EQUALLY TOWARD
THE INFORMATION SOCIETY

GUIDELINES, CHECKLISTS AND EXAMPLES
OF BEST PRACTICES IN GENDER EQUALITY

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ASSOCIATION "EQUAL OPPORTUNITIES"

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INTRODUCTORY REMARKS

"The so-called digital divide is actually several gaps in one. There is a technological divide great gaps in infrastructure. There is a content divide. A lot of web-based information is simply not relevant to the real needs of people. And nearly 70 percent of the world's web sites are in English, at times crowding out local voices and views. There is a gender divide, with women and girls enjoying less access to information technology than men and boys. This can be true of rich and poor countries alike: some developing countries are among those offering the most digital opportunities for women, while some developed countries have done considerably less well."

Kofi Anan, UN Secretary General

Strategy of the development of information society is one of the documents which realization should introduce Serbia into entirely new era – the information era. There has to be a place for everybody in that era, regardless of origins, ethnic or racial background, gender, proprietary status... The Association "Equal Opportunities" has notified the need to observe the Strategy's implementation through the prism of gender equality. Therefore, the group of experts has designed the tools for this undertaking – guidelines, check lists and best examples of the gender equality in building the information society in practice.

Generally, it can be said that the documents of strategic importance for the development of the country (strategies, public policies, development programs, projects) mainly do not point towards gender equality, which means that they are "gender blind", thus the creators of these documents consider the principle of gender equality implicitly included and taken for granted. Consequently, either in the realization of these projects or in the implementation of the documents, this particular aspect is not being emphasized, therefore in most of the cases it is being lost. Furthermore, this results in the decrease of the projects' effectiveness and their direct contribution to the betterment of the target groups as a consequence.

Its development plans, initiatives and new projects Serbia should direct towards the expansion of Information society and drawing near to the countries in the region and implement and utilize the Information-Communication Technologies (ICT)[1]. Profit organizations have mainly recognized the role of ICT as the infrastructure of their business, but the approach and usage of these technologies are still not imposed as the basis of the corporate process and global competition. It should be emphasized that in the near future, most of the jobs will be linked to ICT and their usage. Even today, this proportion is higher than 70 percent. Our economy, as the transitional one, brings a variety of problems and challenges in employing the male and female population. Access to the new technologies is still far from reality for the vast majority of population. Great part of Serbia, especially rural population, is significantly left out from any information about the "information revolution". This is the consequence resulting from the absence of basic infrastructure, high costs of its establishment and development, lack of knowledge about new technologies, insufficient knowledge of English language which is dominant on the Internet, as well as the lack of tangible benefits from ICT in the everyday life needs and poverty reduction. These obstacles represent greater barrier for women, since they are more frequently employed on the positions that do not relate to ICT, do not have the opportunities for training in computer use, and finally, they are

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[1] ICT in its broadest sense encompass fixed, wireless and satellite telecommunications, computer networks, systems for transmission and distribution, digital television, terminal equipment, as well as software services and application, data bases, electronic records and digital archives (libraries) (from NSID)

unemployed and illiterate in a higher percent. The household responsibilities, cultural limitations of mobility, lesser economic powers as well as the lack of practical use of the ICT contents in everyday life, support further marginalization in the information sector and lead to the creation of gender gap, alongside with the digital gap itself. ICT represent the prerequisite for the development of information society [2] and society based on knowledge. New technologies in the field of information and communication, especially the Internet, represent the infrastructure of the information society – IS. Although, very often the major viewpoint is that these technologies have more technical than socio-economic implications, positive changes created by the information and communication technologies (ICT) do not affect equally all the citizens in Serbia. This is particularly related to the women population. The existing relations of power in the society result in the difference in the benefits of ICT, therefore it can be stated that neither these technologies are gender neutral.

The Proposal for National Strategy for Information Society in Serbia – NSIS has undergone a consultative process, but it is still not proposed for adoption. Hence leaving Serbia further on as the only country in the region that does not have an adopted Strategy for Information Society. As the framework paper, NSIS is of the utmost importance for the development of the private sector, society and the process of integration of the country into European Union. In the process of public debate, civil society with the support provided by the Council for Gender Equality of the Government of Serbia has taken more active role and integrated the principle of gender equality into the Proposal for NSIS. It can be certainly acknowledged that the Proposal for NSIS has fundamentally included the issues of gender equality implementation much more than any other strategic document. In Chapter 2.6 it is clearly stated: "Benefits for women brought by the ICT revolution must be explicitly included in the development of sector policies. They have to have equal opportunities for active participation in the decision-making process related to ICT as well as within determination of the topics to be discussed."

The implementation of ISIS is in front of us and it is a long-term objective. The aspect of equal access in the use of ICT and development of IS has to be included from the very beginning as an inevitable element in its implementation through the appropriate policies, programs and projects.

The objective of the project "EQUALLY TOWARD THE INFORMATION SOCIETY – Guidelines, Check lists and Examples of Good Practice" is the creation of theoretical framework and affirmation of gender equality in the process of implementation of National Strategy for Development of Information Society. The project has been developed with the support of Fund for an Open Society, Serbia.

In the initial phase of the project we have asked the following questions and sought answers to them:

a) Why particularly lay emphasis on the issue of gender equality in the implementation of NSIS?

Analyzing the situation in Serbia, as well as the experiences from the world regarding ICT it can be stated that basic reasons for emphasizing the issue of gender equality are the following:

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[2] From the Proposal for National Strategy for Information Society: "...The importance of the information in contemporary society has led numerous scholars and leaders to claim that nowadays we live in the new "information society", in the society where information dominate in the new forms of social organization..." "...Development of the information society is base upon the broad utilization of the new information and communication technologies that inaugurate possibilities that have not been seen up till now, and in collecting, processing, storing and transmitting the data and information. Information society is one of the components of the society based on knowledge – and that is not strange, since the information is one of the components of the knowledge..."

- The existing relations of power in society, whereas the vast majority of managerial positions belong to the men, lead towards gender disparity in the access and use of ICT;
- Lack of appropriate and compulsory guidelines/recommendations at the state level, for implementation of the principles of gender equality, leads towards the absentmindedness and negligence of this particular issue;
- For the reason of lack of gender based ICT indicators, there are no quantitative data that would serve for analyses and suggestion of different approach, or that would draw attention to the obvious gender gap[3];
- Unrecognizing the fact that women population could and should generate an important part of ICT market;
- Cultural and social aspects that put woman in worse position than it was in the last 50 years;
- Transition of market and society has especially affected women that have in most cases lost their jobs or have already been unemployed[4];
- Economic prosperity of every country, especially those in transition, is being realized faster if all of its talents and resources are engaged – both male and female, equally. Therefore, it is clear that everybody can contribute to the development solely if given the chance;
- Studies[5] demonstrating that in the private sector there are companies which have taken into account the aspect of gender equality, hence gender diversity and that have women in the managerial structures, generate higher profit for their stakeholders;
- European Commission and Council of Europe have already in 1996 in several documents, two resolutions[6] and one communication[7], emphasized the importance of incorporating equal opportunities for women and men into all the activities and practical policies of the Union. This has been preceded by the introduction of equal opportunities policy into the Structural funds;
- One of the above-mentioned Resolutions[8] in its paragraph 46 reminds, "the integration of equal opportunities has to be an important aspect of negotiations on accession".

b) What is obligatory to incorporate the principle of gender equality into the realization of IS?

The NSIS Proposal and its Action Plan are prepared according to the obligations that the Republic of Serbia has accepted by signing the following documents:

- Memorandum on Understanding of the Development of Information Society that has been accepted by all the countries in South-Eastern Europe;
- Agenda for the Development of Information Society that the countries of South-Eastern Europe have adopted within the framework of the activity of eSEE Initiative of the Stability

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[3] The research conducted with the two biggest Internet service providers have indicated that the available access for women is much less than for men and it is shockingly low when it comes to women between 15 and 20 and over 30 years of age, congregating up to 30% of the total users. This image is a bit better for the life period between 20 and 30 years of age, but it does not exceed 38%. Interest for technical faculties among girls is increased this year, though statistics show that this proportion varies 18-22%.

[4] Republic of Serbia Institute for Statistics, "Women and Men in Serbia", Belgrade 2005.

[5] Catalyst (2004), "The bottom Line: Connecting Corporate Performance & Gender Diversity", quoted in the speech Ms. Kelly Richdale presented at the conference: "Women and/in Technology", Geneva (Switzerland), February 2-3, 2006, available at www.freestudios.tv/?cdroite=tablo_lift06

[6] "Resolution on the Commission Communication – Incorporating Equal Opportunities for Women and Men into all Community Policies and Activities – "Mainstreaming" (COM(96)0067 C4-0148/96), Official Journal C 304 , 06/10/1997 P.50", "Council Resolution of 2 December 1996 on Mainstreaming Equal Opportunities for Men and Women into the European Structural Funds, Official Journal C 386 , 20/12/1996 P.1-3".

[7] Communication from the Commission: "Incorporating Equal Opportunities for Women and Men into all Community Policies and Activities", COM/96/0067 FINAL. (Celex Number (51996DC0067))

[8] Resolution on the Communication from the Commission: "Resolution on the Commission Communication – Incorporating Equal Opportunities for Women and Men into all Community Policies and Activities – "Mainstreaming" (COM(96)0067 C4- 0148/96), Official Journal C 304, 06/10/1997 P.50"

Pact at the regional Ministry conference on telecommunications in Belgrade, October 20, 2002;

- Conslusions of the regional Ministry conference on the information society in Thesaloniki, July 1, 2005;
- **Declaration** and **Action Plan** from the World Summit on Information Society, first phase, adopted in Geneva, December 2003;
- **Obligations** and **Agenda** from the World Summit on Information Society, second phase, Tunisia, November 2005.

Proposal for NSIS has used the following documents and recommendations as its basis:

- Lisabon Strategy that European Commission has adopted at the Summit in Lisabon, March 2000. It represents the foundations for action plan of e-Europe, the concept representing the requirement of every member country, as well as the countries candidates for full membership.
- Action Plan **e-Europe** + **2003** of the European Commission
- Action Plan **e-Europe 2005** of the European Commission
- Draft **Action Plan e-Europe 2010** of the European Commission

Furthermore, Millennium Declaration[9], Action Platform from Beijing, as well as the Convention Against the Discrimination of Women (CEDAW) explicitly put emphasis on the role of women in creation and implementation of market and societal strategies as unavoidable.

Platform from Beijing contributes to the goals of Millennium Declaration in 12 critical fields of action: poverty, education and trainings, health, violence against women, armed conflicts, economy, decision-making, institutional mechanisms for the improvement of the status of women, human rights, media, environment, female children.

Tremendous efforts invested in the implementation of the principles of gender equality are present not only in the transitional economies and underdeveloped countries, but in the developed countries as well. OECD has after the situation analyses repeated the Resolution on Gender Equality. World Bank has provided Guidelines according to which the principle of gender equality is compulsory in the projects WB supports and finances, and Sweden has declared 2006 as the Year of Women.

c) Why guidelines and check lists?

The implementation of NSIS will be conducted according to the Action Plan of Strategic Priorities (analyses of the e-readiness [10], sectoral strategy, institutional framework, development of infrastructure, e-governance, e- government, e-education, e-health care). It will inevitably generate a range of projects that have to be gender sensible.

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[9] Millennium Declaration (www.un.org.yu/eng/mdgs.htm):
1. Elimination of extreme poverty and hunger; This cannot be achieved without the consideration of both women and men that live in poverty,
2. Completion of elementary education for girls and boys;
3. Promotion of principle of gender equality and empowerment of women. This goal reflects the Action Platform from Beijing;
4. Reduce the mortality of children. This cannot be achieved without the improved service for women reproductive health;
5. Improve the health status of pregnant women;
6. Secure the sustainability of the environment.
[10] The prefix "e" is used for signifying the work, acts or activities that are being performed with the use of ICT and the Internet.

How to ensure that the principle of gender equality will be included and supervised in all the phases of the development and implementation of strategic documents and projects for IS? The developments of the guidelines for inclusion of the principles of gender equality represent one of the models that can achieve positive results. The most important advantages that can be attained by this document are the following:

- Guidelines can represent an important political utility since the provided information may be used for the promotion of gender equality principles and improvement of the agenda for empowerment of women in the process of developing IS;
- Guidelines can represent additional utility for the decision-makers, project leaders and those who are supervising and monitoring the results of the realization of programs or projects, validating the proposed documents from the gender perspective and obligations deriving from international conventions;
- Guidelines can assist in the creation of documents or applies for financial support of the projects that explicitly demand the inclusion of the gender equality principle[11].

Guidelines should also serve for:

- Increase of the overall awareness of the society and encouraging the inclusion of the gender equality principle in all the segments of developing information society,
- Development of coalition for inclusion of gender equality in political and institutional reforms utilizing the ICT,
- Clarifying the roles in the development of partnerships as well as facilitating the participation of all the key-actors in the society, including the non-governmental organizations (NGOs) in accomplishing gender equality in the process of developing IS,
- Steering the available resources for access and use of ICT for women in rural areas and other marginalized groups, as well as
- Drawing attention to the special needs of women and the effects of ICT in the overall strengthening of the women.

Guidelines can be used in one of the following two ways as:

1. The list of guiding principles when making decisions or
2. The consultative document that provides ideas on how to set course for the gender equality policy in the bodies implementing NSIS.

These guidelines can serve as the addition to the existing resources in policy and concrete setting. They are not designed as the exclusive list of rules and therefore they should not be used in that sense. Guidelines should be used in order to ensure that the analyses of the implementation of gender equality principles become an integral part of the activities in implementation of NSIS and development of the sector policies. Successful implementation of these guidelines will require development and promotion of the new policy within the institutions seeking transformation towards the environment that nourishes the gender equality. These suggestions may, for example,

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[11] Structural funds of the EU can be the example of good practice in consideration of the projects from any area, sector policies related to the different needs of women and men. It should be mentioned that each project submitted by the member country, as the prerequisite for consideration, must have a clear attitude towards equal opportunities, thus has to demonstrate not only that gender equality is incorporated, but also the contributions the project will made on the reduction of gender inequality. (European Commission, Technical Paper 3: Mainstreaming Equal Opportunities For Women And Men In Structural Fund Programmes And Projects (March 2000). Commission of the European Communities, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: **Implementation of gender mainstreaming in the Structural Funds programming documents 2000 - 2006**, Brussels, December 20, 2002)

be accepted as a whole or partially, as a part of the rules for institutional behavior. The process of guidelines implementation should be carried out with full participation of the mentioned beneficiaries and, if possible, with participation of the experts from the field of gender equality in order to ensure full comprehension of the regulations and avoid the unproductive resistance towards this process.

Standard practice in the acceptation and elaboration of the projects includes the usage of the so-called *checklists*, which primarily assist in avoiding the errors. From the aspect of gender equality, checklists that will be extracted from the guidelines, using the analyses and evaluation for the projects practiced in the world, will serve as the guide for project teams in the process of the project objectives creation as well as their evaluation.

However, the existence of the guidelines document itself, even in its best form is not sufficient guarantee that they will be implemented. Practice has shown that the political will represent basic condition for implementation or non-implementation of the principles that should grant gender equality in a society and therefore enables the sustainable economic development of the state. Second condition is the existence of the critical mass of those that support the principle of gender equality, and third – the existence of fertile grounds, the environment that will make this possible (laws, institutions, mechanisms, etc).

This document "Equally toward the information society" is divided into the following chapters:

First Chapter treats the guidelines and check lists for establishment of the gender sensitive mechanisms in the proposed institutional framework for implementation of NSIS.
Second Chapter treats the guidelines and check lists for sector strategies and relevant projects. It contains suggestions for ICT projects and examples of the best practices as basis for launching the similar projects in our country.
Third Chapter presents the research on the usage of Internet based upon data collected from the Internet service-providers (Eunet, PTT, Neobee, Pogled, VeratNet) as well as the interviews conducted by the students of Faculty for Traffic Engineering at Belgrade University. Also, an example for the list of indicators that should be monitored in the evaluation of gender equality principles inclusion in the development of IS, is being provided within this Chapter.
Fourth Chapter contains the bibliography of documents used in this research, as well as definitions and basic terms in the field of gender equality.

Collection of Articles "Equally toward the information society" intended for media and broader (not only expert) public has been produced separately. The Collection suggests the selection of topics from gender equality in information society, in order to broaden, presently very narrowed focus that is currently used in the public to observe and analyze this area. Taking into consideration that the Collection is written in journalistic style, the Collection illustrates the fact that specific topics can be described in a manner understandable for the broadest public. The objective of the Collection is to inspire and motivate the editors and journalists to treat these topics in the future. Quotations, useful links and instructions, good examples from practice, as well as the elements of strategic documents created within the framework of the overall project additionally increase the educational component of the Collection.

It should be stressed that in development of the guidelines, checklists and the Collection, authors attempted to concretize them in accordance with the contemporary situation as much as possible. Non-existence of the similar documents in the region has presented an additional challenge in work.

1. GENDER SENSITIVE GUIDELINES IN THE PROCESS OF CREATING THE INSTITUTIONAL FRAMEWORK FOR THE DEVELOPMENT OF INFORMATION SOCIETY IN SERBIA

1.1 INTRODUCTION

The development of the vision for establishing IS and preparation of action plans with key-policies is the responsibility of the state, which fulfills them through appropriate strategies and action plans. All the initiatives related to the promotion and quicker development of the information society is basis for the integration of Serbia into regional and global economies. It does not include mere development of the info-communication technologies, but the creation of the environment that can utilize ICT solutions in all of its sectors, especially in private sector and civil society. The state administration itself should be an example of how to use new technologies in increase of the efficiency of performance, communication and provision of quality services for citizens and economy. Such a complex objective requires management within a specifically designed institutional framework.

Proposal for the National Strategy for Information Society (NSIS) in Serbia has projected the formation of institutional framework for ensuring the implementation of NSIS with the following objectives:

- Promotion of the **Ministry for Public Administration and Local Self-Government (MPALSG)** as the body responsible for the development of information society, implementation of NSIS, development of future strategies and laws, including those that are focused on the state administration based on e-government; coordination of launching the information society standards utilization plan in-between the ministries and relevant regional and international partners.
- Establishment of the **Council for Information Society** as the political body consisting of deputy ministers responsible for information society and e-government within ministries (*Chief Information Officer*, CIO) aiming to enable the coordination and cooperation of all government bodies during the development of information society and especially e-government and the reform of state administration.
- Formation of the **Committee for Information Society** as the political body presiding by the Prime Minister, which includes ministers and government bodies that are involved in the development of information society and the reform of state administration. Therefore, the Committee will include:
  - o Prime Minister of the Republic of Serbia
  - o Ministry for Public Administration and Local Self-Government
  - o Ministry for Science and Environmental Protection
  - o Ministry of Finance
  - o Ministry for International Economic Relations
  - o Ministry for Capital Investments
  - o Agency for Telecommunications
- Establishment of the **Forum for Information Society** that would represent the institutional framework for coordination and cooperation between all of the key-actors in the country. Representatives of the government, private sector and civil society should actively participate and collaborate in solving the problems that occur in the process of the development of information society.
- Formation of the **Subcommittee for Information Society** within the Committee for Science of the Serbian Parliament.

The last version of NSIS has explicitly included the principle of gender equality in realization of the objectives of IS development. Following is the proposal of guidelines and checklists that enable main decision-makers and other stakeholders in the process of establishing the institutions for development of IS to secure the inclusion of gender equality principles into all the processes, as well as the control of ICT project management from the aspect of gender equality.

1.2 GENERAL GUIDELINES IN THE PROCESS OF FORMATION THE INSTITUTIONAL FRAMEWORK FOR THE DEVELOPMENT OF INFORMATION SOCIETY

The fact that there are no data on the number of women in managerial positions[12] in the state institutions in Serbia, already points to the significance of the problem, or to the absence of conscience on its importance. Development of IS is a long-term task. Serbia is at the very beginning of this process and it is the right moment to set healthy basis for attainment of the gender equality in all aspects. Therefore, the first steps have to be visible already in the process of creating the institutions that will ensure the implementation of NSIS. Following are the main guidelines that should represent principal ideas in the formation of institutions for implementation of NSIS:

1. Apply the principles of equal gender representation on managerial positions of the institutions for IS,
2. Initiate programs for special part of the sector exams from the field of gender equality[13],
3. In cases of equivalent qualifications decide in favor of the less represented gender, consequently utilize positive discrimination when related to women[14],
4. Encourage women experts to apply for opening positions, which would make them underpinning actors in creative activities in the development of IS and to stress that clearly in each and every ad for managerial positions,
5. Secure the implementation of this principle for other working posts in the established institutions,
6. Ensure that the access to trainings and education for performing duties from the domain of newly established institutions respects the principle of gender equality,
7. Ensure the use of gender sensitive language within the process of developing documents, legal acts and projects (especially those financed or subsidized by the state budget).

GUIDELINES ARE INTENDED FOR:

- Minister for state administration and local government, as the person responsible for establishing the institutions of IS on behalf of the Serbian government
- Prime Minister in the process of promoting the development of IS and reform of the state administration
- Council for Gender Equality of the Serbian government
- Committee for Gender Equality of the Serbian Parliament
- All persons managing the institutions that form the institutional framework of IS

Checklist 1 intended for decision-makers, facilitate the control of gender equality inclusion in the process of forming the institutional framework for IS.

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[12] Managerial positions include all the posts where decisions are being made; hence the positions from the top state administration to the level of sector or department managing.

[13] Positive example from Croatia (Program of Gender Ombudsman).

[14] Positive discrimination is based on granting the advantage to the representatives of particular social groups in the areas where equality (gender, racial, religious, sexual, etc) has been systematically imperiled, and consequences cannot be solved solely with the new legislative regulations, which is not discriminative. Positive discrimination is most frequently used for limited period that is expected to balance the previously distressed situation. In this respect, the so-called *hard* and *soft quota* can be utilized, whereas respectively determined number of places is reserved for the representatives of the group and only when they are equally qualified or when without the appropriate qualifications. The other measures comprehend positive actins, that would in this particular case include the provision of special measures for representatives of less represented gender (e. g. specially designed seminars, etc). Authors of this project consider them unfeasible in this particular case considering the time that is a crucial factor in establishing the institutional framework.

❖ CHECKLIST 1

No	CONTROL QUESTION	COMMENT	
1.	Has the gender equality implementation been discussed in preparations for establishing the institutional framework?	Yes	No
2.	How many new managerial jobs/positions are there?		
3.	How many new jobs are being planned in total?		
4.	Has the principle (political) agreement on proposing equal number of candidates of each sex for managerial positions been reached? In case that the agreement has not been reached, implement the principle of positive discrimination, assigning minimum 30% of positions for candidates of the less represented sex.	Yes	No
5.	What is the structure of the Employment Commission by sex?	Number of women	Number of men
6.	How many members of the Commission have been trained on gender equality? Which training and when?		
7.	Does the ad explicitly state: - That women are encouraged to apply, or - That the advantage will be given to female candidates with equivalent qualification structure?	Yes Yes	No No
8.	What is the current structure in MPALSG by sex?	Number of women	Number of men

9.	What is the structure by sex at individual working posts in MPALSG:
	    a. Managerial*
	    b. Creative**
	    c. Routine***
	
	* Managerial jobs – all jobs including decision-making and responsibility
	** Creative jobs – individual work on projects, strategies, decisions, documents and similar.
	*** Routine jobs – performed exclusively according to standard procedures and managers' directions.
		Number of women
		a)
		b)
		c)
			Number of men
			a)
			b)
			c)

1.3 GUIDELINES FOR THE MINISTRY OF STATE ADMINISTRATION AND LOCAL GOVERNMENT – MPALSG

IT Department will be a part of MPALSG. Following general guidelines provided in Chapter 2, and in achieving gender equality goals; it is necessary to implement the following specific guidelines that directly ensure the implementation of gender equality principles; and through the creation of institutional mechanism in the following approach:

In the framework of the IS Department form a group or engage an expert for the promotion and monitoring of the gender equality principles implementation in the developing IS. The tasks of this particular group/expert should encompass:

1. Implementation of the gender equality principles within National Strategy for Information Society.
2. Cooperation with the government's Council for Gender Equality especially on the following issues:
   o Raising gender equality awareness simultaneously with the development of IS (media, promotion campaigns, indicators presentation, etc).
   o Preparation of the Proposal for National Program for Introduction/Implementation of Gender Equality Principles in IS.
   o Initiation of ICT projects with special significance for strengthening and improvement of life of women.
   o Development of the status summary in order to record the contemporary status of development and use of ICT by women population.
   o Monitoring the implementation of gender equality principles in the process of development of the law and standards for individual aspect of IS.
3. Active participation in teamwork for the development of sector policies and establishment of the mechanisms for the control of implementation of the gender sensitive in the process of designing the concrete sector policy.
4. Collecting and the analyses of the gender sensitive indicators in cooperation with the Department for Monitoring and Evaluation (DME)[15].
5. Collecting and the analyses of the gender sensitive data for the preparation process of the laws that follow the implementation of NSIS.
6. Process control in the development and realization of the e-government projects in implementation of the proposed gender guidelines for e-government.

