services.

3.39. Mutual operational capacity of eGovernment organization units. In order to achieve mutual operational capacity and coherence of information systems in the Government sectors, a technical framework for mutual operational capacity will be set up in the form of appropriate specifications and standards. The specification of meta-data will also be established within the public sector in order to have effective search for and the location of information in the sector’s information systems.

3.40. Fundamental registers. A harmonization and/or integration of fundamental public data will be achieved, and provide their administration, manipulation, access and use.

The law will regulate and stimulate such solutions that use the current and valid data from the fundamental registers, which, among others, include: civil register of persons, birth registry

books, dead persons registry books, the newlywed registry books, registry of vehicles, personal documents (IDs), etc.

3.41. **Security.** Government will provide a secure environment for the electronic transactions of its administration, as well as for the electronic transactions with citizens and business systems through a building of secure network and services, a reliable service for the administration of digital certificates (issuing, prolongation, cancellation, renewal), and the protection and encryption of data. Government will closely co-operate with the private sector in the process of development and implementation of such an environment.

3.42. **Government joint functions.** Joint government functions in diverse organization parts of the Government (management of documents workflow, decision-making support systems, financial operations, management of personnel data, purchase procedures, statistics systems, etc.) will be made automatic in the application of project relying on open standards and respecting the specifications for mutual operational capacity. The standardization of programme solutions and equipment in the different Government organization units will be stimulated and supported.

3.43. **Specialized functions of some Government sectors.** Government will, along with use of new technologies, and in order to increase the efficiency and the quality of services, as well as to alleviate the work of its employees, make some specific work processes automatic in some segments, in compliance with the adopted standards, principles, commitments and deliberations. The specialized applications will enable the users to obtain administration services through electronic services.

3.44. **eDemocracy.** Government will use ICT to strengthen and develop democracy in Bosnia and Herzegovina through a creation of conditions for a direct expression of opinions, suggestions and proposals of its citizens and the virtual citizens forums and the Government; the possibility of electronic voting, etc.

Government will make its work more transparent with the application of ICT, whereas a pluralism of information sources and opinions enable a better understanding of citizens and a better value of their standpoints in the decision-making process. Government will become closer to citizens, and they will, in turn, become participants in the governance in local and state structures (eCitizen).

Government will stimulate and support the projects and initiatives that use ICT for the promotion of gender equality and the stimulation of participation of persons with incapacity or the elimination of any kind of discrimination among citizens. The use of ICT in all the other segments will also be stimulated and supported, especially those that can exert influence on the strengthening and building of a democratic society (such as, strengthening of independence of regulatory bodies, legal system, etc.)

3.45. **Services: C2G, G2C, G2B, B2G, G2G.** Different kinds of services (G2G, G2B, G2C, C2G, B2G) will enable the users of services to obtain the desired information, or to do any type of work with the administration through any channel of communication, at any time and from any location. The electronic services will be able to offer diverse possibilities to do in an electronic way some of the following: paying of taxes, fees, customs duties, licenses, etc. They will also allow: a submission of requests for identification documents, certificates, licenses, excerpts from documents, various types of permits and clearances, as well as to enter the birth registries, registries of residence, wedding license and certificates, death certificates, etc. They

will also allow firms to be registered, or provide desired statistics data and analyses, imports-exports permits and declarations. In the same manner, they will improve the communication between the different government levels, as well as the regional and international collaboration.

3.46. Portal and access points. in order to provide unique entry points for a simple and user friendly access to Government information and services through Internet for citizens, business subject and the Government employees, the adaptive Internet portals will be established. The access through portals will be enabled from work places, home computers or public information kiosks. In addition to portals, the interested subjects will have access to desired information and services through telephones, facsimile, SMS or through a direct communication with the Government administration.

Information Society Legal Infrastructure

3.47. Information society legal infrastructure development. A legal infrastructure development will be set up in a manner that the existing constitutional, legal and political frameworks can be used in the largest possible extent. It means that the existing direct or implied authority of the state in relevant sectors will be applied. The tendency will be to transfer the authority of the entities and the Brčko District to the State level in this area as well. The harmonization of regulations will be stimulated whenever such a process can be the fastest and most efficient means of realization of the Information Society Policy and Strategy.

3.48. Information society legal basis. Bosnia and Herzegovina will work towards the implementation of a postulate that, without the unique State economic and legal space, there cannot be the unique information society. The State, the Council of Ministers and the Parliamentary Assembly have a primary task to define well the profile of encompassing and adequate legal basis under the concrete conditions. The legal instruments must be in the form of laws and not of regulations.

3.49. Unique legal infrastructure. The legal infrastructure will be set up as the whole and as an open system, which does not allow territorial and political divisions, and even less it can permit certain partial or sector-bound attitudes. It will enable not only a fast progress of propulsive sectors, but also unhindered involvement of regions that are lagging behind into a unique whole.