GUIDELINES ARE INTENDED FOR:

- Minister for State Administration and Local Government who will take the responsibility for designing and conducting the process of establishing the Department for IS in MPALSG
- Appointed Director of the Department for IS
- Council for Gender Equality

Taking into consideration that the formation process of the Department for IS and other institutions, including employment of staff, is a time-consuming process. Even if the time required for the formulation and verification of the necessary legislative changes is not calculated; NSIS projects the introduction of temporary measures for the establishment Department for IS[16]. There is a serious

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[15] Proposal for List of Indicators is provided in Chapter 4.
[16] NSIS encompasses temporary measures for the establishment of Department for IS through the use of temporary resources in the following manner: "...To select a small number of key-participants from the government's

threat that the specified will not be considered in this particular process, which can affect the implementation of gender equality principles. Therefore it is recommended that the Minister of MPALSG who will take the responsibility for designing and conduct the process of establishing the Department for IS should be gender-sensitive and create adequate environment for the implementation of the proposed guidelines. Checklist 2 will provide him/her with tools to control the efficiency of the guidelines implementation in the process of the temporary measures use and in later monitoring of work of the Department and MPALSG.

❖ **CHECKLIST 2**

No	CONTROL QUESTION	COMMENT	
		Yes	No
1.	Is the staff selected from the government's administration participated in trainings on gender equality? a. When? b. Who organized the training? c. Duration? d. If the staff has not participated, when is the training planned?	a) b) c) d)	
2.	Have the selected consultants participated in the training on gender equality? a. When? b. Who organized the training? c. Duration? d. If the consultants have not participated, when is the training planned?	Yes a) b) c) d)	No
3.	Are the general guidelines for gender equality being implemented in the establishment of the Department for IS?	Yes	No
4.	Is the group in the Department for IS formed of expert engaged for the issues of gender equality in IS? If not: - What is the main reason? - Who will you address in order to respect the aspect of gender equality? a. Minister b. Government Council for Gender Equality c. Specialized NGO d. Expert for gender equality	Yes a) b) c) d)	No
5.	Does the Department for IS through the Group for Gender Sensibility cooperate with the Council for Gender Equality on the issues of establishing IS and how: a. Regular meetings b. Through the National Action Plan for Women c. Concrete projects	Yes a) b) c)	No
6.	Is there cooperation with the teams for sector strategies?	Yes	No
7.	Have the instruments for the implementation of these guidelines been established?	Yes	No
8.	Are the mechanisms for ensuring gender equality being implemented in the projects financed or co-financed from the Serbian budget?	Yes	No

administrative apparatus who will be assisted by one or two consultants or the staff appointed in other departments – establishment of the temporary structure, to appoint the temporary leader from the administration..."

1.4. GUIDELINES FOR THE COUNCIL FOR INFORMATION SOCIETY

Having in mind that the Council for Information Society is a government body responsible for e-government and conducting the development of National Strategy for E-Governance, and it should be constituted from the Deputy Ministers and other officials at the level of state administration office, it is necessary to:

1. Conduct seminars for gender sensibilization of the members of this Council with the support of the expert for gender equality,
2. Consider the aspects of e-governance in the improvement of the lives of women and men,
3. Consider the aspect of inclusion of women in the creation of services of e-governance,
4. Implement guidelines and checklists for e-governance that are separately considered in the Chapter 2.

GUIDELINES ARE INTENDED FOR:

- Minister for State Administration and Local Government
- Director of the Department for IS as co-chair of this Council
- Council for Gender Equality

1.5 GUIDELINES FOR THE COMMITTEE FOR INFORMATION SOCIETY

Committee for Information Society should: reach decisions on the most important issues of development policy and topics of public interest from the area of information society; as well as to create frames for their public consideration; to reflect and monitor the implementation of the policy and strategy for National Information Society; remove obstacles and reduce risks for their implementation. The aspect of gender equality in the work of the Committee should be implemented through the following set of activities:

1. To form the subcommittee for the gender equality issues with the following responsibilities:
   - Defining the specialized area of work relating to he issues that treat the development policy and strengthening of women in IS, in cooperation with the group or the expert for gender equality from the MPALSG Department and the government's Council for Gender Equality,
   - Creating the documents in close cooperation with the Department for IS (group for inclusion of gender equality in IS) and the Council for Gender Equality that will become the integral part of the National Action Plan for Women,
   - Monitoring of the gender sensitive indicators and reporting to the Committee for IS,
   - Defining topics for public discussions that would influence the reduction of the gap between women and men in access and use of ICT (Knowledge Society, e-business, e-democracy...).
2. President of the Council for Gender Equality should participate at the Committee sessions where the gender equality issues are being discussed based upon the Subcommittee on Gender Equality report.

GUIDELINES ARE INTEDED FOR:

- Prime Minister and the Ministers that will be members of this Committee
- Council for Gender Equality

The Checklist 3 should be used in continuous monitoring and securing the implementation of the guidelines.

❖ **CHECKLIST 3**

No	CONTROL QUESTION	COMMENT	
1.	Are the Committee members gender sensibilized?	Yes	No
2.	Is the Committee constitutional process including the Subcommittee for Gender Equality?	Yes	No
3.	If not, what is the main reason?		
4.	Are the topics from the development and strengthening of women in IS included in the group of topics significant for the public interest?	Yes	No
5.	Are the reports and presented documents including the gender sensitive indicators?	Yes	No
6.	Are the use of IS development policy and projects that are financed of co-financed by government gender sensitive and do they influence the decrease of gap between women and men in access to ICT?	Yes	No

1.6 GUIDELINES FOR THE FORUM FOR INFORMATION SOCIETY

Forum for Information Society is an independent advisory body that organizes discussions related to the development policy of information society, strategy and topics of a wider public concern with participation of the representatives from the government, private sector, academic and civil society. Its role is especially important in the promotion of gender equality principles in all the discussions related to the development of information society, as well as social and economic development. In order to achieve this, the Forum should include in its work the gender equality principle using the following guidelines:

1. In the constitution of the Forum encourage equal participation of women and men as representatives of the government, private sector, academic and civil society as well as NGOs that treat the issue of women in ICT,
2. Gender equality principles and measures for reducing the gap in access and use of ICT, especially for women, should be an integral part of the proposal of strategies, consulting services and recommendations related to further development of information society and ICT sector,
3. Raising general awareness related to the importance of the development of information society and its influence on the improvement of social and economic status, should particularly emphasize the status of women and steps that would empower women to become equal participants in IS,
4. Regular organization of special panel discussions on the effects of IS to the life and strengthening of women,
5. Organization of discussions on documents that have been prepared by the group of the expert from the Department for IS (for example: National Action Plan for Women and IS) which will increase their transparency,
6. Organization of seminars for gender sensibilization of the members of Forum with the assistance from the Council for Gender Equality and civil sector.

GUIDELINES ARE INTENDED FOR:

- Members of Forum who are representatives of the government, private sector, academic and civil society.

Checklist 4 should enable the participants and management of the Forum the evaluation of the implementation of these guidelines.

❖ **CHECKLIST 4**

No	CONTROL QUESTION	COMMENT	
1.	Is the participation of women and NGOs treating women issues and ICT encouraged in invitation for constitution of the Forum?	Yes	No
2.	Is the gender equality respected in the Forum's management structure?	Yes	No
3.	Are the members of the Forum gender sensitive? Have they participated in gender equality training? a. When? b. Who organized the training? c. Duration? d. If they have not participated, when is the training planned?	Yes	No
		a)	
		b)	
		c)	
		d)	
4.	Are there any seminars, public or panel discussions including the gender equality in IS issues?	Yes	No
5.	Among the planned seminars, public or panel discussions are there any specific events treating the empowering of women for inclusion in the IS?	Yes	No
6.	Is there a record on the gender structure of the panelists and participants at the discussions?	Yes	No
7.	Are the results of the records on gender structure being analyzed?	Yes	No

1.7 GUIDELINES FOR SUBCOMMITTEE FOR IS IN THE PARLIAMENT OF SERBIA

Subcommittee for Information Society should be formed within the Committee for Science of the Parliament of Serbia. This Subcommittee should promote faster access of Serbia to IS and be the executor of the activities representing legal infrastructure of the IS. The principle of gender equality should be respected in selecting the members of the Subcommittee, and it would be specially emphasized if women would preside over it. This would achieve a positive example of wider inclusion of women into the processes of developing the IS[17]. In the scope of work of this Subcommittee, issues of gender equality should be instigated through the following activities:

1. Adoption of Law for the Implementation of NSIS,
2. Promotion of the role of ICT in achieving the efficiency in the work of the Parliament,
3. Raising general awareness on the importance of ICT through media coverage of the Parliament's work,
4. Monitoring indicators on use of ICT and their presentation as the positive example. Indicators have to be gender structured,
5. Proposal of the methods for expert training of the MPs for utilization of the new ICT tools.

This Subcommittee should closely cooperate with the Council for Gender Equality of the Assembly of Serbia. Following key-questions provided in the Checklist 5 should represent basis for measurement of the achieved results.

❖ **CHECKLIST 5**

No	CONTROL QUESTION	COMMENT	
1.	Have the expert group or expert for gender equality from the Department for IS examined every law for implementation of IS?	Yes	No
2.	Are the indicators on use of ICT by the parliamentary staff and MPs being collected?	Yes	No
3.	Is the analysis of the indicators available to the public?	Yes	No
4.	Which type of expert assistance is necessary to the MPs for utilization of ICT?		
5.	Do MPs have their own websites for communication with the electorate?	Yes	No

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[17] At the European Commission, among 25 persons being Commissioners, 7 women have been appointed for different domains of functioning of the Union. Representative of the UK, Ms. Vivian Redding is the Commissionaire in charge of the "Information Society and Media Department".
For more details, see also: http://europa.eu.int/comm/commission_barroso/index_en.htm

1.8 GUIDELINES FOR THE PROCESS OF MONITORING AND EVALUATION OF NSIS

Department for Monitoring and Evaluation (DME) of the results of National Strategy for IS will be located in the Ministry for Public Administration and Local Self-Government (MPALSG). This Department should closely cooperate with the group or the expert from the Department for IS by the MPALSG which will implement the gender equality principles in the process of NSIS implementation. This Department should:

1. Enable the transparency of the results of implementation of projects and programs, and to specially motivate the evaluation of projects from the aspect of their influence on men and women and their contribution to gender equality,
2. To collect and analyze all the indicators from the aspect of gender equality,
3. To advise and coordinate the implementation of the gender equality principles, especially in the projects that have to be gender sensibilized (e.g. e-health care, e-education, e-business) and projects that are financed or co-financed from the Serbian budget resources.

In monitoring and evaluation of the projects implementing NSIS, the indicators are important subject for evaluation. Evaluation should be conducted not only after the completion of the project, but during the reception of periodic reports on realization as well.

❖ **CHECKLIST 6**

No	CONTROL QUESTION	COMMENT	
1.	How big is the participation of women in realization of policy/project implementing the NSIS? a. Minor participation o Number of women with required expertise is small o Consequence of the gender unawareness of the staff that coordinates or realizes the project/program o Neglecting resources and their potentials o Lack of mixed teams that can jeopardize the realization of the project b. Satisfactory participation (over 30%) c. Good participation	☐ a ☐ b ☐ c (Mark the answer)	
2.	Do project documents defer to the guidelines in respect to gender equality for the observed project? (e-health care, e-education, e-business, e-governance and e-banking, as provided in Chapter 2)	Yes	No
3	Are women explicitly encouraged to apply for the managerial positions on the project and/or positive discrimination principle implied?	Yes	No
4.	Does the project include the gender analyses of the target group?	Yes	No
5.	Does the project bring benefits to women from the aspect of: - Contribution to the improvement of their financial situation - Decrease of problems/obligations	Yes	No

1.9 RELATIONS BETWEEN THE INSTITUTIONS FOR IS IN THE PROCESS OF INCORPORATING THE GENDER EQUALITY PRINCIPLES

Image 1 illustrates the relations and information flow in the institutional mechanisms for incorporation of gender equality principles in the process of establishing the IS.
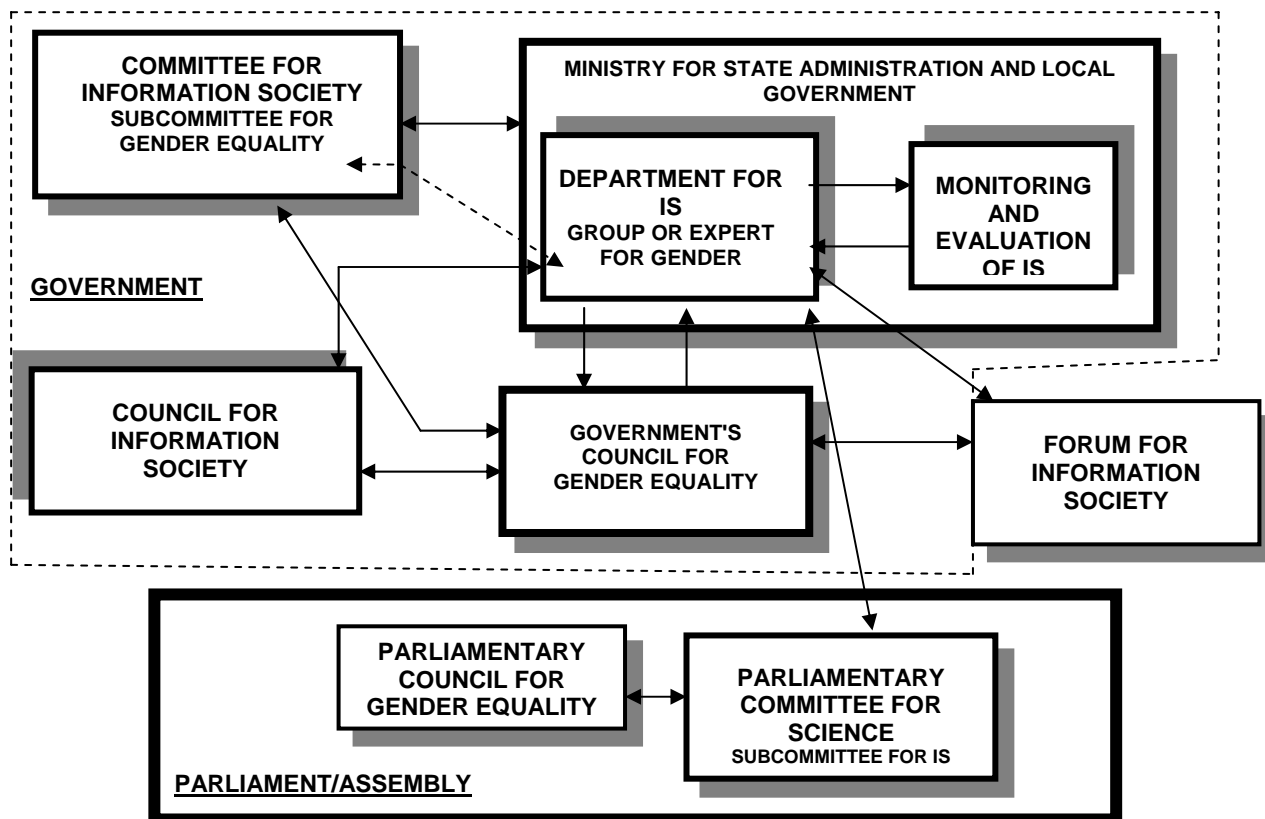
Image 1. *Relations and information flow in institutional mechanisms for incorporation of gender equality principles in the process of establishing the IS*

2. GUIDELINES FOR INCLUSION OF GENDER EQUALITY PRINCIPLES IN THE SECTOR POLICY AND PLANNING OF ICT PROJECTS

2.1 SECTOR POLICIES AND GUIDELINES

In the part of NSIS referring to "sector policies and planning of ICT"[18] it is said:

> *"Benefits for <u>women</u> from 'ICT revolution' have to be explicitly included in the development of sector policies. They have to have equal opportunities to actively participate during the decision-making process related to ICT and in determination of the topics for discussion."*

NSIS projects the development of the forms that will assist to those that are creating policy, planners and other participants in the process of developing the sector policy, to stay focused on crucial issues – crucial solutions that the policy has to provide to the society and that branch of economy.

The forms have to be created to be used as consultative document with which the work on developing sector policy starts, at the first meeting of the constitutive workshop or the meeting of the group in charge of planning. After the development of the draft for sector policy, public discussion that will amend and finalize the document will be launched.

NSIS identifies the following seven key-components of the form during the development of sector policy for **e-governance**, **e-education**, **e-health care**, **e-business** and **e-banking**.

- **0. Introductory Part,** which has to identify key-actors that will participate in the creation of sector policy
- **1. Key Issues**
- **2. Strategic Opportunities**
- **3. Challenges and Threats**
- **4. Considering Challenges**
  - o Legal and regulatory infrastructure
  - o Technical infrastructure
  - o Human capital infrastructure. *"Fertile public range is significant for inclusive information societies and has to fully include **women knowledge** encompassing knowledge that are unique, rooted in experiences and practices based upon local knowledge in the field of production, nutrition and health."*
  - o Social, cultural and other issues. *"ICT have to be utilized to the greatest possible extent in order to remove the gender inequality in writing in elementary, secondary and higher education as well as in formal and informal surroundings..."*
- **5. Relations Between the Branches**
- **6. Key-Factors for Success**
- **7. Measurement of Success**

Having in mind that in case that gender equality principles do not get incorporated at the very beginning of the development of sector policies (*gender mainstreaming*), in later discussions it can be merely partially included and undermine the reduction of the digital gap and the gap between the access and use of ICT by men and women. In order to avoid this problem, it is suggested that in the process of initiation and development of individual sector policies from the aspect of gender equality inclusion, and based upon the mechanisms within the Institutional Framework for Implementation of the NSIS, the following guidelines should be used.

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[18] NSIS in Serbia, page 26, Chapter 2.6, paragraph 2

Guidelines are structured as:

- **General guidelines** in which are, from the aspect of gender equality, suggested proceedings in the process of formation the teams, and initiation and creation of sector policies and/or process of the development of ICT projects.

- **Specific guidelines** in which are suggested recommendations and checklists for every individual sector policy.

2.2 GENERAL GUIDELINES IN THE PROCESS OF CREATING THE SECTOR POLICIES IN IS AND ICT PROJECTS

Basic objective of the guidelines provided in Table 1 is to ensure the inclusion of gender equality principles in the process of initiation and creation of the sector policies, as well as ICT projects implementing the NSIS.

In the first step of the process of developing the sector policy, a person that will lead the team and work on the planning and the development of the document will be selected. Appointing the women expert for the team leader would represent a positive example delivering responsibility for the most complex tasks to a female expert.

No	GUIDELINES	COMMENT
1.	Gender equality principle should be considered in the selection of members for the team for sector policy development.	One of the methods to accomplish this is to forward the appeal to the institutions and organizations, which will clearly stress the necessity to nominate equal number of women and men. This will directly raise their awareness on the necessity to implement the principle of gender equality. The other option is to introduce the quota of minimum 30% of women in the team.
2.	Council for Gender Equality, NGOs and media should be involved in the creation of sector policy, especially during the consultative process.	Media: It is highly desirable that they should be representatives of specialized and daily newspapers, TV stations, etc, who will be engaged in the process from the beginning, in order to make it transparent and available to the broadest possible public magnitude. Media participating from the very beginning will achieve the significant awareness raising on the use of ICT and possibilities offered in the process of democratization to individuals as well as to the society as a whole.
3.	Expert for gender equality – gender mainstreaming should be constantly involved in the team for development of sector policy, with the possibility of organizing the training on mechanisms of achieving gender equality for the whole working team.	This would accelerate the work on developing sector policy/ICT project, considering that the mechanisms for gender equality achievement would be recognized from the very beginning of its development.
4.	Explicitly analyze the specific significance of sector policy for women and men in its introductory part.	
5.	Within the group of objectives, explicitly define individual objectives that will in a long-term bring benefits to women population, especially in rural areas.	See individual guidelines for sector policies.

No	GUIDELINES	COMMENT
6.	Plan the budget that will accomplish the above-mentioned objectives.	
7.	Use the gender sensitive language in all the documents of sector policies.	
8.	In defining strategic possibilities, it is necessary to consider: o Services and applications and their future users with special emphasis on different needs of women and men, or differences in the needs of women and men, o Advantages that the services introduce in the sense of financial effects, separately for women and separately for men, o Strengthening of women in entrepreneurship using the ICT, o Means of acceptation and utilization of the creative and innovative women knowledge, o Use of open software platforms.	Utilization of women knowledge (science, finances, judiciary, etc) in developing society of knowledge is a valuable resource. It is especially important in the process of creation of knowledge specific for our area (art, family health, reproductive health, healthy nutrition, environment, tourism, tolerance).
9.	Incorporation of the gender equality principles into the legislative, regulatory and other structures.	As the preparation of legal and regulatory infrastructure for IS is at the very beginning, the realization of this guideline would adapt the regulations with requirements from the future Law on Gender Equality and EU standards.
10.	Ensure that every policy and ICT project incorporate the regulations regarding ethical principles of the ICT use.	
11.	Insist on securing the conditions for the development of technical infrastructure (wide range approach and ICT equipment), especially in rural areas inhabited mainly by women and children.	Liberalization of telecommunication market would speed up the solution of this problem.

Table 1 General guidelines in the process of creation of the sector policies in IS and ICT projects

It should be emphasized that from the aspect of gender equality, the following basic threats to the realization of policy/projects are identified:

- Lack of telecommunication infrastructure for the access to ICT services,
- Unsystematic basic ICT education,
- Neglecting of information and other needs of the marginalized social groups in the development and use of ICT services,
- Disregard for preparation of local personnel, especially women experts for the creation of new knowledge and equal participation at the global knowledge market,
- Abuse of women and men population (e.g. pornography, pedophilia, trafficking in human beings, theft, etc).

GENERAL GUIDELINES ARE INTENDED FOR:

- MPALSG and other relevant ministries for sector policies
- Person managing the Department for IS
- Group/person in Department for IS in charge for gender equality
- Person managing the project team for sector policy of ICT project
- Moderator in the development of sector policy

Aiming to assess the influence of ICT projects on life, work and education of genders, it is suggested to use the following checklists for gender evaluation, proposed during the training of the organizations Norwegian People's Aid and Voice of Difference with minor modifications:

❖ **CHECKLIST FOR GENDER EVALUATION**

Factors of practical and strategic empowerment **+2** significant positive influence **+1** positive influence **0** no influence **- 1** negative influence **NI** no information	**Influence of Gender Empowerment** (+2, +1, 0, -1, NI)		**Need More Information** **W** (Women) **M** (Men)	**Comments**
	Women	**Men**		
1. Does the ICT project enable greater **access to basic infrastructure** for both women and men?				
2. Does the ICT project enable greater **access to resources and technology** for both women and men?				
3. Does the ICT project improve the **health** of both women and men?				
4. Does the ICT project improve **educational opportunities** for both women and men?				
5. Does the ICT project increase the **possibilities for income** for both women and men?				
6. Does the ICT project identify **obstacles** for participation of women and men?				
7. Does the ICT project include women and men as **active partners** in project development?				
8. Does the ICT project improve the opportunities for both women and men to **organize**?				
9. Does the ICT project increase the **control** of both women and men over the resources and/or technology?				
10. Does the ICT project contribute to the achievement of **democratic rights** for both women and men?				
Total score:				

2.3 GENDER SENSITIVE GUIDELINES IN PROGRAMS/PROJECTS FOR THE DEVELOPMENT OF THE NATIONAL INFRASTRUCTURE FOR e-COMMUNICATION

2.3.1 NATIONAL INFRASTRUCTURE FOR e-COMMUNICATION AND GUIDELINES

National information and communication infrastructure – NII is the basic pillar of the IS. In the broadest sense it includes fixed, wireless and satellite telecommunications, computer networks, transmission and distribution systems, digital television, terminal equipment as well as software services and applications, databases, electronic records and digital archives[19]. Telecommunications and radio-diffusion as integral parts of this infrastructure are aiming to satisfy the communication needs of the business, society and individuals.