3.50. Creation and connection of databases. One of the priorities in the legal infrastructure development will be the legal regulation of the connection between databases. Due to practical reasons, the creation of state organs and different agencies and their respective databases (CRA, Agencies for privatization, commissions for concessions, electric power transmission operators, competition council, etc.) must be achieved almost immediately.

3.51. Secrecy of data. Although the regulation of databases implies the protection of privacy, official and business secrets, it is, nevertheless, necessary to point out the importance of secrecy and the boundaries that must not be crossed. Since the good material and legal solutions do not mean much without the adequate process solutions, the procedural aspects of protection happen to be in the focus of policy.

3.52. Globalisation of society. The systematic scrutiny of the influence of informatization on the entire legal system will be carried out: from administrative, criminal to international

private law. The strategic focus will be on *eBusiness* legislation, such as *eCommerce*, *eTrade*, *eContract*, *eProcurement*, *eSignature*, *eCertificate*, *eBanking*, etc. The second most important strategic goal is a regulatory and legislation struggle against the widely used monopolies in all the sectors, which exert a direct influence on the creation and functioning of the information society.

3.53. Harmonisation of regulations and legislation with EU solutions. The basic legal and political guidelines will be the establishment of the harmonisation process with the European Union laws and regulations and the monitoring of such harmonisation. It does not exclude some solutions from the USA legal system and the international *soft law*, there where it improves the overall legal regulations of the information society.

Information society and sustainable development

3.50. Realization of environmental sustainable development. A realization of environmental sustainable development is one of the Millennium Development Goals, as express in the United Nations Declaration. The basic emphasis is on the need of attributing the more equalized, if not the equal, importance to the economic, social and environmental dimensions, as well as to understand and respect their more or less obvious interweaving and all kinds of mutual interconnections.

3.51. ICT influence on the environmental sustainable development. The Government will harmonies a relationship between the diverse ICT influences on the sustainable development. It will stimulate positive influences of a wide ICT application. It will contribute to bringing close of the former divergent goals, and, at the same time, it will allow the economic growth, social cohesion, peaceful co-existence and environment protection. In other words, it will contribute to the more equalized and more just development. It will promote alternative solutions in order to decrease the negative consequences on environment, such as the increase of energy consumption, emitting of poisonous gases and radiation, electronic hard waste and undesired effects in the sense of the increased consumption of physical goods or transport.

3.52. Synergy between information society development ad sustainable development. Bosnia and Herzegovina will respect the following elementary principles that allow the realization of the potential synergy between the information society development and sustainable development:

- Innovations in terms of organization, way of work and mutual co-ordination of relevant institutions must be equally radical, efficient and effective as the technological innovations, in order to keep the pace in an appropriate manner with ever faster and more important changes;
- Government, business, academic institutions and non-governmental organizations must act in a coordinated way and give the full support to the relevant activities,
- A successful linking between ICT and sustainable development implies the acceptance of the long-term, and not the short-term deadline as the basis for any activity at the political or business levels.

3.53. Monitoring of information society development effects on the environmental sustainable development. Government will monitor the potential possibilities and negative effects on the information society development at three levels, according to different stages in the development, production and use.

- Possibilities and influences having been created by the physical existence of related information and communications technologies and processes, where it would include a design, production, functioning and waste disposal of ICT products. A special attention must be paid for the ICT functioning to: an optimization of energy sources and supply, a decrease in energy consumption, a decrease of negative effects caused by the physical components waste disposal; a harmonization with the EU directive related to the electronic waste disposal (WEEE directive), as well as to recycling of certain components;
- Possibilities and influences having been created by the existing manner of information and communications technologies application. The Government will its active role exhibit through a number of activities in the following fields:
 - gathering, distribution and manipulation of information about environment, where the emphasis will be on a creation o a single Environmental data registry and the integral National Environmental Information System. It will also stimulate the introduction and use of software packages: geographical Information systems, Global Positioning Systems, and Planning Support Systems, as well as the use of information and communications technologies for the quality assessments of influences that the new technologies or investments exert on the environment and the sustainable development;
 - the processes of introduction of telebusiness (work at home with help of information and communications technologies) will diminish the need of physical traveling of workers to work place;
 - use of telemetric equipment in order to decrease the traffic congestion, the time of travel and environment pollution;
 - optimization of methods of products delivery, as ordered through Internet, and also t increase the use of collective means of transport.
- Possibilities and influences having been created by the aggregated effects of the large number of people who happen to use information and communications technologies in a mid-term and long-term time consuming period, such as.
 - a change in nature of relationship between a firm and a market;
 - a decrease of the proportional energy consumption with the economic growth increase – it will stimulate the possibilities for decrease of the consumed energy per GDP unit;
 - a decrease of proportional increase in pollutants emission and the economic growth – it will stimulate the possibilities for decrease of the pollutants emission per GDP unit;
 - changed paradigms of living and housing – it will not stimulate a possible increase f the environmental pressure to some regions in the form of the increased environmental imprint;
 - it will stimulate the use of computer simulation programmes (i.e., a sustainable city) in the urban planning process in order to have a better insight into the city itself and its environment as the whole system.