Based upon the continuing experiences it is clear that the so-called gender-neutral policy is not sufficient. Following facts prove this statement: women are underrepresented in communication management[20], although women count over a half of the workforce, men still hold majority of the managerial positions in telecommunication companies and regulatory and legislative bodies, decisions in the field of regulations are being brought without the analyses of the influence on gender equality, licenses for certain services are being issued to the companies without implementation of gender equality policy and controlled mainly by men. On the other side, women groups and female citizens do not have their positions in the discussions or decisions that influence the national legislation in ICT and their approach. Therefore, it is necessary to form the mechanisms for identification of their needs and interests within the framework of appropriate forum of users.

The strategies for development of both the telecommunication and broadcasting sector have not been made yet. This provides the opportunity for all the participants in the creation of the strategies (from the government, relevant ministries, regulators, operators and service providers), to consider aspect regarding the inclusion of the gender equality principles into the policies of these sectors. Up to date practice shows that the experts engaged in the policies creation are insufficiently sensibilized or even intentionally neglect this aspect, supposing that this subject matter is gender neutral. Therefore it is necessary to produce a collection of guidelines in order to overcome this problem. These guidelines would enable and direct persons in charge and/or decision-makers to ensure the implementation of gender equality principles in the process of the development of regulations, policies or ICT projects[21]. In addition, these guidelines should point towards reconsideration of the influences of decisions on the gender equality.

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[19] From the text of NSIS.

[20] In management boards of the Regulatory Agencies for Radio-diffusion (RRA) and Regulatory Agency for Telecommunications (RATEL) and in the first instant management of the operators there are no women.

[21] ITU has within the framework of the Working Group for Gender Issues in Telecommunications (WGGI) prepared the collection of Guidelines for Regulators and Decision-Makers. These guidelines can be found at www.itu.int or www.e-jednakost.org.yu

2.3.2 GENERAL GUIDELINES TO BE CONSIDERED IN THE PROCESS OF THE COMMUNICATION STRATEGIES DEVELOPMENT

1. Support the establishment of the group or appointment of the expert for the issues of gender equality principles implementation in the sector of telecommunications and within the following bodies:
   o Ministries,
   o Bodies dealing with regulations in communications (Regulatory Radio-diffusion Agency – RRA and Regulatory Agency for Telecommunications – RATEL) and
   o Operators and service providers.
   This group of expert would closely collaborate with the government's Council for Gender Equality and Department for IS.
2. Examine and correct the regulations, circular materials, guidelines and procedures in order to eradicate all gender related prejudices.
3. Promote the collection and analyses of the results of gender equality principles implementation as a part of the process of reconsideration of operational policies.
   o An analysis is required in order to ensure that the process of reconsideration of policies is based on facts, not assumptions. This analysis is the method for quality and efficiency improvement of the operations utilizing all of the human resources.
4. Special analyses should provide information on structure of the users of information services by sex, which should further improve the policy of service provision with identification of specific needs of each category[22].
   o It should not be ignored that women represent a bigger part of potential market and that this fact should be considered when creating new services.
5. Develop systems for collecting the gender sensitive statistical data in cooperation with the Department for IS from the MPALSG.

GUIDELINES ARE INTENDED FOR:

- Relevant ministries
- Department for IS
- Regulatory bodies in the sector of communications, RRA and RATEL
- Operators

2.3.3 GUIDELINES IN CONSIDERING STRATEGIC OPPORTUNITIES

UNIVERSAL SERVICE

In defining the strategy of the communication sector it is necessary to process, in a separate section, the issues of "linking" the rural and remote areas. This issue is being resolved through the issue of Universal service/access[23]. Minimal set of services for universal service is encompassed in the Law on Telecommunications (2003), and the Agency for Telecommunications – RATEL should propose to the government further resolution of the issue of universal service. The Law envisages the

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[22] Researches conducted among certain number of Internet service providers (over 180.000 users) have shown that there are no data describing the user or typifying the users' profile (no gender, age, interest and other structures).

[23] Universal service has dual role: social (as a mean against alienation) and developmental (as a mean in the process of the development). It is defined as the compilation of services of particular quality that are available to all the users regardless of their geographical location and other restrictive factors (e. g. persons with special needs), and taking into account specific national settings that can be used – economically affordable.

establishment of particular fund for supporting universal service development policy. The rules of investment and distribution of the resources from this fund should be brought by RATEL.

In rural and remote areas the majority of population are women and children whose need for communication is unquestionable. Action Plan of the World Summit on IS envisages that by the year 2015 every village will be connected and accessible for broadband services. This will make possible services such are tele-education and tele-medicine. In Serbia, this objective should be accomplished much earlier and therefore it is recommended to follow these guidelines in the development of the Universal Service:

1. Through license(s) and/or permit(s) for provision of universal service to oblige the operators to allocate a tele-center for every settlement in Serbia, hence the place from which it is possible to attain access to broadband services on technologically neutral basis.
2. To encourage women from local community to undertake and run the tele-center, or to form a tele-center via the micro-credit.
3. The tele-center should be located on the spot where women can access it easily by all means (e.g. school, local office, library, kindergarten, shop, women association; and not in a pub, restaurant, gas pump, etc).
4. Simultaneously with the construction of the tele-centers to perform basic ICT education of the local tele-centers' staff.
5. The prices of access and services for the impoverished population, especially those that live in rural areas (where the most women and children are), should be acceptable, and where it is necessary to provide appropriate subventions[24].

An example of creating and implementing the policy of developing the universal service is given in Table 2, alongside with the comparison of the use of neutral approach (most frequently used) and gender correct approach.

Steps in developing policy	"Neutral" approach	Gender sensitive approach
Problem definition	Focus on macro-statistics such as density of households with phones, number of households without phones, average distance to the nearest accessible phone	Observation of the phone linkages according to the number of women who run the households, average time and distance to the accessible phone, location of accessible phone.
Definition of objectives and target groups	Women population is not explicitly mentioned.	Women population is explicitly mentioned, especially with very low income and the one living in rural settlements.

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[24] NSIS in paragraph 5.7.5 envisages:
"...Subventions in telecommunication services for economically weaker social groups and possibility to connect schools, libraries, health stations and hospitals to the Internet using special prices."

Steps in developing policy	"Neutral" approach	Gender sensitive approach
Formulating the options of development policy	Policy of the increase in number of households with phone, promotion of the development of tele-centers	Equivalent, but with emphasis on the increase of the number of households with phone and run by women, decrease of the time spent walking towards the phone, easily accessible tele-centers, promotion of women in managing and ownership of the tele-centers
Selection of the best option	Focus on the overall effects	Focus on the specific effects for women as well
Implementation of the new development policy	Support by user groups, local governments, ministries and operators	Additionally develop the support of women organizations, government's Council for Gender Equality, gender experts from RATEL
Evaluation and monitoring	Process based on basic statistics and quantitative methods	Process based on the statistics structured by gender; analyses that does not treat solely if women benefit, but which women (class, age, location, nationality)

Table 2 Creation of gender equal policy of the Universal Service

GUIDELINES ARE INTENDED FOR:

- Relevant ministries
- RATEL, RRA
- Department for IS

LICENSING

The activities of licensing are operations of the regulatory body (Regulatory Radio-diffusion Agency – RRA and Regulatory Agency for Telecommunications – RATEL) that decide on the rules and criteria of licensing and issuing licenses. Regulators should, within the process of licensing, ensure that the non-discriminatory approaches are achieved; concurrently, licensing conditions should uphold the implementation of the gender equality principles.

The following gender sensitive guidelines and checklist should be used by regulators, in order to secure equal opportunities for applicants in the process of preparation of licensing conditions, analyses of offers and licensing. Naturally, it comprehends the monitoring of the given general guidelines.

1. Licensing criteria should include the assessment of companies from the gender aspect (with high percentage of ownership by women and/or high percentage of women in the top management).
2. Ensure that the procedures for attaining licenses and advertising are publicly available.
3. Regulators should, as an integral part of granting the license, secure mechanisms that will ensure that the licensed ones in their own organizations have programs introducing gender

equality by accepting the guidelines on the importance of this equality; promoting the analyses on gender equality in their work; offering training programs for women from technical professions and managers, as well as securing the working environment that cares for gender equality.

4. Regulators should, when establishing criteria for attaining licenses, consider the contemporary social responsibility of the companies, as well as their plans to contribute to the universal approach to communications (such as their readiness to participate in development projects, projects such as tele-center, local radio; initiate educational programs that will attract youth, especially girls, for attaining technical know-how, etc). Implications on the gender equality should be separated in the following exemplary manner: if these programs are directed towards the women in rural areas as the most marginalized group in the society, they would have greater impact on strengthening the family as well as overcoming the traditional barriers.

GUIDELINES ARE INTENDED FOR:

- Persons that manage RATEL and RRA
- Persons that lead the team for creating the licensing criteria and issuing licenses

❖ **CHECKLIST FOR THE PROCESS OF LICENSING**

No	CONTROL QUESTION	COMMENT	
1.	Does the licensing criterion evaluate the company from the aspect of gender equality?	Yes	No
2.	Do the procedures for attaining the licenses/permits transparent enough and are the communication channels available to women being used?	Yes	No
3.	Has the gender equality principle (affirmative action) been respected in the process of analyses for granting the license?	Yes	No
4.	Has the social responsibility been considered in the process of determination on the universal service provider?	Yes	No

2.3.4 GUIDELINES FOR THE PROCESSES OF EMPLOYMENT AND TRAINING (FACING THE CHALLENGES IN REALIZATION OF THE STRATEGY FOR COMMUNICATION DEVELOPMENT

Electronic communication represents rapidly changing and propulsive area of economy. This occurs as the consequence of fast technological progress, liberalization of the market and users' demand for broadband mobile services. Entering the IS and the new knowledge economy requires from the operators of e-communication to redefine their mission and participant oriented direction. Creation of the healthy competitive environment is possible through establishment of the flexible legal and regulatory infrastructure. Continuous care for human potentials and their permanent education also represents a challenge that increases the competitiveness. Facing these challenges can easily lead to discrimination and unequal employment opportunities and training of women and men, regardless of race, ethnic background, class and age. Institutions participating in these changes (ministries, RATEL, RRA, operators) should ensure (on their own, or in partnerships with other government and non-governmental institutions) the systems that sustain both women and men work, through the

increase of the number of women on managerial positions, creation of additional criteria, access to trainings, flexible working hours and mechanisms to avoid harrasement and any type of disturbance. These particular systems or mechanisms facilitate not only the participation of women, but increase the working efficiency and business policy focus as well.

Also, it should be taken into account that the new "information revolution" carries in itself the need for new expert profiles. Today situation with maximum of 18-20% of girls studying ICT points that there will be a very limited number of women employed on new working posts. There is a strategic question on how to motivate and encourage girls to enroll ICT studies and become creators of knowledge in this new economy.

The following set of guidelines should assist in considering these questions:

1. Equal opportunities for women and men (from different ethnic, class and age groups) for *all* working positions that are available, through public announcements, for all the participants in e-communications (institutions). To introduce a clear standard to include the following sentence in the text of the ads for opening positions: "We especially encourage women to apply", or something similar.
2. Institutions should establish the policy of "affirmative action" or quota (based on the realistic level of qualified candidates for every position) in order to secure the principle of equal gender opportunities and avoid any tendency of segmentation of work and/or sector segregation on the working post.
3. Institutions should develop gender equal business policy through the increase of the number of women at all managerial, supervisory and executive positions, as well as the mechanism for reporting on the undertaken measures.
4. Institutions should develop employment policy to attract women experts to work on the technical, regulatory and legislative positions. Awarding scholarships should include the principle of equal number of female and male students, with special emphasis on positive discrimination of girls from the technical faculties, or to have at least 30% of female students. Formation of the special Fund for Scholarship Awarding for female students represents the modality for increase of the number of women experts for ICT[25]. These actions should be developed in coordination with other government bodies as a part of the overall campaign for the increase of the number of women at all levels and areas of work in the ICT sector.
5. RRA and RATEL, as the operators and service providers, have to secure equal access to trainings, domestic and international, for both women and men in defining the proposal for sector advancement of human resources. Women should not be discriminated because of "other" responsibilities such as motherhood or contemporary sector level. Instead of that, the institutions should make every effort to ensure equal access and necessary conditions for participation in training programs for all the employees, and consequentially benefit the advantages of the improved qualifications
6. RRA and RATEL should establish gender sensitive indicators on the improvement of knowledge, additional education and trainings.

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[25] See guidelines for e-education

In order to secure the equal access in the improvement of knowledge and trainings, the institutions may set up a checklist that includes the following tests:

CHECKLIST FOR THE PROCESS OF e-COMMUNICATION HUMAN RESOURCES ADVANCEMENT

No	CONTROL QUESTION	COMMENT	
1.	Are the training opportunities announced in all departments?	Yes	No
2.	Are the additional conditions for women participants provided for the training (e.g. coverage of additional costs for baby-sitting)?	Yes	No
3.	Are the teams conducting the training gender mixed?	Yes	No
4.	Is the support provided to technical and managerial programs that educate women experts through partnership with institutions for education; in order to promote the increased interest of women in educational programs, and, where possible, develop training programs intended for employed women experts?	Yes	No
5.	Are the indicators related to knowledge improvement, additional education and expert training being continuously monitored and analyzed?	Yes	No

2.4 GENDER SENSITIVE GUIDELINES IN e-GOVERNMENT PROJECTS AND POLICY

2.4.1 INTRODUCTORY REMARKS

The reform and modernization of the public administration, based on the extensive use of ICT, represent one of the key elements of the overall transition of Serbia into the modern information society and knowledge base economy. Generally, women create a half of the population of every society and state, thus the disrespect for their needs, perspectives, but also creative potentials and talents, represents a trap that Serbia should avoid. Especially in the knowledge based economy all the societal potentials have to be utilized. Inclusion of women represents basic human right and it is a prerequisite for incitement of the faster economic growth and poverty reduction[26]. Countries of united Europe have realized and respected that much earlier through the inclusion of the principle of "equal remuneration for equal work" into the Roma Contract 1957[27].

When considering e-governance, it is necessary to make distinction between e-governance, e-management and e-democracy and stress their benefits for women. Image 2 (a, b and c) illustrates essential differences of these concepts.

a)

b)

c)
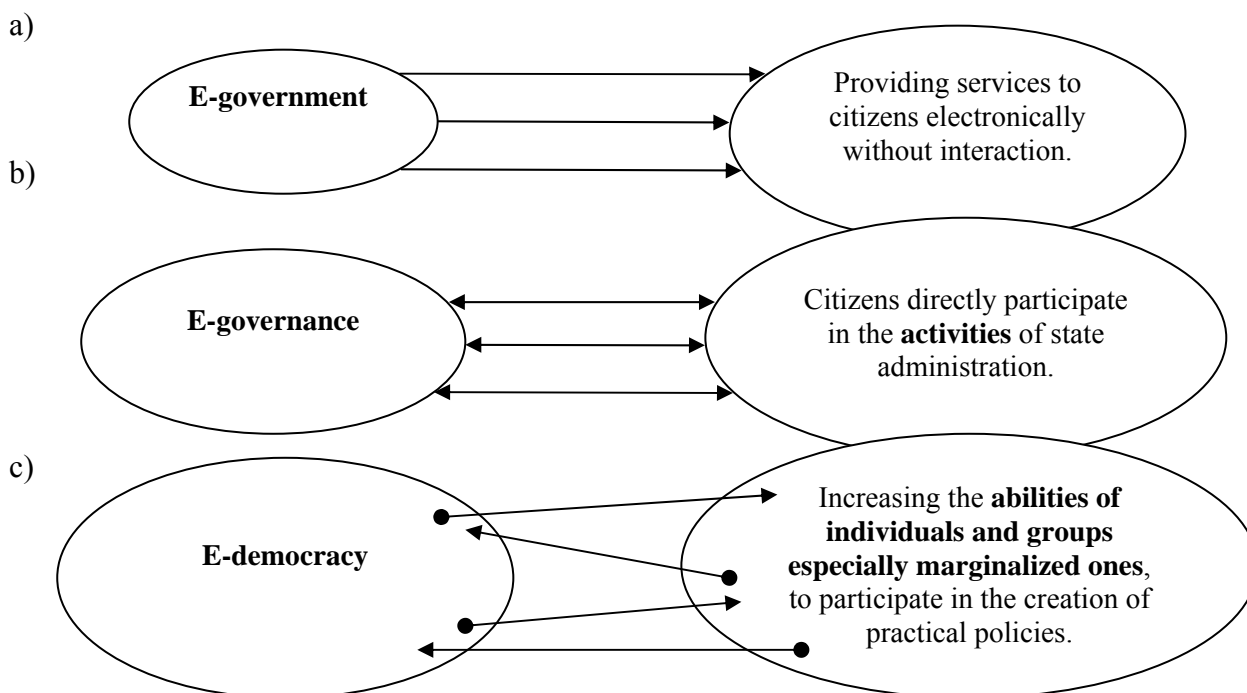
Image 2 (a, b and c): *Simplified definition of terms*
*(**Circle at the beginning of the arrow represents the decision of practical policy**[28])*

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[26] UN Millennium goals for development of Serbia and Montenegro: www.un.org.yu/srp/mdgs.htm

[27] Reasons for inclusion of this clause into the text of Roma Contract were strictly economic and their objective was to preserve the stability of the market. Today, equality between women and men, thus incorporation of gender differences into all the policies and activities, as well as the promotion of equality are basic **values** and **tasks** of the EU, which are implemented from the election of representatives for major EU bodies, to the country applications for obtaining resources from the Structural Funds of EU. There are 7 women among 24 commissioners that form the EU government. One of them is in charge for Information Society and Media, Vivien Redding: http://europa.eu.int/information_society/index_en.htm, Directorate General for Information Society: www.eurunion.org/legislat/TradeAg/InfoSoc.htm

[28] Practical policy is the use of authority or political power in administrating public policy, hence the activity directed towards the resolution of concrete problems or improvement of situation in the community. Definition taken from Oin

E-governance [29] is generally described as the use of ICT by the state administration for **modernization** of work and providing **efficient services for citizens**. In this particular concept, ICT serve to increase the **productivity** of the state administration providing efficient and effective solution of the requests and satisfaction of the citizens' needs. Consequently the resolution of all administration work is much easier, which is the very purpose of the state administration.

By e-governance, the state administration becomes more responsible for its behavior and decisions towards its citizens, and the operations, responsibilities and procedures that state bodies and state administration institutions have to follow are becoming more comprehensible. Some of the services of e-governance are: obtaining various receipts from the state documentation, submitting requests for acquiring various licenses, submitting various complaints, etc. The complete list of services for citizens and business entities is given in Table 3 at the end of this chapter.

Although it is frequently happening that the term "**e-governance**" is used in the same meaning as "e-government", there is a significant difference between these two terms, considering that e-governance is a much broader term[30]. Whilst the *e-government* is defined as the delivery of the services of state/local government to the citizens, in *"e-governance is not simply about the e-mail and website of the state/local government. It is not merely the services that can be provided over the Internet or digital access to information of the state administration or electronic paying or attaining documents"*[31], **e-governance** enables direct participation of citizens in the activities of administration. *"E-governance brings **new concept of civil society** in relation with the needs, as well as in relation with the responsibilities of citizens and state administration"* (Harris, 2002, Ibid). As the latest example of e-governance we can record the method of strategic planning in Canada. Federal agency *Status of Women Canada: Gender Equality Consultation*[32] has published an online interactive questionnaire on its website and consulted the citizenry during the two months in 2005 (September and November) enabling the citizens to express their opinion and participate in the creation of the development of new Strategy for Gender Equality in Canada[33].

Young and Lisa Queen: "Writing of Effective Proposals for Public Practical Policy: Guide for the Consultants for Practical Policy in the Countries of Central and Eastern Europe, OSI-LGI, Fund for an Open Society Serbia 2002.

[29] Definitions of e-governance, e-administration and e-democracy are taken from *"Looking Behind the Internet: Empowering Women for Public Policy Advocacy in Central America"*, Martinez Juliana and Reilly Katherine (2002), UN/INSTRAW virtual Seminar Series on Gender and ICTs, Seminar 4: *ICTs as Tool for bridging the Gender Digital Divide and Women's Empowerment*, September 2-14.

www.iucea.org/publications/cap2_e-Gov_Report_East%20Africa.pdf#search='egovement%20discussion

[30] Joint UNESCO and COMNET-IT Study of E-Governance: Development of Country Profiles / prepared by the COMNET-IT Foundation. Paris: UNESCO, 2002. (CI-2002/WS/1) P.1.

[31] Blake Harris (2001) defines the area of e-governance in the following manner: "e-governance is not simply about the e-mail and website of the state/local government. It is not merely the services that can be provided over the Internet or digital access to information of the state administration or electronic paying or attaining documents. E-governance will alter the way citizens relate to the state administration and in the same extent as it changes their relationship with other citizens. E-governance brings new concept of civil society in relation with the needs, as well as in relation with the responsibilities of citizens and state administration".

[32] www.swc-cfc.gc.ca/index_e.html. Besides the questionnaire on the future strategy for gender equality in Canada, the Agency has also published the report available at:

www.swc-cfc.gc.ca/resources/consultations/ges09-2005/finalreport_1_e.html

[33] Alongside with this type of consultations, Canadian government has formulated its vision and the Strategy using the consultative procedure with citizens through questions on how they wish to access the information and services. In addition, the vision is formulated in the manner that includes the availability of e-services to population throughout the country regardless of their income, language or specific needs. (Joint UNESCO and COMNET-IT Study of E-Governance (2002), Ibid, P. 9.)

E-democracy is an interactive process that takes place between the state, individuals and groups and represents the use of ICT in order to facilitate and allow their participation in the democratic processes and on several levels and means: through the improvement of transparency[34] in the work of the state administration bodies, through increase of the responsibility for actions and adopted decisions, and finally through securing the accessibility of information.

In case of women organizations, the use of ICT by state administration should facilitate the production and distribution of information of public interest for women. **Information available in this particular mode should serve for effective monitoring and supervision of the implementation of practical policy and advocating for women interests in certain areas and issues**.

For example: if women had the data on the number of family violence cases and on the status of every individual case, groups representing women interests (civil society, political parties, unions, media, etc) could advocate and lobby for the change of policy/law much easier.

2.4.2 IMPORTANCE OF e-GOVERNMENT FOR WOMEN AND WOMEN ORGANIZATIONS

The introduction of modern information systems increases the quality of services and improves the efficiency, transparency, responsibility and effectiveness of the work of state administration. From the women point of view, and from the perspective of their needs, the majority of countries in their approach to e-governance/e-government consider women primarily as individual users, not as organized participants in the process[35]. NSIS uses solely the term "e-government", comprehending both e-governance and e-democracy in that context.[36.]

From the point of women's needs and perspectives, sector policy of e-government should **ensure the influence of women on the processes of creating practical policies and the decision-making process**[37]. Above all, women should decide on the issues that relate to them, as well as on other societal issues, based purely on their fundamental human rights.

The existing gender inequality in the policy and decision-making process will deepen if the development of e-government is not based upon the gender equality principle. Besides the factors stated in NSIS[38], key factors for the creation of gender sensitive vision are the acceptance of difference that exists in the role and importance of e-government, e-governance and e-democracy for women and women organizations as organized actors (associations, cooperatives, unions, etc).

In the development of sector policy for e-governance certain threats that can lead to gender neutral or unequal e-governance should be particularly considered. They are primarily related to the focus

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[34] Transparency, publicly identifiable work should be separated from the clarification of duties and organization of state administration on its website. Transparency or publicly identifiable work means that **women as organized actors can learn, understand and make value assessments on the activities of the state and participate in decision-making process, hence influence the outcome and character of the changes**. Clarification of the role, organization and process of work of state administration is undoubtedly important, however it should not be equalized with transparency. (Martinez Juliana and Reilly Katherine, (2002), Ibid)

[35] Martinez Juliana and Reilly Katherine, (2002)

[36] National Strategy for Information Society in Serbia (NSIS), Draft 2, Belgrade, December 2005, page 72. Downloaded in February 2006, Ministry for Science and Environment Protection: http://147.91.185.8/formulari/nsid.zip

[37] See in further text: Checklist for Gender Sensitive Standards of e-Governance, question no. 6.

[38] Factors for the accomplishment of the NSIS Vision: 1 – Political will, 2- Leadership and strategic thinking, 3 – Personnel, 4 – Financing, 5 – Promotion of the e-governance advantages, as opposed to the challenge/resistance to the changes, 6 – Participation of the citizens and economy.

of e-governance on women as individual users. Also, it is notified that services and information that may be of use to women as organized actors are not being considered, although they should influence the decision-making and creation of policies. It should be emphasized that e-illiteracy of women and their neglect in further advancement represent a threat as future isolation of women e-governance users.

2.4.3 GUIDELINES FOR SECTOR DEVELOPMENT POLICY OF e-GOVERNMENT

National Strategy for Information Society in Serbia defines the following objectives of development the e-government:

a. Modernization of public administration,
b. Development of national economy,
c. Extended engagement and greater participation of citizens in democratic processes.

Realization of each and every of these objectives that encompass e-government and e-democracy, requires specific consideration of their influence on development and empowerment of the women population, primarily as the creators of e-government services, then as the service users.
Following group of gender sensitive guidelines should be used in modernizing the public administration and creation of appropriate policy:

1. Perform continuous training of staff from the administration for access and use of ICT, as well as e-government services aiming to accelerate the process of implementation of sector policy of e-government. The principle of gender equality should be utilized in every phase of this process: from the preparation of training and application procedure to participation at training.
2. Middle and older generation of employees from the administration should have the same conditions as the rest of participants in the modernization of state/public administration.
3. Follow the information on trainings by the level of education, gender and age structure.
4. In the course of establishing e-government there will be a decrease of working posts in state administration. Women now occupy majority of these posts. This part of women workforce is to be re-qualified for maintaining the services of e-government.
5. Form mixed teams by gender and age for the creation of e-government services utilizing the latest ICT tools.
6. Use gender sensitive language in all the forms, requests, documents that are being used in the e-government services, as well as on the website of state/local government.
7. On the e-government portal project the spot for inquiring on the gender of the person who uses the services.
8. On the portal/website of local government project a special space for women. This should serve as a channel for affirmation of the work of woman coordinator, the committee of commission for gender equality (depending on the adopted mechanisms) and should contain comprehensible and transparent description of the authorities, responsibilities, procedures, relevant laws, timing for reception of citizens, etc.
9. Establish and affirm the mechanism of "women – positive role models" among "mainly men professions" such as within the Ministry of Defense and Ministry of Internal Affaires at which websites we also suggest the establishment of separate and apparent sections for promotion of the women from the profession.
10. Ensure the availability of e-government services to persons with handicap.

GUIDELINES ARE INTENDED FOR:

Level of the Republic

- Ministry for Public Administration and Local Self-Government, Department for IS as responsible body
- All other ministries that implement e-government
- Council for IS
- Council for Gender Equality of the government of Serbia
- Ministry of Internal Affaires
- Ministry of Defense

Municipal/city level (local level)

- Local governments in Serbia that develop the concept of IS, thus introduce the e-government services or launching the portals/websites of their municipality
- Coordinators for gender equality in municipalities
- Centers for Social Work
- Institutions of health care on the territory of local government

Considering the planned e-government services it is especially important that they are used for reporting of every **sort of violence**. It is specifically significant for women who are, by all the statistics, most frequent victims of violence. Actualization of the problem of violence over women as well as the contemporary forms of trafficking in human beings, point to the possibility to facilitate the first contact of victim with the law enforcement in this way. It is proved that the hardest thing for victim is the first step – reporting the violence in fear of the judgment by the environment and facing the problem. In that sense, it is suggested to extend the list of services and within the service "report to the police"[39] to add the following:

1. "Report family violence"
2. "Report trafficking in human beings"

The e-government website should contain the link to the website of the police where a notice about this criminal act and detailed instructions on how to file a report (information on the necessary evidence materials, such as the report from the doctor, eyewitnesses' statements, etc. and information of further procedure) is posted. The same possibility should exist for the cases of trafficking in human beings, which would represent one of the easier ways to report this criminal act. It is necessary to make this report very simple and easy to file.

In addition, it is required to pay special attention to protection of databases on victims of violence that are located at non-governmental organizations or state bodies (medical institutions, centers for social work, associations, websites of the police, etc).

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[39] In NSIS it is said "report to the police" (e.g. "report a theft")

GUIDELINES ARE INTENDED FOR:

- Team for the creation of sector policy
- Council for IS
- Ministry of Internal Affaires
- Ministry of Culture and Media
- Society – in order to face the problems and means for their resolution
- Local and/or regional associations that are engaged in the protection of women human rights of the victims of family violence (which number is increasing)
- Victims of trafficking in human beings

The following checklist should facilitate an easier definition of this particular service:

❖ **CHECKLIST FOR THE SERVICE FOR REPORTING THE VIOLENCE**

No	CONTROL QUESTIONS	COMMENT
1.	Is there a text explaining the family violence posted on the website?	
2.	Is there a text explaining the legal procedure following the filing of report?	
3.	Is the text encouraging the victim of violence to report the tormenter? (Rights of women in case of divorce, possibility for temporary accommodation in shelter for women)	
4.	Is the information on the most frequent methods of recruiting the victims of trafficking in human beings posted on the website? (Dubious ads for work in the country and abroad)	
5.	Is the reporting form simple to file and in several languages?	
6.	Is the reporting form for trafficking in human beings visibly posted on the website?	
7.	Are the information on the possibilities and methods of escape from slavery posted on the website? (e.g. toll-free phone line of the local association, etc)	
8.	Do the institutions that are in the system of processing the victims ("unique record") of family violence and trafficking in human beings possess the adequate software and other forms of protection for their databases?	
9.	Is there a special training for representatives of the associations and institutions of the system [40] that are in the system of processing data on victims (family violence, violence over women and trafficking in human beings) and when it is planned?	

If the e-government and e-governance are sufficiently developed, the privileged groups in the society gain or already have extremely big advantages compared to the rest of population, and especially the marginalized groups. Privileged groups actively participate in the political structures of power that decide on "what is to be posted on the Internet", subsequently the advancement of these e-government services will not contribute to the change of gender relations or participation in the decision-making processes.

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[40] Centers for social work, police, health care institutions, judiciary, etc.

In order to avoid this particular situation in the process of realization of the objectives for extended engagement and greater participation of citizens in the democratic processes it is suggested to:

1. Plan specific activities and securing the appropriate budget for the extensive training for access and use of the e-government services for women in remote rural areas.
2. Promote the benefits of e-government for women and marginalized groups.
3. Analyze every service of the e-government from the aspects of:
    o Equal benefits for both women and men,
    o Benefits for women only,
    o Benefits for men only,
    o Gender neutrality.
4. Establish separate, clearly visible part of the state administration's website for the promotion of the mechanisms for gender equality (committee, commission or coordinator at the local level) as well as posting links to women organizations and other gender equality mechanisms at the state level.
5. Analyze the services of e-government that women will most frequently use with the purpose of engaging in the decision-making processes and creation of policies, since the availability and use of the technology as such do not guarantee the participation in the decision-making process not only for women, but for marginalized groups as well. Tables 3 and 4 provide an overview of the adopted e-government services by the European Union and corresponding to the citizens and business entities[41], and point to the services that particularly strengthen women. E-government services should secure special space for an insight in the work of institutions, which will contribute to the strengthening of women groups and raise competencies of organizations advocating for women interests in the use of concrete practice and laws.

    Example: Not only women, but other organizations and associations as well, primarily those dealing with ICT, should have an insight and basic knowledge on the significance and benefits deriving from the Law on Electronic Signature. In this way, not only the competencies of organizations are being raised, but the use of ICT is promoted as well.

GUIDELINES ARE INTENDED FOR:

- MPALSG
- Person managing the Department for IS
- Council for IS
- Team for sector policy
- Teams for creation the e-government services

The assessment if e-government policy managed to satisfy gender sensitive standards is being performed through the factors of success that need to be defined. These factors can be evaluated through the following control questions:

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[41] IDABC e-government Observatory (June 2005), e-government in Member States of the European Union, Page 24. http://europa.eu.int/idabc/egovo

❖ **CHECKLIST FOR GENDER SENSITIVE STANDARDS OF E-GOVERNMENT POLICY**

No	CONTROL QUESTION	COMMENT
1.	Are women included in the decision-making process in e-government? a) As individual experts? b) As representatives of the women organizations/associations? c) What percentage of women is included in the decision-making process compared to the total number of men?	
2.	What percentage of women is included in creation of the new knowledge and e-government services? a) What is the number of women consulted in regard to the identification of their needs? b) What is the number of women consulted in regard to their needs as organized actors, either in local community or at the level of the Republic?	
3.	What is the number of women who use e-government services compared to the total number of users?	
4.	Who is in charge for conducting gender sensitive statistics on the use of e-government services?	
5.	Analyzing the influence of sector policy on women and men. Who is in charge for gender sensitive analyses of sector policy and its influence on women and men independently? a) To whom is the report being presented? b) Who is in charge of reporting? c) Who is in charge for monitoring the gender perspective in the e-government?	
6.	How much are women as organized actors (number of representatives from unions, representatives of civil society, number of representatives from media, etc) included into decision-making on creation of practical policies compared to the total number of requests?	
Gender sensitive analyses of the e-government:		
1.	Does the service reduce costs, volume of work and travel of women and children compared to men?	
2.	Does the service specifically increase the economic opportunities for women in local community or region?	
3.	Does the service stimulate work and activities of women organizations or groups?	
4.	Does the service provide women with better possibilities to improve their knowledge and skills?	
5.	Does the service encourage women to take part in administering the community?	

#	Services for state administration – economy/business	W	M	Explanation
1.	Social dues for the employed	+	+	Women are unemployed or the dues for them are not being paid, hence this is the way to control it if the data are visible
2.	Tax on the companies' profit: tax declaration, notice			
3.	Value added tax (VAT): tax declaration, notice			
4.	Registration of the new company			Specifically encourage women entrepreneurship and innovation; create and support special portals with instructions, forms and consultations
5.	Submitting information to the statistics offices			Data should be gender structured
6.	Custom declarations			
7.	Licenses related to the environment (including reporting)	+		
8.	Public acquisition			

Table 3 *Overview of the e-government services for business entities (companies) adopted by the European Union*

#	Services for the populace	W	M	Explanation
1.	Trade tax, notice on declaration	(+)	+	Greater number of men are the owners of companies and they declare taxes, on the other side there is a certain number of women accountants (incursion into specific profession or area) who technically file those taxes, which will lead to the reduction of their costs
2.	Employment seeking services by the National Agency for Employment	+		Greater number of women is unemployed, which will lead to the reduction of their costs of travel/transport and time savings
3.	Social security	+	+	Request for additional child-support subsidy, registration for pre-school institutions
4.	Personal documents (passport and driving license)	+/-	+	The assumption is that equal number of women and men have/not have the passport, which is not the case with driving license; the logical conclusion is that this service will benefit and save time, at least in the beginning, to the greater number of men
5.	Registration of vehicles (new, used and imported)		+	Majority of the car owners are men

#	Services for the populace	W	M	Explanation
6.	Acquiring the construction license		+	Men are mainly the owners of construction companies; renovation and building of houses/real estates is usually registered on the name of husband, brother, father, etc.
7.	Report to the police (e.g. in case of theft)	+	+	This service should be extended with the following services (7.1 and 7.2)
	Report to the police in case of theft	+	+	Separated since it is given as an example
	*7.1 Report to the police in case of trafficking in human beings *	+		*Women and children are more frequently victims of trafficking in human beings*
	*7.2 Report to the police in case of family violence *	+		*Women are more frequently victims of violence*
8.	Public libraries (availability of the catalogues and tools for publications search)	+	+	It is presumed that this is equally important for both genders, or that it is equally benefiting
9.	Birth, marriage certificates	+	+	It is presumed that it equally strengthens both genders
10.	Application for higher education/faculty	+	+	Equal number of girls and boys, or even greater number of girls enroll the faculties
	*10.1 Registering and acceptation in the kindergarten and preparation group for school (pre-school education) *	+		This service especially strengthen women considering their "standard" role in care, nurture and upbringing of children
11.	Notification on the address change (reposition)	+	+	It can be analyzed from the aspect of those who reports the change of address
12.	Services related to the health care (interactive consultations in regard to the services in hospitals, scheduling appointments in hospitals, waiting lists, etc)	+		Women in our communities generally take care of children and the elderly family members and have very little time for their own health

***Table 4** Overview of the e-government services for citizens adopted by European Union*

* Services marked with the asterisk are suggested as e-government services that especially strengthen women.

2.4.4 GOOD EXAMPLES FROM PRACTICE

Municipality of Indjija

Indjija Municipality has the presentation on the Internet at *www.indjija.net*. This website with its contents encompasses various aspects of e-government, e-administration and e-democracy. All the information relevant for the life in Indjija are available to citizens: they can, via Internet, order birth, citizenship and other certificates, review their financial record in public companies, etc. It is also possible to report a communal problem that will be solved in the following 48 hours. In the visitors' registration form, besides standard data, user's gender is required; and next to the "name of father" is the field for entering the name of mother as well. In section "Citizens", where the information on associations and organizations in Indjija are located, the first place is dedicated to women non-governmental organizations[42]. We can say that *www.indjija.net* is the example of good practice in e-government and an indication of the example for good practice in gender sensitive e-government.

Project "Managing Small Enterprises for Women"

This website (*www.sba.gov/businesslaw/index.html*) is created as the "first aid" for women, primarily those that have the idea, future entrepreneurs, with the basic aim to provide information on how to start a small business, how to acquire capital and how to present/sell their products and/or services.

In addition, the presentation offers the list of counseling services that offer assistance regarding the establishment and management of the small companies, as well as special sections: library, news from the ombudsman and leading business news. Especially important part of the website is the one presenting all possible forms that can be downloaded free of charge, as well as the assistance in filling them (there are several dozens of different forms).

Basic objective of this presentation, launched January 26, 2006, is to offer information to women, thus eliminating barriers and/or fears on the way of initiation and running the small enterprise. This type of economic empowerment represents the way out of poverty and prevention of various types of violence over women and girls.

Similar attempts regarding the establishment and conducting cooperatives, as well as available credit lines in the country amongst government institutions and foreign donors may be good example of the economic empowerment of women in Serbia[43].

Database of e-Government Projects

Different projects of e-government realized in the member states of the European Union represent useful database of the examples of good performance, available at *www.egov-goodpractice.org*

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[42] These are Women Initiative and Organization for Women Activities "Indjija"

[43] See also website of the Regional Chamber of Commerce, Nis at http://www.teodora.org.yu/rpk_nis.html. These sorts of examples are necessary to promote and affirm additionally.

2.5 GENDER SENSITIVE GUIDELINES IN SECTOR POLICY AND e-EDUCATION PROJECTS

2.5.1 INTRODUCTION

Education and the right to education is basic, constitutionally guaranteed, human right. In the world of fast and frequent technological and information changes, education is getting more important role, since it is expected to contribute to:

- Cultural, economic, technological development of the society,
- Development of peace and stability in the state,
- Development of good interethnic and interstate relations.

In order to efficiently respond to the changes in the world, as well as the needs of individuals and the society as a whole, education has to be:

- Functional,
- Efficient,
- Quality,
- Adjustable,
- Lifelong,
- Modern,

Thus implemented by the use of ICT.

Education has special role in the societies such as Serbian. By means of analyzing the existing statistical data[44], provided in brief below, it is apparent that when it comes to younger age groups there is no difference between women and men in regard to the literacy dispersion. Participation of women in the overall mass of illiterate population is in direct proportion with the increase in age, whereas the difference in relation to men is progressively increasing. The rate of illiterate women is 6,0%, and for men it is 1,2%.

Educational structure of women is significantly more inconvenient in relation to men when considering lower levels of schooling, while in view of the secondary, higher and university education this particular difference is not that much expressive.
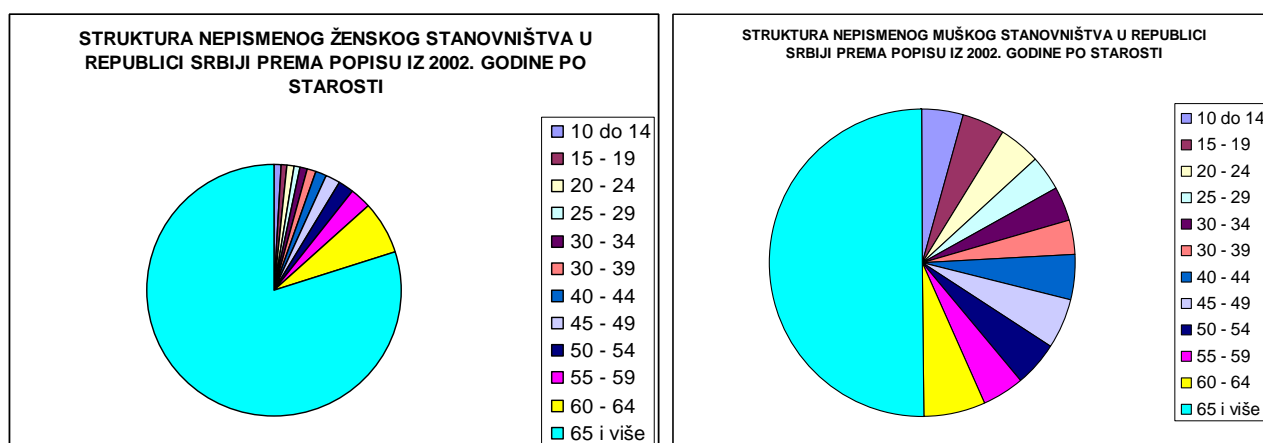
Diagram of illiteracy structure by gender

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[44] Republic of Serbia Institute for Statistics, 2005, "Women and Men in Serbia".

In the year 2002 girls have added up to 48,4% of the enrolled pupils in the first grade of elementary schools, hence on the 100 enrolled boys of seven years of age there were 93 girls. When secondary education is considered, on 100 enrolled boys of 15 years of age there were 95 girls, which means that girls formed 48,4% and boys 51,6% of registered pupils.

If we observe the student (university) population, it can be noticed that women students create 52,9% of the enrolled in the first year of university level population, while men students add up to 47,1%. Women form the majority among the graduated students (in the year 2002, there were 6.831 women graduates and 4.778 men on science faculties; there were 318 women and 178 men on the artistic faculties), accordingly, there are 143 women on 100 graduates gaining diploma at the science faculties, while on the artistic faculties this proportion is 185 to 100 in favor of women.

According to the data from 2002, there were 404 women and 835 men that have obtained the MA degree (women 32,6%, men 67,4%), while in the same year there were 137 women (30,4%) and 313 men (69,6%) who have obtained the PhD title. This data compared to the data on graduation point that apparently the majority of women end their studies with the basic diploma and in considerably lesser extent continue further advancement. Having in mind that this is the age when majority of them give birth to children, it is easy to draw the conclusion, since generally the care for children rests up to mothers.

If the minority groups are observed, especially alarming is the education status of Roma national community[45]. It is estimated that 80% of the total population of Roma are completely or functionally illiterate. In that category there is a vast majority of women. This presents the challenge for the whole of society, and every little step in that direction symbolizes a great contribution to this part of populace and the state as a whole.

2.5.2 SIGNIFICANCE OF e-EDUCATION FOR WOMEN

Modern era, the new millennium with the incursion of ICT, all the decisions, recommendations and resolutions of the international organizations on the respect of gender equality, reshape and restructure the patterns of social inter-dependence in every segment of our social life and force us to rethink and reevaluate both formal and informal educational system in Serbia. New methods that the e-education introduces are changing traditional methods of education and advancement. Structure of teaching and learning acquire new ways and new forms of creative and lifelong continuous development and work, empowering women and men to improve their lives and their enterprising. Modernization of the Serbian educational system is indispensable and very important process that will mainly base upon ICT, thus e-education.

E-education especially provides options for strengthening women, in attaining and exchange of knowledge and experiences, at any place, in every moment and with high speed. E-education removes many obstacles, such as distance or handicap, which prevented many women to commence or continue their education. Therefore it is understandable why the proposal of NSIS pays special attention to e-education. Realization of the defined objectives for e-education should be performed through adequate sector policy which main actor will be the Ministry of Education and Sport.

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[45] Publication "Roma in Serbia and Montenegro" published by the Ministry for Human and Minority Rights of Serbia and Montenegro

These are the e-education objectives defined in NSIS:

1. Basic computer education of citizens in order to become equal members of the IS,
2. Development of the educational system that is adapted to the needs of IS,
3. Encouragement of research and development (R&D),
4. Provision of access to information on cultural, historical and scientific heritage.

Incorporation of the gender equality principle should be an undivided process of development the sector policy and projects that will implement it. It is suggested that in developing the policy and projects, besides previously specified general guidelines for achieving equal opportunities in IS, specific guidelines should be used as well. The task of these specific guidelines is:

- To direct the creators of sector policy towards the incorporation of gender principle and
- To initiate the issues of equal opportunities in the process of implementation of the NSIS Action Plan.

The most dangerous threats that may delay and endanger the realization of NSIS objectives and inclusion of gender equality into the sector policy of e-education are:

- Lack of the satisfactory infrastructure in Serbia,
- Resistance to training (alleged reason) caused by the fear of failure facing the unknown,
- Neglect of the elderly population and minority groups, especially women, and
- Lack of political will.

Further on, if women will not have explicit support by the institutions and the society as a whole in the necessary education and training in adequate skills, they will become major marginal group that will cause additional economic and societal problems in Serbia. Lack of funds in the republic's budget could delay the process of creation the prerequisites for e-education. Insufficient development of infrastructure in rural areas will primarily imperil women. The existence of actual danger if the first objective defined in NSIS is not achieved, impossibility of employment of ICT, is shoving the marginalized groups even deeper onto the societal margins and widens the digital gap, which is among these groups a result of political, social and economic gap.

2.5.2.1 Basic Computer Education of Citizens So That They Become Equal Members of IS

In the realization of this objective it should be taken into account that the establishment of e-Serbia is a long-term strategy. Only the e-literate will be able to use all the advantages of e-Serbia (e-government, e-health care, e-business, lifelong education, etc).

The following guidelines should be ensued in the process of basic computer education:

GUIDELINES:

1. Assist women in overcoming the fear and realizing the significance and necessity of the e-knowledge and skills, e.g. by motivating articles and programs in printed and electronic media[46];
2. In the creation of the critical mass of computer literate citizens (minimum 25%), special attention should be paid on the basic computer education of the women of all ages, and it is possible through the attainment of gender balance in planning and realization of the education;
3. Promotion of the open code software use;
4. Organize seminars and workshops in cooperation with the Ministry of Education and Sport and NGOs oriented at women empowerment, for women teachers and professors in elementary and secondary schools, since they will transmit e-knowledge and skills to girls and other women from the local community[47];
5. During the organization of trainings for women, take into consideration: proximity of the premises where the training is being held (e.g. night courses in local community offices, schools or other forms of alternative schools), as well as their existing commitments (family, work, travel, etc);
6. In the phase of group formation, pay attention that the courses are being attended by the women of similar educational level and social milieu;
7. Insist that the trainings for women in rural areas be of the same priority as those for women in cities;
8. Secure all the necessary literature in languages of minority ethnic groups, as well as the use of gender sensitive language;
9. National Agency for Employment should, based on the gender structure of the unemployed, enable the affirmative action in additional education, re-qualification and training for e-comprehension and skills for all ages;
10. Plan the programs and methods of training for women population with special needs;
11. Provide particular support to the basic computer education to Roma women (ICT in the function of inclusive education) with the assistance of women NGOs and international organizations;
12. Initiate the creation of the Support Center (*help desk*) from which the mentors would be able to provide assistance to particular questions by phone, e-mail or "virtual meetings" (e.g. within the municipal office, NGO, Council for Gender Equality);
13. Promote the role of public libraries in the process of creation the information literacy for women[48];
14. Promote the establishment of "Internet Café-s" and "Internet Spots" at locations of women gathering as the support to overcome the fear of computers and support to women that do not have their own PC;
15. Follow the indicators on the number of e-literate women, their qualification structure and place of residence;
16. By raising the public awareness and stimulation through state subventions encourage women to form and manage regional centers for their own empowerment using the ICT.