4. IMPLEMENTATION

4.1. Information Society Development Strategy. Based on this document, the Information Society development Strategy will be done by end of 2004. The Council of Ministers of Bosnia and Herzegovina will adopt the Strategy by end of 2004. The Information Society Development Strategy will cover the following development areas.

- ICT infrastructure, ICT industry and eBusiness
- eEducation
- Government

4.2. Development programmes and projects. The Information Society development Strategy will be followed by the appropriate Action Plan, which includes some concrete implementation steps, development programmes and projects with adequate descriptions, holders of realization, deadlines, assessment of resources needed and the expected realization effects. The State will, stimulate the implementation of these programmes and projects through various measures and activities (including a better development environment, through short-term and long-term additional financial assets, different kinds of support and exemptions for the implementing holders of development programmes and projects from both the public and private sectors, the support for research activities in this area, etc.).

The protection of investments in all these activities will be secured through:

- the application of solutions based on open standards,
- lesser dependence of those who deliver ICT equipment, software and service (the original code of applications wherever possible, possibilities to access data/contents through different tools, a possibility of migration to alternative platforms).

4.3. Policy implementation holders. The Council of Ministers of Bosnia and Herzegovina, the parliamentary Assembly of Bosnia and Herzegovina and the Governments of Entities will be responsible for the realization of Information Society Development Policy. The Council of Ministers of Bosnia and Herzegovina, the Governments of the Entities (and, if need be, other governmental sectors) will set up adequate expertise bodies with defined scopes of responsibilities and duties. Their work will secure a co-ordination of activities and the implementation of goals as having been determined in the Policy and Strategy, respectively, and in compliance with the adopted Action Plan. The relevant holders will also identify/establish the forms of organization and competence for decision-making of the issues related to the Information Society Development (some Ministries, Committees, etc.)

4.4. The Agency for Information Society. The Agency will be set up as a separate organization at the level of Bosnia and Herzegovina by end of 2004. It will play one of the key roles in the implementation of the Information Society Development Policy and the Information Society Development Strategy.

4.5. Information Society Development Financing. Funding necessary for the realization of programmes and projects from relevant action plans will be provided from budget lines, assets of interested companies (both public and private ones), as well as from international financial sources designated for a stimulation of information society development.

The Bosnian-Herzegovinian authorities will work towards identifying of separate financial resources by granting certain exemptions to creators of funds, foundations or other forms of

financing, whose scope of activities is meant to overcome a technological discrepancy within Bosnia and Herzegovina, as well as between Bosnia and Herzegovina and the developed world.

4.6. Support and promotion. The Council of Ministers, governments of the entities and all the other interested subjects will work together on the promotion of the information society building. The important form of the Council of Ministers' support for the information society development and building will be through the process of partnership with other counties, non-governmental sector, academia and private sector, respectively.

Non-governmental organizations from diverse fields will be stimulated through various means of the government's support. Their task will be to work towards the establishment of forum-type bodies, which happen to be the part of the overall process. They will consist of the representatives of &H authorities, representatives of local communities, consumers, experts, international community, academia, private sector, telecommunications operators, providers, media and other interested parties. This informal body and all its members will work towards the promotion of the information society development, and notably through the Public Broadcast Service, which is accessible to all the citizens of Bosnia and Herzegovina.

4.7. Information Society Development Monitoring. Benchmarking and information society indicators are the bass for monitoring and updating of both the Information Society Development Policy and Strategy and towards the harmonization of B&H process in comparison of the same one within the European Union. Benchmarking processes stand for a reference of assessment of information society development success. They are based on building of trusted sources of information, such as the Bureau of Statistics of Bosnia and Herzegovina, statistics institutions in the entities, non-governmental organizations etc. A valid and independent benchmarking process will be created. It will use the European Union adopted methodology and indicators for some constructors of information society development (Internet, eBusiness, etc.).

CONCLUSION

This Policy has expressed the ambitious goals for building of Bosnia and Herzegovina as a modern and prosperous society.

The vision's realization of such a society is the task of the highest level of complexity. It requires, above all, a consensus, as well as coordinated efforts and support at the state level of all the relevant political factors, but also the indispensable acceptance of the aforementioned principles and commitments by all the relevant participants.