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[46] The example within this project is given in "Collection for Media"

[47] The association "Equal Opportunities" has initiated this particular project. Information on the project can be found at: www.e-jednakost.org.yu/projekti/skole.html

[48] www.bgb.org.yu/predlazemopredlazete/PulmanPrevodFinal.pdf

GUIDELINES ARE INTEDED FOR:

- Ministry of Education and Sport as the key actor of development and implementation of sector policy of e-education
- Ministry for Work, Employment and Social Issues
- Ministry for Human and Minority Rights
- Ministry for Public Administration and Local Self-Government
- Ministry for Culture and Media
- Institutions of IS (Council for IS, Committee for IS, Forum for IS, Subcommittee for IS)
- Educational sector as a whole (educational institutions: schools, institutes, libraries, museums, etc)
- Civil sector (non-governmental organizations)
- National Agency for Employment
- Private educational institutions

Users of the guidelines are advised to employ the following checklist in the implementation of gender equal approach in basic computer education:

❖ **CHECKLIST IN THE PROCESS OF BASIC COMPUTER EDUCATION (e-LITERACY)**

No	CONTROL QUESTION	COMMENT	
1.	Are there indicators for the initial status (number of e-literate women compared to the number of e-literate men)?	Yes	No
2.	Is there the necessary infrastructure for the planned modernization?	Yes	No
3.	Is the "empty space", places where the work is technically impossible, mapped: Are the possible technical solutions identified?	Yes	No
4.	State the number of women employed on basic computer education in percentages.		**%**
5.	What is the percentage of e-educated women who got a new job (or been accepted back on work)?		**%**
	Has the number of women at the Agency for Employment decreased/increased as the result of their e-education?	Yes	No
6.	What is the percentage of women with special needs included in the training?		**%**
7.	What is the percentage of Roma women included in the training?		**%**
8.	What is the contribution of civil sector, measured in the number of e-literate women? What is their qualification structure and place of residence?		
9.	Is the local administration prepared to cover the costs of the *Support Center*?	Yes	No

2.5.2.2 Development of the Educational System Adapted to the Needs of IS

According to the NSIS Action Plan, the Ministry for Education and Sport should in the realization of this objective incorporate all the requirements into its sector policy by September 2006. Gender approach should be considered in this process, having in mind that the existing Strategy for Education[49] is not gender sensitive. The following guidelines provide basis for answering this challenge.

GUIDELINES:

1. Introduce the contents on gender equality in the process of acceptation the new technologies based on ICT methodology of education, from elementary school on;
2. Introduce the expert assessment of the textbooks contents from the aspect of gender sensibility and exclude gender stereotypes, especially when using e-forms;
3. Include the members of marginalized groups of all ages[50] in the creation of the concept as well as during the production of specific (inclusive) educational programs;
4. Motivate girls to study and specialize in ICT, through creation of particular funds for university scholarships for women population[51];

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[49] Strategy of the Ministry for Education and Sport for the period 2005-2010, www.mps.sr.gov.yu

[50] UNESCO has through the so-called "Global Project" presented its programs on *Inclusive Schools and Community Support Programs*, aiming to maximize human and material resources of support to the inclusive education. Until now, there are 30 countries from all over the world included in the project.

5. Produce gender related standards, methodology and indicators for implementation of ICT in education that will be generally accepted and in accordance with the European standards (e.g. *European Computer License*);
6. Plan programs of continuous education and professional development (lifelong learning) of the teaching staff that mostly consists of women, as the contribution to the creation of knowledge society[52].

GUIDELINES ARE INTENDED FOR:

- Ministry for Education and Sport
- Ministry of Culture and Media
- Institutions of IS (Council for IS, Committee for IS, Forum for IS, Subcommittee for IS)
- Educational sector (educational institutions: schools, institutes, libraries, etc)
- Civil sector (non-governmental organizations)

The following control questions should facilitate the evaluation of the inclusion of gender principles in the development of educational system for IS.

❖ **CHECKLIST IN THE PROCESS OF DEVELOPMENT OF EDUCATIONAL SYSTEM OF IS**

No	CONTROL QUESTION	COMMENT	
1.	How many women are in the team for the creation of this particular sector policy?		
2.	Are the contents of the textbooks relieved from the gender stereotypes?	Yes	No
3.	Are there gender indicators for utilization of ICT in education?	Yes	No
4.	Do programs for continuous education of the teaching staff exist?	Yes	No
5.	How is the realization of these programs being monitored from the gender aspect?		
6.	Have the representatives of the marginalized groups been included in the development of specific (inclusive) educational programs?	Yes	No
7.	Have the programs for promotion of ICT sciences among girls in secondary schools been produced?	Yes	No
8.	Is the fund for scholarships for girls studying ICT been formed?	Yes	No

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[51] WSIS Plan of Action, Geneva 2003, C4. Capacity building g): Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls. Early intervention programmes in science and technology should target young girls with the aim of increasing the number of women in ICT careers. Promote the exchange of best practices on the integration of gender perspectives in ICT education.

[52] Program of the European Agency for Reconstruction (VET)
www.ear.eu.int/sectors/sectors.htm, www.vetserbia.edu.yu

2.5.2.3 Encouraging of Research and Development (R&D)

In realization of this particular objective the following guidelines create basis for inclusion of gender sensitive aspect.

GUIDELINES:

1. Women regional networking should promote research projects that will eliminate gender stereotypes and form the centers for knowledge transfer, formation of business incubators, scientific parks and innovation centers;
2. Promotion of research on gender relations and science on gender relations;
3. Exchange of the good and successful practice examples through networking of women in institutions of high education (e.g. universities);
4. Support to women initiatives for development of the new research and development projects;
5. Financing the research work of ICT scientists as affirmative action;
6. Promotion of intersectoral cooperation of mixed scientific and research teams.

GUIDELINES ARE INTENDED FOR:

- Ministry for Science and Environmental Protection
- Ministry of Culture and Media
- MPALSG/Department for IS
- Educational sector (educational institutions: schools, research institutes, libraries, museums, etc)

2.5.2.4 Stipulation of Access to Information on Cultural, Historical and Scientific Heritage

Realization of this objective will be directed towards defining the national strategy for digitalization of the national heritage. National Expert Council will be formed within this process. The following group of specific guidelines should provide basis for including the gender principle in these processes.

GUIDELINES:

1. Ensure gender balance in the formation of the National Expert Council;
2. Encompass recognizable national symbols and traditions of women creativity in the strategy of digitalization;
3. Promote renowned and accredited women with local background and their contribution to the cultural, historical and scientific heritage through specific contents in electronic form;
4. Use the existing women knowledge that are exclusive, rooted in experience and practice based on the local knowledge in the areas such as production of healthy food, handicraft and similar, as the part of cultural heritage;
5. Digitalize the artistic heritage of women, for example: women books, magazines, etc, that are gradually disappearing and form a special women library/archive.

GUIDELINES ARE INTENDED FOR:

- Ministry for Science and Environmental Protection
- Ministry of Culture and Media
- National Expert Council

2.5.3 BEST PRACTICE EXAMPLES AND PROPOSALS FOR NEW PROJECTS

Project "Training of Women ICT Trainers"

The project "Training of Women ICT Trainers" can serve as a good example of practice in basic computer education[53]. The association "Equal Opportunities" in cooperation with the Ministry of Education and Sport has trained teachers from elementary schools in Serbia. The aim of the project which first module was "Introduction to the Use of Computer" was related to the basic computer education of the staff that will further communicate the obtained knowledge. Evaluation and letters of gratitude from approximately 200 participants have demonstrated the noticeable need for training, as well as the project's successfulness. This fact has proved that the project should be extended to a greater number of participants, and that the trained staff should participate at the second module of the project: "Advanced Use of ICT Services and Tools".

Project of Linux Center and Fund for an Open Society

Linux Center has within the project of induction of free software into the educational institutions, with the support from the Fund for an Open Society, educated and presented the open code software for particular number of women (over 90) employed at schools and faculties. One of the problems in the implementation of the project was the resistance expressed by managers to engage women in the tasks of network administration and maintenance of communication computers. This has been overcome by hard work and this example has demonstrated that women can additionally adopt the knowledge and skills for maintenance and use of programs in technically complex setting.

Program of Remote Studies and Learning via Internet: e-Learning

E-learning in the technical sense involves schooling over the Internet, and it is defined as "the use of ICT to design, deliver, select, administrate and extend the method for education and learning"[54]. Analyses show that women use the advantages of this particular method of learning with much more success and enthusiasm. Remote studies in USA have demonstrated that the number of women who use this method of learning exceeds the number of men (61-78% at certain universities). The research results in other countries also contribute this thesis (50% at the Open University in UK, 54,7% at UNED in Spain, 38% at the Open University in Netherlands, etc).

The analyses of studying supported by ICT in Austria demonstrate that women students especially appreciate the privacy of "virtual education", which relieves them of the pressures of formal studies and provide the possibility for an enhanced support through additional cooperation with the mentors, professors and other students. This form is at its beginning in our country. Development of this type of studying should require high standards and accreditations as much as formal education. The Faculty of Information Technologies[55] in Belgrade is the only faculty that has the accreditation of the Ministry of Education for distant studies – learning over the Internet. This provides students who do not live in university centers or who are employed, to follow the curriculum without difficulties, since they choose the timing for lessons and tasks themselves and all over the Internet. This is also very important for persons with special needs, since they can study from their homes.

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[53] See: www.e-jednakost.org.yu/projekti

[54] Gender, ICT, and Education, Sophia Huyer, 2003.

[55] www.fit.edu.yu

Initiation of the Project Fund for Women Scholarships for ICT Studies

The development of ICT sector and its future point towards consideration of the needs of this particular market for the ICT expert profiles. Distant studying of info-communication technologies opens up the possibilities for young as well as for middle-aged persons. Particular advantages in this type of schooling relate to girls and women with special needs, girls from the marginalized groups, as well as those who are of poor material status prevented to study because of the distance from university centers.

Faculty of Information Technologies from Belgrade is prepared to enroll two students with handicap per year (a girl and a boy) without the obligation to pay the schooling fees. Otherwise, these fees are 1.500 Euros per year, which adds up to 4.500 Euros for three-year education. This offer has been presented at the meeting with representatives of the associations of persons with handicap held in the Municipality of Stari Grad.

This opens up opportunities for the formation of the special fund for scholarships for greater number of persons with handicap, or single mothers and other persons that are not able to study in the classic manner.

Internet Reading-Room

Information technologies as means for communication and source of new knowledge are available to the broad circle of citizens in the National Library of Krusevac (NLK). Majority of citizens of Krusevac do not have the opportunity to use the Internet for the reason of inability to purchase equipment, incapacity to link up with the providers (considering bad communication infrastructure in the majority of the settlements) or because of the high prices of Internet providing services in their own homes. Opposed to the existing Internet playrooms or clubs, which enable their customers to use computers solely for games and do not act upon their education in sense of information exchange and attainment of new knowledge; NLK is the place that provides professional assistance in finding and using the desired contents on the Internet.

Prerequisite for the creation of the Internet Reading-Room and Children Reading-Room in NLK was the existence of the 24-hour online connection, and the funding came from the local government budget. Moreover, the Ministry for Science and Environmental Protection has paid the legal software for all the public libraries. NLK possesses a network of 20 computers and in 2005 it had over 7.600 users with NLK membership cards and several thousands of users that have used the services of so-called "daily search" of the contents with symbolic remuneration. NLK is one of the first public libraries that have joined the project "Virtual Libraries of Serbia" that enables the formation of mutual paperback volumes database of the National Library of Serbia, Serbian Literary Main Center (Matica srpska), university libraries and majority of public libraries in Serbia. Great part of the folklore epitome (not registered up till now) of NLK is digitalized and the search of the complete book fund (by title and author) is enabled at the website of NLK[56].

All of the above-mentioned has made possible the formation of the so-called Children Playroom at the Children Department of NLK where youngsters use the computers and have access to the Internet; the same way adults do in the space of the Reading-Room and Landing Department for adults.

More than 65% of NLK members are women of all ages (secondary school pupils, university students, employed, unemployed, pensioners). NLK staff is trained to provide professional

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[56] www.nbks.org.yu

assistance for the use of computers, so as to enable even beginners to find the desired contents. Users target groups are primarily students (preparation of exams, semester essays and graduation projects...), unemployed women (searching for work over the Internet, development of self-employment projects...), pensioners who already use the daily press and magazines in NLK (broadening the selection of available publications, medical consultations...), as well as others who want to expand their knowledge with the information from the Internet (use of e-mail, business information, information on work and engagement in women NGOs, etc).

The positive example from the NLK practice is certainly utilizable in the majority of libraries in Serbia. The contribution that would the enlargement of this project make will undoubtedly increase the computer literacy of women, strengthen their scientific and research work and increase the access to information on cultural, historical and scientific heritage.

Developing ICT in Education for People with Special Needs

Text-to-Speech (TTS) technology for Serbian language is developed at the Faculty of Technical Sciences – University of Novi Sad. Visually impaired persons use PCs as speech machines based on TTS, and they are now able to put their equal rights in education, information and communication into practice. The audio library is developed for the visually impaired and they have access to a lot of texts converted into speech by TTS. Foreigners can learn Serbian language using TTS as well. Man-machine speech communication is completely enabled using TTS and another speech technology - automatic speech recognition (ASR), that is also developed at the FTS-UNS.

2.6 GENDER SENSITIVE GUIDELINES IN THE e-HEALTH SECTOR POLICY AND PROJECTS

2.6.1 INTRODUCTION

The right to health is the human right of every woman. Health is not merely personal problem, but the problem of every society and international community as well. The state is obliged to take over the responsibility for establishing the system and services that will satisfy standards and take into account the political and societal aspects of this dimension in life of women[57].

It is significant to encourage women to actively participate in the programs concerning their own health, their families' health and the entire community's health. Special attention has to be paid to the role of men, definition of their responsibility in achieving gender equality and identification of women's needs in the field of health and health protection/care[58], [59], [60]. Use of ICT and e-services in health care create adequate setting for rapid accomplishment of these objectives.

2.6.2 SIGNIFICANCE OF E-HEALTH CARE FROM THE ASPECT OF GENDER EQUALITY

Health policies and programs are often affected by the gender stereotypes not taking into consideration all the barriers that prevent women to decide on their own health. The priorities for formulating programs and activities in the health care system those derive from the analyses of the health status of women, above all represent preventable diseases. Those are cardio-vascular diseases, which acting upon the known risk factors can reduce frequency, then there are malignant diseases, whereas besides acting upon risk factors an important set of activities include early detection of these diseases in women population and prompt and efficient treatment. On the third place are unfortunate incidents and appropriate preventive programs can also reduce external causes of injuring which proportion. Promotion of health among women or within women population would make possible the development of healthy life styles and greater responsibility for their own health and health of their families.

ICT infrastructure provides strong support to the transfer of health care into the system that primarily promotes health and prevention of diseases. Accordingly, all the participants of the health processes are provided with access to numerous relevant information and it creates basis for provision of health services on distance. In the developed world medicine and health are areas where the technological innovations are being introduced the fastest. Rapid development of the Internet has incited the revolution in the manner of collecting, storing, searching and communication with medical information. Information technology in health care has become the most complex segment of ICT and from the total number of searches and queries on the Internet 43% is related to solution of health problems[61]. Therefore, it is extremely important to stimulate

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[57] CEDAW 2003 Report in the section C: Women and Health provides detailed information in paragraph 12 related to women health: improvement of health, health care during and after pregnancy, family planning and abortion and sexually transmitted diseases. The report describes differences in the health of women and men.

[58] Action plan for preservation and improvement of women health in the Republic of Serbia for the period 2005-2010. , Draft, April 2005.

[59] Gender and Equality in Health Sector Reform, PAHO/WHO, 2001

[60] Integrating Gender perspective in the Work of WHO: WHO Gender Policy, Geneva, 2002

[61] Darko Bogojević, Zorica Žarković "Importance of e-Health Care", www.telemedicina.co.yu

innovations in this area which is of vital interest for all citizens, thus paying special attention to specific needs in preservation of women's health. For this purpose, it is necessary to move toward the development of integral health care information infrastructure aiming to improve the health and treatment for all the citizens of Republic of Serbia alongside with the initiation of developing the web-portal for citizens and health care professionals. Launching the pilot-version of such web-portal would accelerate the increased public interest for the new opportunities provided by it.

The key-role of women as the guardian of family health should especially be considered. This role will be facilitated with the use of the up to date ICT.

Primary concept of the new treatment is the electronic record, which represent also the first step toward the more efficient and quality system of health protection, and information that it contains are valuable for all actors in this system. Patient can, at any given time, via the Internet, obtain the complete overview of his/her electronic record: in all the therapeutic instructions prescribed by the doctor, scheduled appointments or recommendations for preventive actions according to their health status. On the other side, the doctor has, for every single patient, an overview of the history of disease, all the findings, previous diagnosis, prescribed therapies. This enables the attainment of correct and complete picture on the health status of the patient and provision of the best quality and most efficient help. Therefore, it is recommended:

> - In the process of defining and implementing the electronic record predetermine the possibility of separation the gender sensitive data, as well as appropriate contents that will include all information specific for women's health.

Hospital information systems based on ICT are very rare in Serbia. The existing information systems are outdated and generally in paper form, while the use of ICT is fragmented. Information coverage of domestic health institutions is merely around 4%. Strategically taken, there is an open space for designing, standardized use and coordinated integral development of the concept of e-health care. In addition, we have a unique opportunity to integrate gender equality principles in the process of e-health care creation. In this manner, we will prepare the way for easier inclusion into the process of European integrations[62], in which the gender equality principle represent an integral part of all the activities, and also prepare the setting for establishing modern health care system not only from technological, but from societal, cultural and economic aspect.

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[62] **EU Health Strategy** has been brought in 2000. E-health care or ICT for health describes the use of ICT in health care sector. E-health care was the priority of e-Europe policy for 2005 and it covers the following:
- European card of health insurance
- Development of health information network
- Installation of the health online services

European e-Health Care Action Plan has been adopted in 2004. Following activities are defined within:
- Possibility of collecting data from electronic health records
- System for advance warning and response
- Public health portal

2.6.3 KEY ACTORS AND THE IMPLEMENTATION OF THE GENDER EQUALITY PRINCIPLES IN e-HEALTH SECTOR POLICY

Actors that initiate, define and regulate the structure of sector policy of e-health care are:

- Ministry for Health
- Institute for Health Protection
- Institute for Protection of Health
- Funds for Health Insurance
- Insurance companies

Their task is the creation of the health care policy by means of ICT through establishment of the regulatory framework, adoption of legal norms, recommendations and standards

Their attention in the process of defining the framework for e-health care sector policy should be directed toward the specific needs of women, those that work in the health care, as well as women users of e-health care. Guidelines as well as checklists, defined in subsequent text, are aimed at facilitating this process. In order to realize these objectives it is necessary to:

a. Create the atmosphere of understanding the gender mechanisms and

b. Define the means for their inclusion within the Ministry for Health, Institute for Health Protection, health insurance funds, insurance companies and the proposed Department for IS within MPALSG that would have the coordinative and promotional role.

c. Ensure the training and create the atmosphere for accepting the new working method through e-practice between experts and employed in the health care sector, alongside with the inclusion of medical workers on equal basis.

NSIS also proposes the formation of three working groups within the first phase:

1. Working Group for Data Standards

2. Working Group for Privacy and Security

3. Working Group for Personal Health

Recommendations for functioning of these working groups are:

d. All members should be trained for identifying gender aspects and their integration into the strategy of e-health care from the phase of preparation the plans and policy to the projects implementation phase.

e. Endeavor to achieve gender balance in groups.

Accesses to information as well as the use of appropriate services of e-health care represent a problem because of the underdeveloped technical infrastructure, as well as the poor e-literacy of our populace. It especially affects women, not only in rural, but in urban areas too.
Therefore it is recommended to:

f. Assess the existing status through collecting statistical data and indicators for e-health care that are gender sensitive.

In the use of tele-centers (public Internet centers) it is necessary to reach the center physically in order to access the services of e-health care. In the case of emergency, such as precarious pregnancy or heart attack, it is recommended to:

g. Secure the communication service to the home of user using the adequate ICT. These solutions would especially benefit women who tend to stay at home even in the situation when they need intensive medical care.

Digitalization of local health care institutions is inevitable in the process of health care modernization and inauguration of Serbia to IS by introducing the concept of e-health care. This concept of work is extremely important and affirmative in cases of women experts since it enables the overcoming of the usual barriers, such as the lack of time for study trips because of family responsibilities, inclusion of women from smaller centers into global flows of knowledge and state-of-the-art medical technology, practice, etc.

Also, active role in creating the contents of interest for women part of population in preventive treatment, advises for healthy lifestyle and nutrition, as well as in practicing the right on quality health care should be emphasized.

Taking into consideration all of the above-mentioned, the following guidelines should ensure the implementation of the gender equality principles during the creation of the sector policy for e-health care:

1. Formation of mixed doctor teams on equal basis,
2. Equal access to professional advancement for the use of ICT in e-health care,
3. Enabling the advancement through distant practicing,
4. Women health care workers outside of major centers, in rural areas and smaller towns are excluded from the mainstreams of the latest expert information and with reduced possibilities for advancement, thus they should be systematically included into the information flows using e-services for health care.

2.6.4 GUIDELINES IN THE PROCESS OF FACING THE CHALLENGES IN REALIZATION THE POLICY OF e-HEALTH CARE

A. Raising the Level of Awareness for Inclusion of Gender Equality Principles

1. Enhance the understanding of gender issue in e-health care within the Ministry for Health and relevant bodies of the Republic of Serbia through the required education (seminars, workshops, trainings,
2. Form a working post for gender equality in the Ministry for Health,
3. Ensure the participation of women in program teams that work on the selection, evaluation and approve of the services of e-health care,
4. Apply gender balance in teams for sector policy.

The examples of good practice[63] demonstrate that the initiation of pilot-projects that will rapidly, relatively inexpensively and with good arguments prove the advantages and possible difficulties in practice, is the very powerful tool for establishing good foundations for future services of the e-health care and a method for speedier and easier acceptance of this concept by the medical workers and by patients and general public.

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[63] Examples provided further in text in paragraph D of this chapter.

B. Collecting of Gender Sensitive Statistical Data and Creation of Indicators

Secure the collecting of gender-separated data on the accomplishments of the necessary conditions for the use of e-health care services that should include:

1. Existence of the information infrastructure that is by its price, technology and location convenient to be used by women,
2. Possibility of access to the information on health over the Internet,
3. Existence of the appropriate contents that are concerning the women's health (sexual and reproductive health, pregnancy, children care, nutritional regime, osteoporosis, breast and uterus carcinoma, infective diseases, sexually transmitted diseases, professional diseases, mental diseases, etc) and in Serbian as well as in languages of the minorities in Republic of Serbia,
4. Analyses of the level of knowledge of population for the use of ICT,
5. Has the basic computer education for population been organized, and especially for women in the area where the e-health care is being planned,
6. Existence of research resources in the field of development and use of ICT for the needs of e-health care,
7. Preparedness of medical experts for the use of e-health care services.

Based on the above-mentioned data generate indicators which monitoring will enable the constant assessment of the preparedness situation for development and use of e-health care services.

C. Accessibility and Creation of the e-Health Care Services

1. Services within e-health care and all the relevant information should be available to women over the Internet,
2. Inform the general public on the contents, methods of use and all other advantages enabled by the e-health care services,
3. Develop the necessary level of knowledge among women for the use of ICT and approaching the electronic services over the Internet through the required trainings. Special attention should be paid to women from rural areas,
4. Include women into the expert teams within the development and implementation of e-health care services,
5. Develop contents that are easily reached by women, according to the thematic and written in local language in order to avoid the misapprehension obstacle in foreign (mainly English or Latin) language,
6. Through the offer of services adapted to the needs of women, raise the interest for their use,
7. Secure the mechanisms for protection of e-health care users so as the new services cost the same or lower than the traditional methods of treatment.

❖ **CHECKLIST – QUESTIONS FOR INCLUSION OF GENDER EQUALITY ISSUES IN THE DEVELOPMENT OF THE e-HEALTH CARE SECTOR POLICY**

No	CONTROL QUESTION	COMMENT	
1.	Is it projected that the delivery of e-health care services may be extended to individual households in case of emergency?	Yes	No
2.	Do the e-contents related to health include the issues and needs of both women and men?	Yes	No
3.	Do the e-contents related to health and those include issues and needs of women exist in Serbian and minority languages?	Yes	No
4.	Has the access to e-services in isolated and remote areas been secured on equal basis for women and men?	Yes	No
5.	Is there a possibility for consultations in case of rare diseases with the purpose of obtaining the second opinion and providing efficient assistance?	Yes	No
6.	Is the reduction of travel costs for patients that can attain the same diagnosis and treatment in their local health institution taken into consideration through tele-consultations and tele-medicine, instead of traveling to specialized centers in bigger towns or abroad?	Yes	No
7.	Are the general practitioners and internship doctors in rural areas enabled to obtain expert opinion from the bigger centers with possibility for education and access to expert materials?	Yes	No

2.6.5 BEST PRACTICE EXAMPLES

Examples of good practice are selected with the aim to illustrate the possibilities of ICT use and e-services in the field of e-health care, encompassing from one side the new opportunities offered to citizens through more accessible information on the healthy nutrition, prevention of diseases, health protection and online medical consultations in rural areas. On the other side are the examples of solutions that improve and facilitate the work of medical experts, connecting/networking experts from distant centers of medical knowledge, forming the basis for efficient and quality distribution of the most advanced knowledge in this area.

Personalization of Information on Nutrition with the Support of ICT, Netherlands

In spite of significant efforts that are being made in the last few decades in order to improve the eating habits through health interventions, in majority of European countries the effects are not satisfying. Actual consumption of the food articles is not in accordance with the basic recommendations for healthy nutrition, there is still too much saturated fat, sugar and salt consumed, whilst not enough of vegetables, fruit and fish. Healthy nutrition habits are important factor of health and may act preventive on obesity, diabetes, and cardiovascular and malignant diseases.

Personalization of the nutritional regime identifies the foodstuff needs of individual person, through considering personal preferences related to food, habits and needs that are determined by physical, social and surroundings conditions. The researches have shown that fine-tuning of information to the individual situations has much more effect on the choice of healthy way of life, than from general information on the same topic. The evaluation on individual level of actual and recommended behavior influences the motivation of person for the change of habits.

The project of personalization of consultations on nutrition with use of ICT is launched in the Netherlands, at the University of Wageningen[64]. Electronic channels of communication such as Internet and mobile phones are used in nutritional interventions, separately or in combination with direct consultations. The use of ICT applications makes possible to reach a large number of persons with small-scale expenses. The research is continuing, laying special emphasis on the examination of the barriers as well as new opportunities offered to users by utilization of ICT.

Examination of the Brain Stroke among Women with the Assistance of Information System

Acute brain stroke is the third rated cause of death, following the cardiovascular and malignant diseases, in the developed countries of the world, while globally it is the second rated cause of death. Women form 43% of the people suffering from acute brain stroke with 62% of lethal results. Data for Serbia are alarming and demonstrate that out of total number of deaths in 2003, acute brain stroke is the first cause of death among women (18,38%) and the second among men with 12,44%. Beside the fact that it is a disease with an extremely high mortality rate, equally severe is the fact that this is a neurological disease with high invalidity rate as well. It is estimated that approximately half of all those who survived go back to some kind of employment, and that 20-30% are not capable to live without the assistance of another person, while 16% of patients are being accommodated at the institutions for permanent care. Besides the fact that this represents immense material ballast for the social community, it dramatically disturbs the family life and patients' surroundings especially in cases where the diseased is the woman who is traditionally in charge of health care for all household members, from the healthy nutrition, to child diseases and care for the elderly.

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[64] www.digitalopportunity.org-article/view/126566/1/, L. Bowman, Dr M. Koelen: Personalized nutrition communication with the use of ICT, February 2006.

Based on the up-to-date research it is estimated that there is a specific correlation between the gender and outcomes of the acute brain stroke; Prof. Dr Miroslava Zivkovic, neuropsychiatrist, Director of the Clinic for Neurology of the Clinic Center in Nis, has launched a research aimed at brain stroke among women. The research is based on the data from information system introduced and actively utilized as of November 1996 to May 2006; this specialized system was used to process 15.317% neurological patients. The specialized system enables the standardization and unification of the patients' treatment, overview of the documentation of patients that were already treated, search of the data with the purpose of epidemiologist monitoring and communication with other centers.

The analyses of the women with diagnosed brain stroke and treated at the Clinics for Neurology separated by age, gender structure and other parameters, in the seven years period (1997-2004) has been performed owing to the data from this database, and with the aim to generate an outline for basis intrahospital epidemiology data.

It is interesting that the number of TIA (transitory ischemic attack) has increased among women 45-55 years of age and notified in the period 1999-2001 (stress, inadequate nutrition, exertive work...) in relation to other age when TIA is mainly identified among persons of older age.

As the results indicate that there is an increase in brain stroke cases among women, and especially after the menopause, the significance of this research is very important for the development of preventive actions with the intention to preserve the women health, as well as for adequate treatment and monitoring of the patients. The information system has been presented at the national expert events (Congress of Neurologists of Serbia and Montenegro, Yugoslav Symposium on Brain Stroke) where it encountered a very well reception and compliments of the expert public, which has been the first step toward wider application of this noteworthy collection of data and research results aimed at the creation of the modern health care system in which the patients will be treated in the best possible contemporary manner.

Military Medical Academy[65]

The development of communication and the Internet has enabled the creation of the tele-medical services in the area of radiology and pathology. Owing to the procedure, in which it is required to transfer several images correctly recorded by digital camera placed on the microscope, to the expert, conditions for testing the diagnosis by several doctors have been made possible, which removes eliminates the doubt in its exactness.

Tele-medical service on the relation Military Medical Academy (Belgrade) and the Military Hospital in Nis has been established back in 1997 under the lead of lieutenant-colonel Dr Ivica Milosavljevic, pioneer of the Yugoslav tele-medicine, by the regular phone line and a 56K capacity modem. The service functions routinely even today. It is a technically simple, but technologically very complex system. It provides diagnostically quality picture, which is of crucial importance in the diagnosis of the pathologist. The system is reliable, simple to use and has a permanent technical support. Although the rudimentary technique was used, project is completely in compliance with the European and American standards.

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[65] Darko Bogojević, Zorica Žarković, "Importance of e-Health Care",
www.ekonomist.co.yu/magazin/ebit/08/por/dijagnoza.htm and www.telemedicina.co.yu

Project of e-Health Care, India[66]

The project of e-health care, one of the finalists of the big competition *Stockholm Challenge 2006*, is initiated in the hospital in Sirsa area in India, and in cooperation with the local government and the organization of Red Cross with the support of numerous international organizations. Online medical consultancy for the inhabitants of rural areas has been enabled with the support of new technologies. "Health kiosks" are being used for access to health information and services of e-health care, these are similar to tele-centers where it is possible to access the Internet and use particular services. Besides the e-health care service, which can be accessed with the electronic health-card (similar to the electronic medical record in EU), the integration with other e-services that can be accessed from the same place is also planned. The integration of electronic health-card and, for example the electoral ID card will create a multi-functional electronic card. Within the framework of the project there is a basic training of populace for ICT and the use of e-services with special focus on the ICT education of women and girls – since in India they are underprivileged and neglected to a largest extent.

This project through the planned activities under the title "Educated Mothers" focuses on the needs of women and girls. The very dire situation in India should be taken into account: on every 100.000 children born alive, even up to 407 mothers die. On 1.000 children born alive – 63 die, from which around 47% in the first week of life.

Project on Care for the Elderly Persons with the Support of Telematic Interventions – ACTION, Borås University in Sweden

Within the framework of the project ACTION an easy to use ICT system has been developed with the purpose of providing support to the elderly persons and persons from families who take care of them. In contains of multimedia programs for daily activities, heart attack, dementia, and lifelong care. In addition it contains the interface for the so-called video-call for contact with other families and professional care providers; call center in which the experienced care providers answer the questions and give advises; program for family training in computer work, including the Internet and e-mail. The development of this user-friendly ICT service that will strengthen the elderly and those who are taking care of them through education, access to information and support, has the following objectives:

- Enable the elderly persons with chronic diseases in later stages to stay at home (if they wish) and stay active,
- Inform and train the elderly persons and those who are nursing them about the diseases and the best possible behavior adequate for the given situation,
- Assist the elderly persons who are forced to stay at home and persons who are nursing them to maintain contacts with their families and friends, thus reducing their isolation,
- Assist the persons who are new in the field of providing care with professional advises avoiding the beginners' mistakes,
- Reduce the impression of burden among persons that provide the care and increase their satisfaction,
- Acknowledge and support the valuable work that is being done by family members in taking care of the elderly,
- Create new methods for the work of professional nurses through flexible learning and satisfaction with the work.

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[66] www.ehealth-care.net, project e-Health-Care

Guide for Health Care for the City of Stockholm –Vårdguiden, Sweden

This Guide includes easily understandable information on health issues, contacts for attaining the health care and the exchange system for messages for patients in the region of Stockholm. Several sources of information and services have been integrated within the unique and comprehensible approach for users, one that can also easily be used by persons with special needs. Information services include:

- Information for contact and waiting time for the team for provision of care,
- Medical encyclopedia,
- Information on the care for personal health and health related advises,
- Thematic texts related to pregnancy, parenthood, etc,
- Safe message exchange service between the authorized citizens and patients on one side, and medical staff on the other. In this way, the clinical process of work is being facilitated and the quality of process improved. The system shortens the time necessary for communication in-between the patients and medical staff.

The Stockholm County Council with the intention to enhance the information for patients and improve their satisfaction has initiated the project. In addition, the time needed for answering the common questions by medical experts is being reduced, since the answers can be found at the Internet. Significant outcome of this project is also the foundation of the standards for conventional health on the Internet. It is planned to expand the project onto the whole territory of Sweden.

e-Health Care for Self-Monitoring of Coagulation – eHIT, Finland[67]

Timely overview of the information on the status of patient with the fastest possible answer represents the critical factor of success in fighting diseases. eHIT project in Finland includes *Health Gateway*, an efficient and safe system that transmits the information on patients' status from different measurement devices to the health institutions by wireless technology of mobile communications. In this way the remote analyses of the level of sugar in blood, blood pressure, body temperature, coagulation, body weight, heartbeat, etc. is being enabled. The two-way connection between the patient and the health institution offers several advantages in comparison to the traditional methods: the measurement results are accurate, available immediately and in adequate format; the process of treatment is faster – the answer is almost instantaneous; the healing progress apparent, which positively motivates the patient; possibility of monitoring the information flow; remote measurement and supervision regardless of the location of the patient; uncomplicated for use by both patients and medical staff.

Mobile Hospital, Argentina[68]

The mobile hospital is realized in the form of a trailer fully equipped with the latest medical equipment. It is intended for women and men in remote areas who are for geographic, economic and cultural reasons isolated from the mainstreams of the traditional system of health care. Main objective is the prevention of diseases – encouraging the population, especially women, to undertake preventive examinations aiming to preclusion and early diagnosing of the diseases. The project has been realized in the poorest areas in Argentina. Every year with the use of this particular technology the campaign on prevention the breast cancer is being realized. It is expected to improve the health indicators of the poorest part of population and significant reduction of the overall costs of treatment and burdening the health institutions.

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[67] www.ehit.fi
[68] www.fcontemporanea.org.ar

2.6.6 PROPOSAL FOR INITIATION OF THE PROJECT

Development of the Web-Portal and Discussion Forum on the Topics of Women's Health[69]

- **Project Objectives:**

Health erudition in Serbia and Montenegro (SCG) is on the very low level. Basic terms on health protection that are being attained during the obligatory schooling are insufficient. Edification and the schooling system are also found in big difficulties, primarily of material and workforce character, which is especially articulated in rural and underdeveloped areas. Television program, as the powerful mean for information, to a certain extent contains educational programs from medicine and health protection, but they are irregular, often broadcasted in inadequate terms, which are not sufficiently known to the average citizen.

Furthermore, there is a great disproportion in the quality of health care between bigger settlements and developed parts of the country and rural and underdeveloped areas. Difficulties in communication and transport on one side, and overload of the bigger medical centers on the other, frequently cause unwanted consequences. The patient is addressing doctor when the disease is in its later stages, when treatment is extremely difficult, long lasting and expensive. Although the experiences of the developed countries have shown that the prevention is much more economical than the intervention (we also have a saying: "better prevent, than treat"), there are no expressive activities on the field of health education in our country. In this situation, women population arises as an especially endangered group, particularly in remote and underdeveloped areas where the patriarchal upbringing and fear of the reaction by relatives and the environment make women uneasily and belatedly address the doctor.

Development of the telecommunication network, and particularly the Internet technology, can override the gap between the developed and underdeveloped parts of the country and secure equal health protection on the territory of SCG, or even further, including the areas in neighboring countries. Although the price of computer equipment is relatively high compared to the average standard in SCG, the number of computers and their users in the country has a high growth trend. Utilization of the Internet technologies can, among other issues, effectively improve the level and ensure the equality in health protection in SCG, through the introduction of tele-medical services, which is the subject matter of this project.

The project is based on the use of Internet technologies. Depending on the purpose and material and human resources, the project may be realized in different ways.

Web-Portal and Discussion Forum on Women's Health

- **Project Description:**

This project ensures the education from the field of basic health protection, aiming to secure the equality in health protection.

The project encompasses the creation of web-portal for tele-education on basic health problems and diseases. Special attention will be paid to women's problems. The website will include materials that describe basic symptoms, manifestations, nuisances, potential consequences and methods of treatment – prevention, with adequate multimedia presentation. Textual and audiovisual materials will, besides medical terms, also include the simple "folk" terminology in order to facilitate the

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[69] Association "Equal Opportunities" in cooperation with the Faculty for Electrotechnics from Belgrade University works on the preparation of the project implementation.

identification and description of health problems and way of prevention or treatment. The Portal will be continuously open of all users and it will be updated and expanded according to the needs and possibilities.

Special advantage is the **Discussion Forum** where there is an opportunity for the user to pose concrete questions related to his/her health problem. Questions will be posted in written form, entering the text in the adequate field on the website. The doctor-specialist through expert and concrete answers will answer questions also in written form, or the users will be asked additional questions in order to formulate more precise response. Questions and answers will be publicly available to all the participants of the Discussion Forum, other patients and doctors who can also join the discussion. If required, participants will be guaranteed the anonymity on the Discussion Forum for the reasons of privacy respect.

2.7 GUIDELINES FOR INCLUSION OF GENDER EQUALITY PRINCIPLE IN THE SECTOR POLICIES AND PLANNING OF e-BUSINESS AND e-BANKING

2.7.1 INTRODUCTION

Electronic business (e-business) is the automatization of the business process by use of ICT and it represents an efficient mean for performing business activities at the national and international level[70]. Transformation of the traditional business into electronic, undoubtedly brings a variety of advantages for public and private sector – local, state and private firms and by improvement of quality, efficiency and productivity of business and attaining higher profit, with reduction of costs and time saving for the companies themselves. These advantages indicate that the trade of goods and services will in the future be performed electronically.

On the other side, advantages of introducing the e-business should be considered also in the perspective of ensuring the contentment of the service users, consumers. Online consumption records a constant growth in the developed countries. Frequent rapid changes of the ICT, and consequently the development of new business models are the everyday challenges of e-business.

e-Business is a broader term than e-trade and it comprehends the creation of connections and cooperation between computer information exchange systems in the business sector, private and public, and national authorities – government and its sections, aiming to initiate, enable the cooperation and coordination of all the actors in an optimal use of ICT in e-business, thus the creation of an integrated system for administration of the information flows in the economy.

Consequently, the objective is to perform the transformation of work in existing companies from the classic to e-business, and especially the creation of new companies with workforce of different profiles that use ICT, which particularly develops entrepreneurship in the field of ICT. This transformation requires the realization of innovative engineering of the practice and procedures in companies.

The process of e-business/e-trade is directly related and based upon the electronic payments – e-banking. Conventional systems of payment with cash, checks, credit cards, payment/money orders, postal or phone order are practically modified on the Internet into online transactions. Traditional characteristics of the payment system stay the same, such as: security, anonymity, transaction ability, division ability, extensive payment systems, and cost of transactions. Specifics and the scenarios of the payments made by "electronic cash", "electronic check", "electronic order" and credit cards (with the magnet tape or smart-chip), as well as the speed and complete global irrelevancy of the location are exclusive solely to e-banking. In majority of cases it is realized through the Internet, compared to the previous "private networks". This demonstrates the good starting prerequisites and positive and educated setting in the banking systems and financial organizations, and partially in commerce, for implementation of e-banking, as well as on the adopted habits of users that are not negligible.

Consideration of the inclusion of gender equality principles and securing benefits for women in introduction and use of e-business and e-banking in Serbia is an inseparable process of this particular development.

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[70] National Strategy for Information society in Serbia, December 2005, www.mntr.sr.gov.yu

2.7.2 IMPORTANCE OF e-BUSINESS FROM THE GENDER EQUALITY ASPECT

Women form 51,4% of the population on the territory of Serbia, according to the data from the census in 2002[71]. According to the available data from March 2005, representation of women within the structure of the employed population is 43,57%, and in the educational structure it is 51,98%. These data demonstrate that the quantity of women regarding employment is not proportional to the majority participation of women in the overall population, neither in the majority in regard to the educational level. This factual state in Serbia implies to the need of solving the employment issue and undertaking the measures in order to increase the employment rate of women.

Unquestionably the use of ICT and organizing of e-business stimulates commercial growth simultaneously creating greater opportunities for employment of all potentials of the populace. Women should seek their chance in this process.

Equal participation of men and women is the prerequisite for instigation of the quicker economic growth, hence the poverty reduction and securing more quality life. Therefore it is important to set off all the actions that will enable women for an enhanced preparedness for the inclusion in the business sector.

For that reason it is recommended:

1. Attainment of knowledge and empowerment of women for the use of ICT and Internet, as well as the acquaintance with the new business models through trainings and other forms of education, represents the first aid to women of all educational structures in facilitated inclusion into the new forms of business sector such as e-business and e-banking. It is especially important that the younger women wishing to establish new companies in the private sector utilize their knowledge for the entrepreneurship based on the electronic business.

Considering the aspects of users, the following statements have to be regarded:

o Internet and e-business represent the new style of life and work; more humane, richer, more comfortable especially for women, being the new dimension of the quality of life and work;
o Internet and e-business with the accompanying e-services offers great opportunities for access to sources and prosperity of the human creativity **for all**.

Advantages of the e-banking development are considered for the needs of business sector, as well as for individual needs of citizens. Women should consider special advantages of e-payment aiming to improve the living conditions and efficiency of business performance.

Transformation of traditional banking performance into electronic brings a variety of advantages. For the bank those are: creation of the image of an innovative company, better and greater interactive opportunities, promotion of self-service banking, possibility of rationalization the bank's potentials, cost reduction, etc. For the user they are: faster performance of financial transactions independently from the location and timing, better interactive opportunities, permanent insight to the status and transactions on the account, cost reduction, etc.

It can be freely stated that in Serbia the gender equality principle has been accomplished to a great extent in this particular branch of economy, in the use, as well as in expertise and business management. Electronic means for payment are available to all regardless of gender and the

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[71] „Women and Men in Serbia", Republic Institute for Statistics of Serbia, Belgrade 2005.

positive regulations exist. Occurrence of any sort of discrimination exists only if the status of woman is at stake, such as the unemployment, lack of financial means, living income.

It can also be stated that in Serbia there is a great number of banks and other financial organizations, which have developed their networks of branches and ATMs very well, obviously with the respect of their business interest in regard to the density of locations and distribution compared with the density and financial capabilities of population. It is required to act more upon the development of service locations women are visiting more frequently, almost daily, such as locations in the shopping malls, health institutions, educational and cultural institutions, traffic focal points and others, therefore it is recommended that:

> **2.** Banks and other financial organizations secure places for e-payments at the locations where women frequently visit, in order to enable them to perform their payments on the way, fast and with quality, saving precious time that would otherwise be wasted in lines. Special attention should be paid to the security of these locations since women are most frequent victims of mugging.

In the course of the realization of training as the prerequisite for implementation of e-business and e-banking, it is recommended:

> **3.** For the implementation of e-business and e-banking, primarily needed is the training of population for use of ICT and Internet and acquaintance with the new models of e-business and e-banking. Target group for the training should include women population.
> **4.** Local governments should consider the possibility to form the IT center for business support and within it the organization of seminars on the topic of e-business and e-banking. Seminar topics should include several aspects, from the web-shop to the training for remote business conduct and sales over the Internet (e-sales of books, e-tourism, etc).

2.7.3 KEY ACTORS AND THE IMPLEMENTATION OF THE GENDER EQUALITY PRINCIPLES

The actors that initiate, define and regulate the framework of the sector e-business and e-banking policies are:

> - Ministry for Public Administration and Local Self-Government, which is in charge of development of IS and implementation of NSIS
> - Agency for Telecommunications
> - Chambers of Commerce
> - Ministry of Finance
> - Ministry for Capital Investments
> - Ministry for Economy and Privatization
> - Ministry of Justice
> - Ministry of Education and Sport
> - Consumers' Protection Movement
> - Republic Institute for Standardization
> - Republic Department for Customs
> - Ministry for Trade and Tourism

NSIS proposes the possibility of formation an additional body:

1. **Coordination Committee for e-Business** by the Ministry for Public Administration and Local Self-Government (within the Department for IS) in which will participate the representatives of the private and public sector, with aim to coordinate the development of e-business and e-banking framework in accordance with the European and international standards and practice.

After the identification of relevant objectives and participants from the science and economy, including public, private and civil sector, it is possible to approach to the planning and creation of the sector policy of e-business.

2. **Participants from science** will provide same opportunities and trust the women in research, creation and estimation of the best ICT solutions for various areas of implementation in e-business and e-banking; specially by considering and projecting the technological cycle of ICT development and estimations of the economic and technical efficiency, as well as risks of digital economy;
3. **Participants from private sector economy** will provide same opportunities and trust the capabilities of women in planning the new forms of organization, new digital products and services, in preparation of the investment programs and plans, as well as in concrete decision-making and realization of business processes and transactions and marketing based upon e-business and e-banking, Internet and use of ICT;
4. **Participants from the public and civil sector** should secure conditions of gender equality in representation of women in their organizational forms, but also a very important gender equality and positive discrimination for accessibility to their e-services, since they are of dominant influence on equal social and economic status of women. For this sector, it is very important to follow the "ICT evolution" because of the constant rapid technological development, in order to continuously contribute to the quality of life of women and their families.

Aiming to protect the gender equality principles in all the phases of e-business, it is recommended to consider the following general guidelines:

5. It is necessary to implement the gender equality principle and respect equal inclusion of women in all phases of the process of initiation and creation of sector policy, planning and implementation of e-business and e-banking.
6. In proceedings and process of creation of the teams for development of sector policy and/or development of ICT projects, women experts should be appointed as team leaders and also include a significant number of highly qualified women into the teams.

2.7.4 STRATEGIC ISSUES AND POSSIBILITIES FOR e-BUSINESS/e-BANKING AND GENDER EQUALITY

All the participants, stated as the actors of sector policy and planning of e-business should get to know and monitor the trends and capacities of electronic business in the world, and to endeavor to implement the best examples from the practice. Therefore, the Report of the European Union for 2002, 2003, 2004 and 2005[72] on the status, trends and influential factors for the development and

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[72] http://europa.eu.int

incursion of Internet and electronic business in developed European countries is of special importance for us.

Taking into consideration the very low development of infrastructure, knowledge for implementation and use of e-business and e-service, it should be specifically respect the planning of significant financial and material investments by the state and participants in developing infrastructure of communication and equipping with computer equipment equally in all areas and interventional higher investing in education, equally in regard to gender and with positive discrimination.

Consequently it is recommended:

1. In the conception of the national program of development and acceptance of the electronic business, approving the international standards in the area of e-business and e-banking, the gender equality principle should be included from the development of infrastructure and equipment with computer equipment in all areas, to the training and permanent education.
2. Creation of the setting supporting SMME[73] for companies run by women, with efficient ownership control, and which implement e-business in the process of poverty reduction in underdeveloped economies.
3. Stimulate the training of women entrepreneurs (financially favorable or online trainings) for use of the Internet as a utility for establishing new business style, new methods and models of resource management.

In the concluding section it is important to emphasize that from the viewpoint of gender equality, e-business practically offers opportunities for elimination of barriers and status and social differences between sexes and significantly moves the frontiers of the inclusion and success in business in favor of "the capable and those with knowledge", and therefore establishes new value and status categories, regardless of gender, which is virtually a great contribution to gender equality, a big challenge and a chance for women.

2.7.5 THREATS IN e-BUSINESS AND e-BANKING ON THE INTERNET

Internet, e-business and e-banking unquestionably represent positive challenge for the increase of corporate success of the company, manager, and individual. However, it is known that these ICT resources include the existence of various potential threats and possible risks, as well as more harmful consequences of misuse.

Numerous analyses of the computer crime have demonstrated the possibilities of malicious attacks and destructive consequences of these attacks, financial and material damage as well as actual crime in all other forms of its occurrences.

State organization, regulations in adequate legislation and sanctions are necessary and vital for e-business and e-banking as much as the appropriate implementation of software protection and

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[73] World Bank Group Review of Small Business Activities 2001 (Nidhi Tandon: *"The Increasing Importance of Systematic Support for Women in Small Enterprise Operations",* Development Gateway),
Definition of medium, small and micro enterprises (SMME) are:
  Medium enterprise: up to 300 employees, possessions up to $ 10 million and the total annual turnover up to $ 10 million;
  Small enterprise: up to 50 employees, possessions up to $ 3 million and the total annual turnover up to $ 3 million ;
  Micro enterprise: up to 10 employees, possessions up to $ 100.000 and the total annual turnover up to $ 100.000;
These definitions are generally consistent to those used in international financial institutions.

security systems, techniques and systems of video surveillance and possibility to track the electronic business processes.

Understandably, from the aspect of gender equality it is important to state that the most suitable, and the most hurtful by its consequences, is the use of ICT resources for illegal actions such as trafficking in human beings, human organs, genetic material, drugs and similar, whilst women and children are the most frequently attacked categories.

Besides problems related to the misuse, another difficult circumstance in implementation of e-business and e-banking represent the lack of legislation. Accordingly, it has to be emphasized that the online system of payment on the Internet and in e-business is in Serbia almost completely impossible for more complex transactions such are "B2B" – business to business, "B2C" – business to customer and others, considering the lack of adequate legislation or institutional conditions for utilization of the adopted regulations. The law, for now, discriminates electronic documents compared to paper, e-mail compared to the fax, which complicates the dealings since certain documents have to be kept perpetually in the original form.

There is a Law on Electronic Signature, which is practically not being implemented (adopted in December 2004) although the supplementary regulations have been adopted. The certification body, projected by the Law on Electronic Signature has not been formed and it prevents the implementation of the Law. Neither have adopted, nor determined, the rules for standards for electronic documents and procedures in order to follow the world trends. This is putting us in a partial "voluntary" isolation in relation to Europe, hence the geo-political environment, so it is recommended that:

- State and its relevant bodies produce a consistent plan of adoption of the acts for regulation the areas of electronic payment and business alongside with undertaking all of the measures to avoid the occurrence of criminal proceedings, especially regarding women and children.

Lack of infrastructure for quality Internet connections, hardware-software systems with servers and applications for e-business and e-banking, with the support of the banks in the payment system, represents serious problems for introduction of e-business, especially e-payment.

2.7.6 GOOD EXAMPLES FROM THE PRACTICE

Successful examples of e-business do exist even in our country. There are few companies which experts have autonomously installed their own distribution web and develop online business, from ordering to the planned deliveries all over Serbia. Owing to the introduction of e-business, the satisfaction of customers followed, as well as the increased profit for the company. Several examples demonstrate that within the last year and a half, around 50% of the turnover has been realized by online proceedings (orders, transactions, etc). In addition, there are examples of companies with successfully designed websites for e-business. In preparation of the website for e-business it is important to choose the right name, carefully plan the form and contents of the site in detail, so as to make it attractive, functional and easy to use. Certainly, the trade comprehends the existence of confidence and security. Therefore, the buyer has to be assured that the site is legitimate and legal, and the information that is being sent from the personal computer is confidential and protected. Nonetheless, it has to be notified that in Serbia there are no examples of contents and services for e-business that will be of interest for women. Small amount of websites provide an outline of work of women entrepreneurs. The good example in that sense represents the Internet presentation of the NGO Teodora from Nis[74].

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[74] www.teodora.org.yu/projekat_teodora.html

It would be useful to produce analyses of companies managed by women, from public and private sector, and in which the e-business is practiced, with or without the accompanying e-payment, hence to conduct a survey with the potential companies with the purpose of collecting data and information on the existing status and use of ICT and Internet, conditions and possibilities, as well as problems and obstacles for their use. Besides the business sector, the survey on the same topics should be conducted among the customers and users of the services of e-business and/or e-banking.

Questions within these surveys should be focused on deliberating the implementation aspect of gender equality and benefits for women in organizing e-business and e-services. Examination of the situation from the area of e-business and e-banking should be directed towards the insurance that the ICT policy fulfils the needs of women population and does not endanger their rights. Following are the questionnaires – checklists for the realization of the mentioned survey among the companies and service consumers, according to gender structure.

❖ CHECKLIST on the existing status of e-business and provision of e-services by companies

No	CONTROL QUESTION	COMMENT	YES/NO
1	Company's full name and area of business		
2	How do you evaluate the status of IT use in the company: - No use - Initiation phase - Standard use (in which sectors of the company)?		
3	Does the company have access to Internet and for how many employees?		
4	Which Internet services are being used (e-mail, FTP, www) and are you satisfied with the quality of work?		
5	Number of women employees that have the access to Internet (% of the overall number of employees)		
6	Does the company have its website?		
7	Has the e-business been realized with partners and which ones: - Suppliers - Buyers?		
8	What types of e-services are offered?		
9	Does the e-business have advantages regarding: - Efficiency - Productivity - Profit - Quality of services?		
10	Participation of women employees in the use of e-business (% of the overall number of employees)		
11	Has the e-banking been realized: - In banks - In public sector - In private sector?		
12	Participation of women employees in the use of e-banking (% of the overall number of employees)		
13	What are the reasons for non-existence of e-business?		
14	What are the reasons for non-existing e-banking?		

❖ **CHECKLIST on the use of services of e-business and e-payment**

No	CONTROL QUESTION	COMMENT	YES/NO
1	Do you have access to Internet, what type (dial-up, DSL, ADSL...) and are you satisfied with the quality of work?	Woman/Man and Age	
2	Which Internet services do you use (e-mail, FTP, www)?		
3	Do you use the services of e-sale and which companies', which nature of business?		
4	Does e-business have advantages regarding: - Efficiency - Quality of services?		
5	Do you use e-payment method and in which occasions?		
6	For what reasons you do not use e-buying?		
7	For what reasons you do not use e-payment?		

3. PROPOSAL FOR GENDER SENSITIVE ICT INDICATORS AND THE USE OF INTERNET

3.1 INDICATORS FOR MONITORING THE GENDER EQUALITY IN THE DEVELOPMENT OF IS

Within the initiatives, priorities and objectives of the *National Strategy for Information Society in Serbia* − NSIS, it is emphasized that the definition of indicators to follow the development and implementation of NSIS is of vital importance. In addition, the NSIS stressed that in the development of sector policies and planning of the information and communication technologies (ICT), benefits for women from the "ICT revolution" have to be explicitly included (paragraph 2.6). This requires defining the set of indicators that are gender sensitive, and which will become official data within statistics of the republic.

The main reason for defining gender sensitive indicators for ICT statistics is the creation of the basis for measurement of the access and use of ICT and attaining results according to which it may be intervened or launch the corrective actions in realization of NSIS, and/or sector policies and concrete projects in Serbia; as well as accomplishing the obligations towards international organizations and the accepted documents[75].

There are numerous areas where the analyses of the attained statistical ICT indicators regarding gender representation will be very useful, for national projects as well as for other projects in certain branches of economy. Key areas are:

- Access and use of Internet
- Contents
- Employment
- Education
- ICT telecommunication policy
- Participation in the decisions on telecommunication and ICT
- Different influence of ICT on men and women
- Participation in ICT projects

While in the process of the development of institutions, policies and projects for IS is significant to observe the changes in the access and use of Internet as the indicator of e-preparedness of the society as a whole. This indicator, even though it was observed, has not been considered in relation to gender structure at the national level, neither in particular sector proceedings.

This has been the reason for conducting the research on the access and use of the Internet through data obtained from the Internet service providers – ISPs and interviews with citizens. The results of research are presented on the following pages and they indicate the existence of the gap between women and men in the use of Internet.

Having in mind that this research has been conducted with a lesser sample and many ISPs do not maintain gender sensitive and age statistics, the following set of indicators is proposed in Table 7. These indicators should be used by the Department for Monitoring and Evaluation of the results of

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[75] WSIS Deflation of Principles and Action Plan, Geneva, 2003 www.itu.int/wsis
Action plan d) Gender-specific indicators on ICT use and needs should be developed, and measurable performance indicators should be identified to assess the impact of funded ICT projects on the lives of women and girls.

National Strategy for IS that will be located at the Ministry for Public Administration and Local Self-Government and that will assess the development of IS.

	CATEGORY	WOMEN	MEN
1.	Number of Internet users (by gender and age)		
2.	Internet users' age		
3.	Frequency of Internet usage		
4.	Type of Internet access (e.g. LAN, ISDN, ADSL, over mobile phone) ○ At home ○ At work		
5.	Average expenditure: ○ For Internet access ○ For usage		
6.	Number of e-mail addresses		
7.	Number of websites		
8.	Number of blogs		
9.	E-literacy		
10.	Why is the Internet not being used? ○ Lack of infrastructure ○ Potential users do not possess computer ○ Lack of skills		
11.	Owners of ICT companies		
12.	Computers in schools ○ How many computers per100 students ○ How many with access to Internet		

Table 7 – *Proposed gender sensitive indicators for monitoring the development of IS by gender principle*

3.2 ANALYSES OF THE INTERNET USE BASED ON DATA OBTAINED FROM ISPs

Analyses of the Internet use have been performed based on Table 8 that was forwarded to the addresses of the nine Internet providers. The following ISPs have responded: Eunet, PTT, VeratNet, Pogled – Niš and Neobee – Novi Sad.

SURVEY conducted at: _____

Date: _____

	INDICATOR	TOTAL	MEN	WOMEN
1.	Number of Internet users			
2.	Number of Internet users up to 18 years of age			
3.	Number of Internet users 18-25 years of age			
4.	Number of Internet users 25-30 years of age			
5.	Number of Internet users 30-40 years of age			
6.	Number of Internet users 40-50 years of age			
7.	Number of Internet users over 50 years of age			
8.	Frequency of Internet use within one week			
9.	Number of hours spent surfing within one week			
10.	Number of e-mail addresses			
11.	Number of website owners/administrators			
12.	How many hours weekly spent on reading news on the Internet			
13.	How many hours weekly spent on reading medical documents on the Internet			
14.	How many hours weekly spent in search of scientific information			
15.	How many hours weekly spent on educational institutions			
16.	How many hours weekly spent on administrative proceedings			

Table 8 *– Analyses of the Internet use (questionnaire for Internet providers)*

Data on the number of users, age and gender provided in Table 9.

Their results have revealed that women use the Internet less than men. Despite the fact that can be noticed in Table 10: number of users extremely varies by age categories; the percentage of women users of Internet is similar and it ranges from 26,33% to 34,76%.

When we observe the overall population of Internet users in Serbia, women participate with 30,81%. This is less than a third and taking into consideration that women represent more than a half of the total population, the conclusion is even more overwhelming. It is important to notify that this is not the percentage of women Internet users in the total population, but solely the data explaining the quantitative relation between male and female users of the Internet. If we observe the gender structure by age categories, it is immediately noticeable that the least percentage of women is in the youngest and the oldest category. Among users between 40 and 50 years of age there are only 26,33% of women, while in the category for those younger than 18 this percentage is 26,46. Consequently, it can be stated that in these two categories every fourth user is a woman. And in category for those older than 50, the situation is similar, 27,54%. Therefore, data show that professional advancement, professional development, adoption of new technologies and opportunities of re-employment if the job is lost, for women ends up earlier.

The category of those younger than 18, demonstrates that even now there is a big gap in the family, educational institutions and the overall social climate. There is no other way to explain that on every three boys – Internet users, there is only one girl. It is important to highlight that the delay in ICT education, which is being formed in the childhood, elementary and secondary school, cannot be overcame in the desired degree since it influences the choice of profession, faculty, employment opportunity and further admission to the channels of permanent education. When taken into consideration that in the very system of education, in elementary and secondary schools, there is unproportionally greater number of women than men, it is apparent that the existing situation will reiterate if something is not done urgently.

Among other age categories, the percentage is higher than 30, but not considerably. The best situation is among youth between 18 and 25 (34,76%), then between 25 and 30 (34,22%), and finally between 30 and 40 years of age (32,39%).

Although slightly better results than among the youngest and the oldest, these results do not give confidence. Statistical relation between women and men would have to be much closer in the period of studying and beginning of the professional career, since gender equality in the access to ICT for the duration of schooling, employment and work itself would have to achieve better results. When cross-examined the data for the youngest and the oldest categories, it is evident that encouraging of women and motivation for understanding and access to ICT has to have a significant role in future strategy.

Age	Users	Women	Men
- 18	26.509	7.013	19.496
18 - 25	41.331	14.635	26.966
25 - 30	47.363	16.206	31.157
30 - 40	67.595	21.824	45.771
40 - 50	48.907	12.877	36.030
50 +	27.236	7.501	19.735
Total	258.941	79.786	179.155

Table 9 – Summary for five providers

Age	Women	Men
- 18	26,46 %	73,54 %
18 - 25	34,76 %	65,24 %
25 - 30	34,22 %	65,78 %
30 - 40	32,29 %	67,71 %
40 - 50	26,33 %	73,67 %
50 +	27,54 %	72,46 %
Total	30,81 %	69,19 %

Table 10 – Percentage of women and men Internet users by age categories

It is important to underline that the data acquired from the Internet providers do not make possible to observe, by gender structure, in which purposes and what sort of contents and services Internet users exercise. In the interviews with citizens and providers, it can only be stressed that the situation in this area is bad and that the education of women is required.

3.3 ANALYSES OF INTERNET USE BASED UPON THE DATA OBTAINED FROM THE INTERVIEWED CITIZENS

Within the research of the preparedness of Serbia to enter the Information society, an analysis of the Internet use has been performed through the interviews with 541 citizens. Questions from the interview are given in Table 11, and the obtained results in the following text.

Categories of Interviewees

Age	< 18 18 – 25 25 – 30 30 – 40 40 – 50 > 50
Education	No qualification, Vocational ability, Secondary school, High school, College Degree/BA, MA, PhD
Gender	Man Woman

Questionnaire has been filled out circling the appropriate answer

No	QUESTIONS	ANSWERS			
1.	Do you use Internet?	a) Yes	b) No		
2.	If you do not use it, what is the main reason?	a) I do not have a computer	b) I am not trained in Internet use	c) I am not interested	d) Other
3.	For what purpose you use the Internet?	a) Entertainment	b) Work	c) E-mail	d) Other
4.	Do you believe that Internet technology endorse the improvement of work you do?	a) Yes	b) No		
5.	Do you have an e-mail address?	a) Yes	b) No		
6.	Do you use the services offered in the Internet Cafés?	a) Yes	b) No		
7.	If not, what is the main reason?	a) I have my own computer	b) I do not use Internet	c) I do not like the atmosphere	
8.	Do you friends use the Internet?	a) Yes	b) No		
9.	Do you deem Internet important for future generations?	a) Yes	b) No		
10	Are you interested in health information on the Internet?	a) Yes	b) No		

***Table 11** – Questionnaire: Internet use analyses*

The research has been conducted in urban areas in the period February/March 2006 on the sample of 571 interviewees in the following cities: Belgrade, Novi Sad, Kraljevo, Krusevac, and Novi Pazar; the method used: interview with citizens. Citizens were interviewed at the following locations: open air market, theater, cinema, in the apartments and shopping molls.

The aim of this research was to demonstrate how many citizens use the Internet, what are the reasons for not using Internet, how big is the interest of potential users and what are the ways to draw near the Internet to the citizenry.

As previously mentioned, the research included a sample of 571 interviewees: 288 men (50,4%) and 283 women (49,6%) (Image 3) The objective was to achieve the similar number of interviewees by age structure and gender.
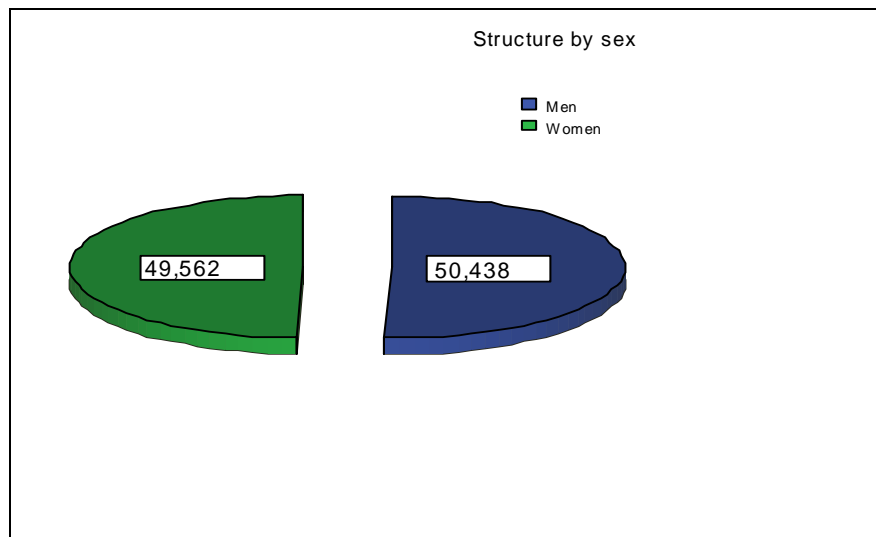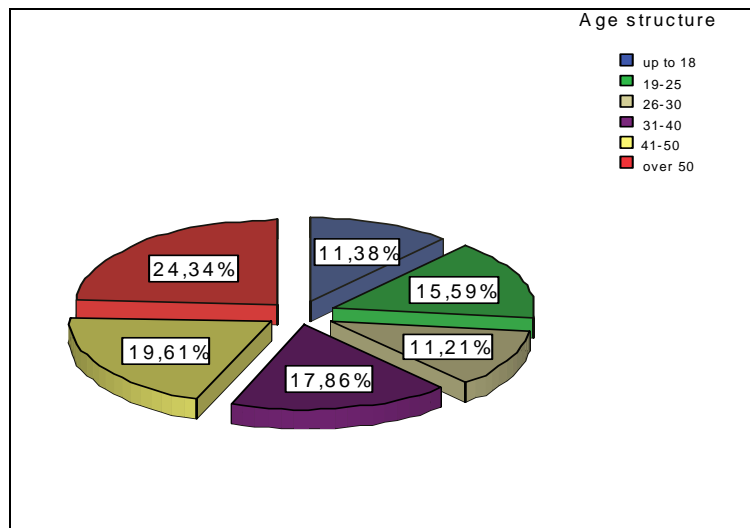
Image 3 – *Structure of interviewees by sex*

Observing the age structure, the research has been performed through six categories represented in Table 12 and in Image 4.

Categories	Number of interviewees	Percentage
Up to 18	65	11,4
19-25	89	15,6
26-30	64	11,2
31-40	102	17,9
41-50	112	19,6
Over 50	139	24,3
Total	571	100,0

Table 12 – *Age structure of the interviewees*

Image 4 *– Age structure of the interviewees*

The interviewees from all seven categories were observed by the educational structure. The highest percentage of the interviewed – 51,8% finished secondary school (this category includes undergraduate students), then 18,7% have university degree, 13,7% have an equivalent of BA (4 years of high school + 2 years college/university). The lowest represented with 1,6% and 1,8% are those with PhD and MA. Results are presented in Table 13.

Categories	Number of interviewees	Percentage
No qualification	30	5,3
Vocational ability	41	7,2
Secondary school	296	51,8
BA equivalent	78	13,7
University degree	107	18,7
MA	10	1,8
PhD	9	1,6

Table 13 *– Structure of interviewees by education*

When questioned if they use the Internet, 227 interviewees (39,9%) answered positive, and 342 (60,1%) do not use Internet at all. In the category of those over 50, 89,2% does not use Internet, while the largest number of those who use the Internet – 75% is among the age of up to 18 years (Table 14). Internet does not use 33,9% men and even 45,8% of women (Image 5).

Age structure	Do you use Internet?		Total
	Yes	No	
Up to 18	48	16	64
	75,0%	25,0%	100,0%
19-25	56	33	89
	62,9%	37,1%	100,0%
26-30	33	31	64
	51,6%	48,4%	100,0%
31-40	44	57	101
	43,6%	56,4%	100,0%
41-50	31	81	112
	27,7%	72,3%	100,0%
Over 50	15	124	139
	10,8%	89,2%	100,0%
Total	227	342	569
	39,9%	60,1%	100,0%

Table 14 *– Age structure: "Do you use Internet?"*
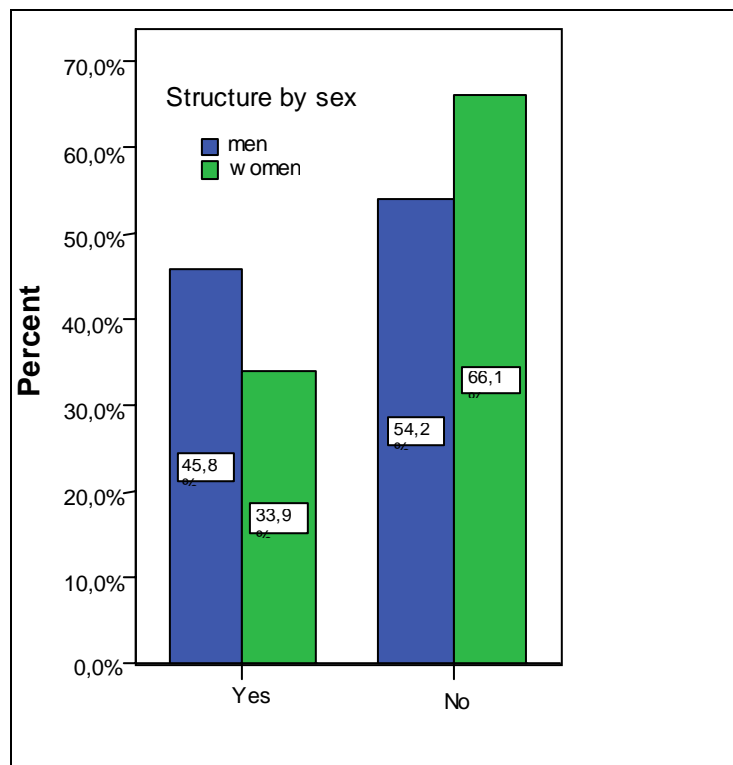
Image 5 *– Structure by sex: "Do you use Internet?"*

In regard to the interviewees over 30 years of age, only 16,2% of women uses Internet, while there is 34,1% of men (Image 6). Among unqualified interviewees only 6,9% uses the Internet. With the rise of the educational level – the use of Internet increases, to those with PhD where the percent is 100 (Table 15). From 203 interviewees with BA, university degree, MA and PhD there is 97 (47,8%) of those who use the Internet. For women this percent is 34% and for men it is 60,4% (Image 7).
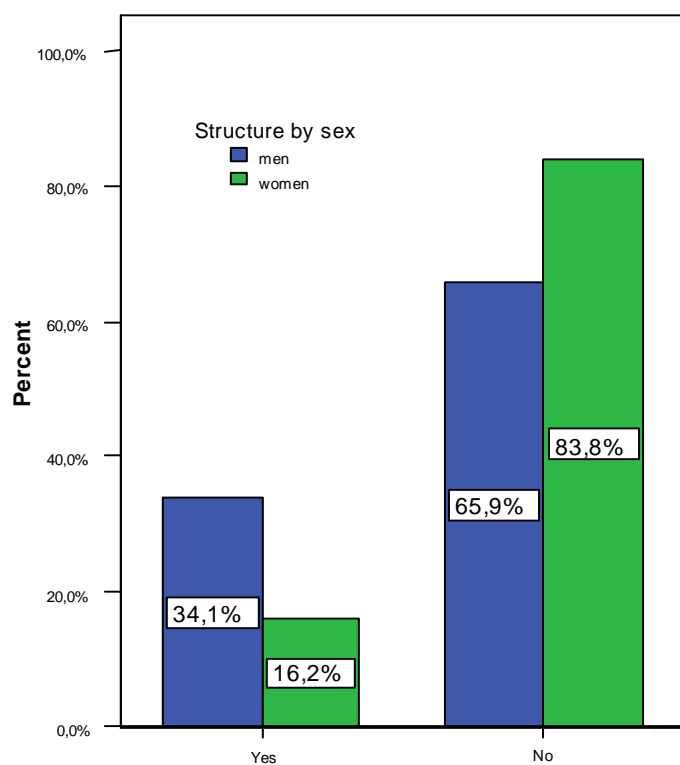
Image 6 – *Interviewees over 30 years of age: "Do you use Internet?"*

Education	Do you use Internet?	
	Yes	**No**
Unqualified	2	27
	6,9%	93,1%
Vocational ability	7	34
	17,1%	82,9%
Secondary school	121	175
	40,9%	59,1%
BA	33	45
	42,3%	57,7%
University degree	51	55
	48,1%	51,9%
MA	4	6
	40,0%	60,0%
PhD	9	0
	100,0%	0%
Total	227	342
	39,9%	60,1%

Table 15 – *Education: "Do you use Internet?"*
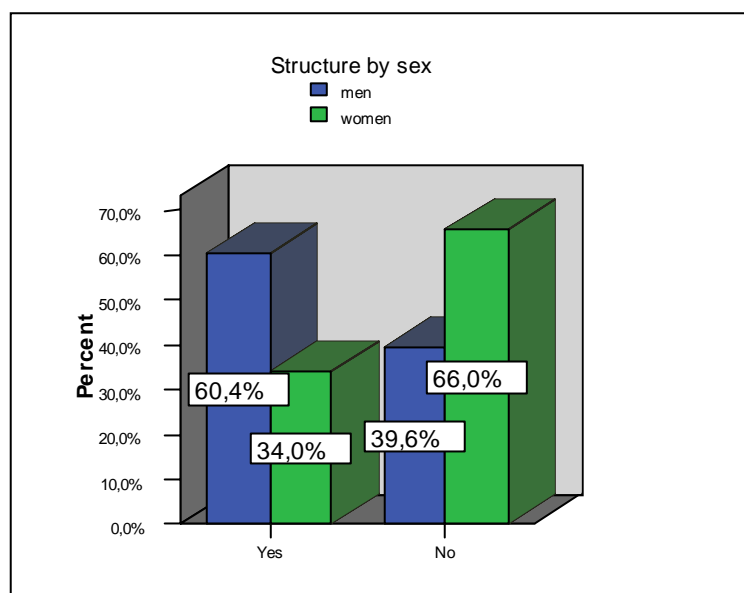
Image 7 *– Education: "Do you use Internet?"*

From 344 interviewees that answered negative on the question on the use of Internet, not having a computer was the main reason – 114 (33,1%), and not being interested – 110 (32%). The highest percent of men do not use Internet because they do not possess the computer (36%), and women because they are not interested (34,4%), Table 16.

If you do not use Internet, what is the main reason?	Gender structure		Total
	Men	**Women**	
Do not possess the computer	59	55	114
	36,0%	30,6%	33,1%
Not trained to use Internet	43	40	83
	26,2%	22,2%	24,1%
Not interested	48	62	110
	29,3%	34,4%	32,0%
Other	14	23	37
	8,5%	12,8%	10,8%
Total	164	180	344
	100,0%	100,0%	100,0%

Table 16 *– Gender structure: "If you do not use Internet, what is the main reason?"*

On the question: "Would you like to attend a course for Internet? (Basic and advanced knowledge)" 513 interviewees have responded. Majority of the interviewees who replied that they do not want to attend the course are over 50 years of age (79,5%) and up to 18 years (66,1%). The percentage of those who want to attend the course is 33% between 30 and 40 years of age. It is interesting that 30% of interviewees between 25 and 50 want to attend the training if it is free of charge (Table 17). Among men, 57,9% generally do not want to attend the course in Internet skills, while the percentage of women is somewhat lower – 49,4%. Almost the same percentage of men is 19,4% and women 28,7% (Image 8).

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Age structure	Would you like to attend a course for Internet?			Total
	Yes	Yes / if free of charge	No	
Up to 18	12	9	41	62
	19,4%	14,5%	66,1%	100,0%
19-25	26	14	44	84
	31,0%	16,7%	52,4%	100,0%
26-30	16	15	25	56
	28,6%	26,8%	44,6%	100,0%
31-40	29	31	28	88
	33,0%	35,2%	31,8%	100,0%
41-50	28	33	40	101
	27,7%	32,7%	39,6%	100,0%
Over 50	13	12	97	122
	10,7%	9,8%	79,5%	100,0%
Total	124	114	275	513
	24,2%	22,2%	53,6%	100,0%

Table 17 – Age structure: "Would you like to attend a course for Internet?"
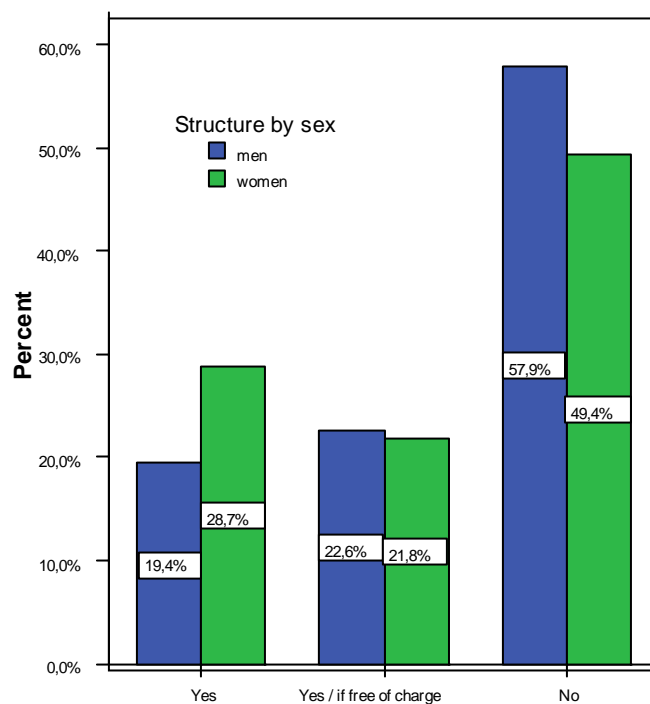
Image 8 – Structure by sex: "Would you like to attend a course for Internet?"

It is interesting also that the majority of the citizens (those who use the Internet) use the Internet for entertainment (34,8%), while 18,3% uses it for work: Image 9.
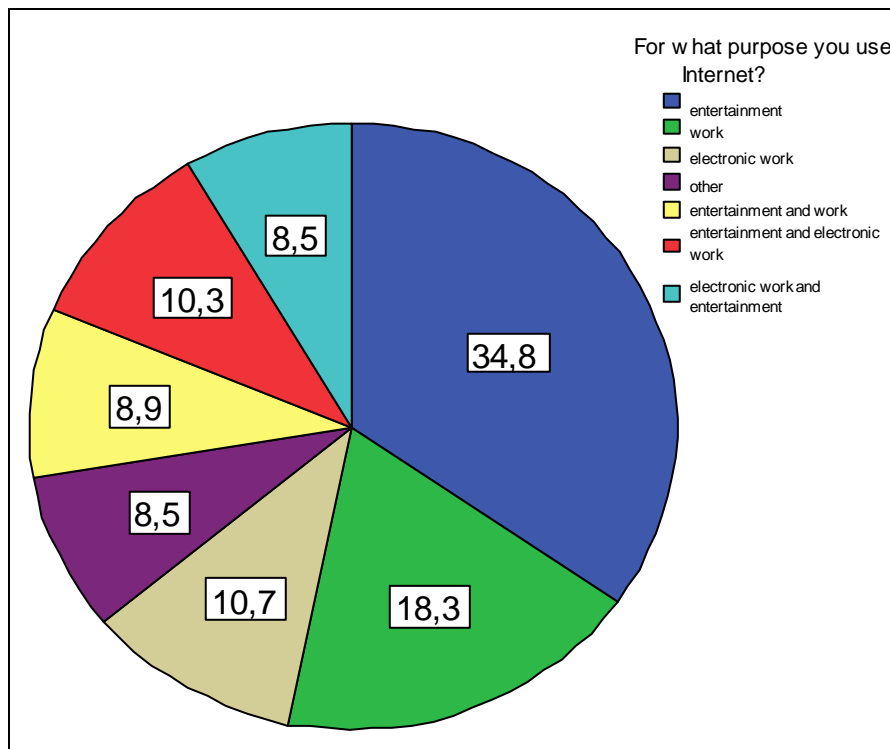
Image 9 – *For what purpose you use Internet?*

It should be stressed that among the interviewees with high education level, MAs and PhDs there is a higher percent of women who use the Internet solely for work (30,3%), while among men it is 24,2%. In addition, higher amount of men (21%) uses the Internet only for entertaining purposes, while among women this percent is somewhat lower (15,2%).

The overall percent of interviewees who think that the Internet contributes to the advancement of their work is around 70%. Alongside with education, the awareness of the interviewees on the positive influence of Internet on the work they perform rises, which can be observed in the Image 10.
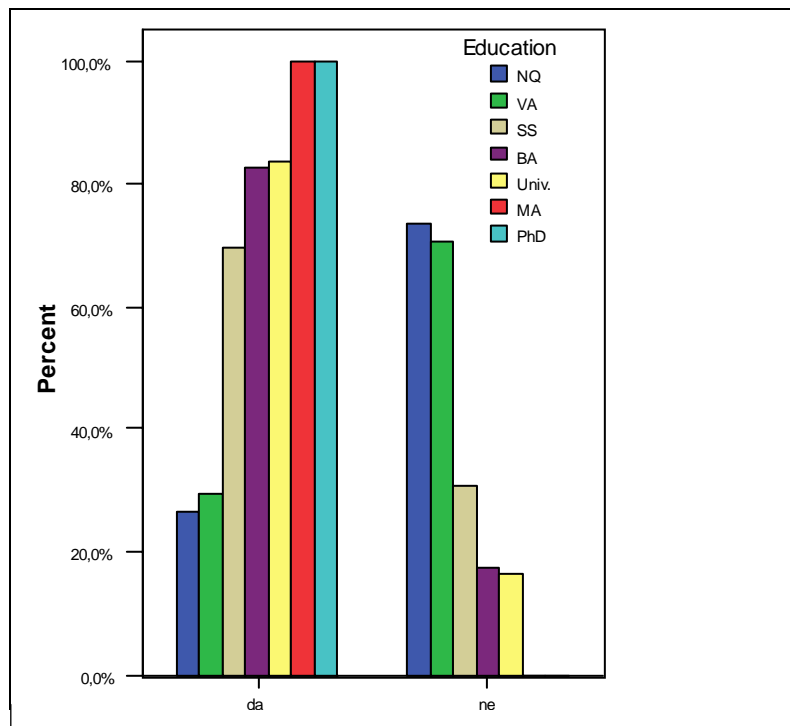
Image 10 *– Education: "Do you think the Internet endorse the improvement of your work?"*

On the question if they possess e-mail address, 43,3% of men and 31,5% of women answered positive (Image 11). The amazing fact is that among the interviewees with no qualification and vocational ability only 2,9% has e-mail address, and 3,1% men and 2,7% women (Table 18).
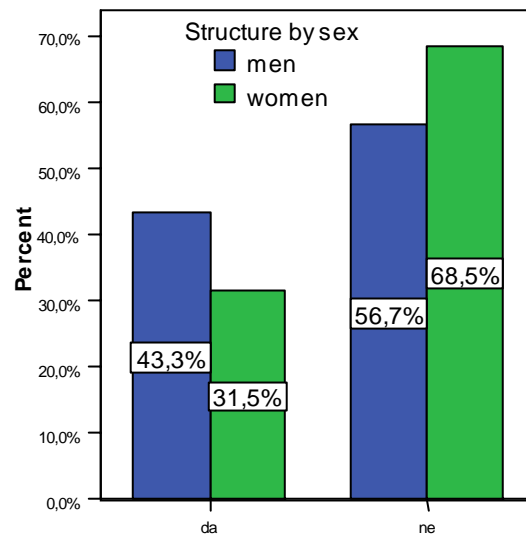
Image 11 *– Structure by sex: "Do you have e-mail?"*

Gender structure	Do you have e-mail?		Total
	Yes	No	
Men	1	36	37
	2,7%	97,3%	100,0%
Women	1	31	32
	3,1%	96,9%	100,0%
Total	2	67	69
	2,9%	97,1%	100,0%

Table 18 – For not qualified and with vocational ability: "Do you have e-mail?"

The Internet within Internet Cafés is being used by 10,6% of men and 8,4% of women, Image 12.
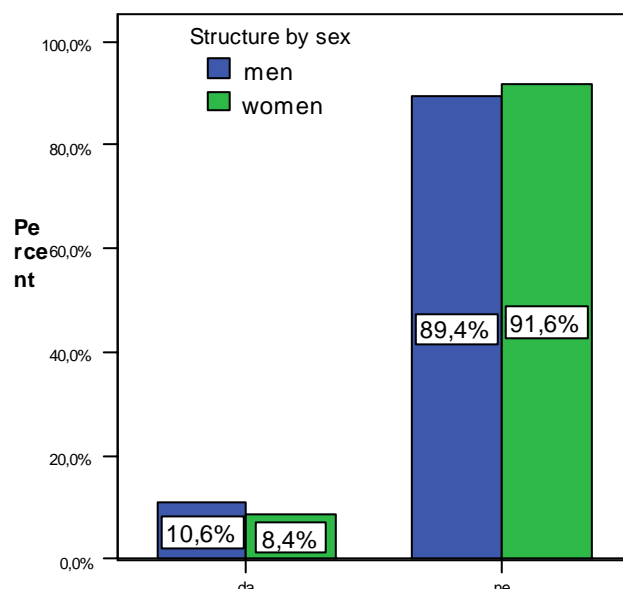
Image 12 – Do you use the services of Internet Cafes?

Among men between 18 and 50 years of age around 80% is interested in information on health care via Internet. Below 18 and over 50 this percentage is twice less (Image 13). Similar situation is with women (interest is around 70%), with a difference in age category: between 31 to 40 years of age this percent is 60% (Image 14).
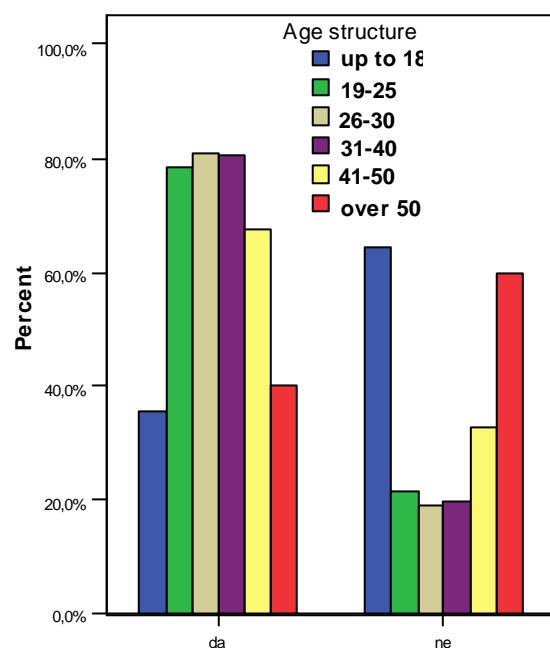
Image 13 *– Men: "Are you interested in medical information on the Internet?"*
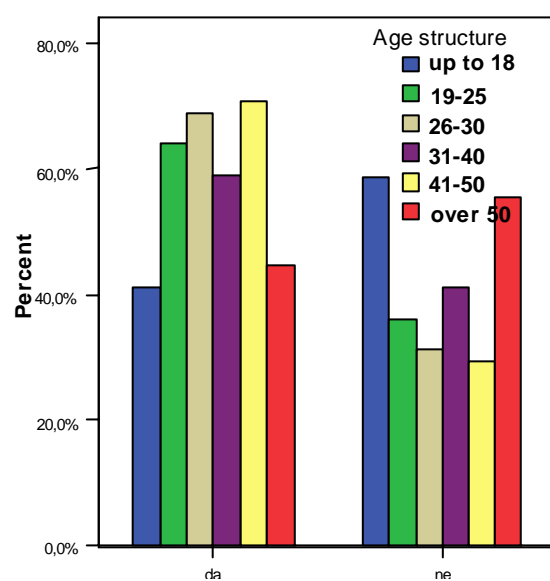
Image 14 *– Women: "Are you interested in medical information on the Internet?"*

4. VOCABULARY OF TERMS AND BIBLIOGRAPHY

4.1 VOCABULARY OF TERMS AND DEFINITIONS[76]

The term gender has penetrated social theory and practice in order to make a clear distinction between biological essence of women and men (sex) and socially constructed roles of women and men. While *sex* signifies biological, unalterable and permanent differences between women and men, the term *gender* is used for defining the social roles of women and men, ways in which the desirable behavior patterns are being formed, transferred and adopted. Simplified, "we are being born as male and female, but how to become a boy or a girl, woman or man, we learn from our society and our families"[77].

Creating the terminology difference between the gender and sex is another effort to refute the beliefs that biological difference use to preserve the existing *status quo* in the distribution of social power and wealth, hence to preserve the unequal status of women and men.

Gender roles and expectations from women and men are being formed under the influence of numerous factors: cultural, ideological, confessional, and economic. They vary from culture to culture, but are changing in time. Therefore, it is necessary to take into consideration that the social status of women and men is not the consequence of their biological characteristics, but they are socially and historically determined and therefore variable. For example, just before 60 years women did not have the voting right in majority of the countries, whilst they are the head of some states nowadays.

Gender roles are adopting during the process of individual socialization and in their formation and transfer the whole society participates – family, school, media. The usual selection of toys for their children, parents are teaching them of socially desirable roles. Accordingly, it is considered that dolls, cooking or sawing sets are appropriate for girls, while boys should play with guns, cars, etc. This way girls are being taught that their socially desirable role is to be housewives, caretakers, while men are on the other side being taught "male roles and jobs" (warfare, politics).

Gender roles are basis on which gender based discrimination relies upon and which is visible in every social sphere. Gender based discrimination can occur in two forms, as direct and indirect discrimination. Direct discrimination is certainly unjustified more unfavorable approach toward the person of particular sex, than the approach toward the person of different sex in the same of similar situation. Indirect discrimination is positioning of the person of particular sex into unequal position appealing to delusional neutral norm, criteria or practice equal for all.

Gender equality is not merely equality before the law. It comprehends formally legal equality of women and men, but it is a broader expression from it.

Gender inequality is not acceptable solely from the viewpoint of respect for human rights and fulfillment of legal norms, but it represents the obstacle to economic development of the state. The researches from all around the world demonstrate that unequal status of women and disrespect for women resources delays the economic growth and solution of the problem of poverty.

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[76] Vocabulary and definitions are taken from the publication "100 Words on Gender Equality – Vocabulary on Equality of Women and Men" published by European Commission 1998.

[77] www.unicef.org/gender/index_bigpicture.html, 2005.

For that reason, efforts for gender equality aim at promotion of the full participation of women and men in the society and stand for equal representation, power and participation of both genders in all spheres of public and private life. Introduction of gender equality principle and valuation of the process in politics, in an attempt to include the gender equality principle into all public policies at all levels and all phases of its creation and implementation, which would enable them to benefit equally women and men.

The more intensive work on gender equality issues, exchange of information and experiences with other organizations that treat equal opportunities for women and men, as well as the need to define positive measures related to the gender equality accomplishment, lead toward more frequent use of specific terms that represent a part of the new value system and social concept in which both women and men equally participate in all spheres of public and private life. The aspiration to change the traditional attitudes on the role of women and men, alongside with system change, creates the requirement to introduce these terms into everyday practice, with the purpose of highlighting that the sensibilized communication is the reflection of the society that respects diversity in which women and men have equal treatment.

Following are the definitions of basic terms in the field of gender equality and equal opportunities.

GENDER
The term relates to the social differences between men and women, which are learned, subject to change during the course of time and vary within the framework and between different cultures.

SEX
Biological characteristics determining human beings as women and men.

GENDER EQUALITY
The concept signifying that all human beings have the freedom to develop individual abilities and righteous choices without the limitations imposed by the strict gender roles; that different behavior, wishes and needs of women and men are equally considered, valued and supported.

EQUAL OPPORTUNITIES FOR WOMEN AND MEN
Absence of gender based obstacles for participation in economic, political and social life.

WOMEN HUMAN RIGHTS
Rights of women and girls, as undisputable, constitutional and inseparable part of universal human rights, including the concept of reproductive rights.

STRENGHTENING, EMPOWERMENT
Process of realization of accessibility and capacities development for active participation in shaping one's own life and community in economic, social and political sphere.

INTRODUCTION OF GENDER EQUALITY INTO PUBLIC POLICY
Systematic inclusion of specific status, priorities and needs of women and men into every policy aimed at improvement of equality between women and men and modification of all general policies and measures, especially in the purpose of achieving equality, by active and open consideration of their effects on related situation of women and men during their implementation, monitoring and evaluation, as well as in the planning phase.

GENDER SENSITIVE STATISTICS
Collecting and classification of data and statistical information according to gender, which enables the implementation of comparative/gender analyses.

POSITIVE ACTION
Proceedings related to particular groups aiming to eliminate or prevent discrimination, or the ease the negative consequences deriving from the existing attitudes, behavior and structures (occasionally mentioned as positive discrimination).

GENDER CONTRACT
The collection of implicit and explicit rules that regulate the relations between gender, and which define different work and the value of that work, responsibilities and duties for men and women. They reflect on three levels: in culture – norms and values of the society; institutions – family subventions, education, employment policy, etc; in the process of socialization, primarily in the family.

EQUAL PARTICIPATION OF WOMEN AND MEN
Redistribution of power and deciding positions (40-60% of representation of any gender) between women and men in every sphere of life, which represents an important condition for equality between men and women.

GENDER GAP
The gap that exists between women and men in any area, related to the level of their participation, accessibility, right for reimbursement or benefits.

DIRECT GENDER BASED DISCRIMINATION
Unfavorable approach toward the person because of his/her sex.

INDIRECT GENDER BASED DISCRIMINATION
When the law, regulation, policy or practice, superficially neutral, has disproportional negative influence on the members of the opposite sex, except if this particularly different treatment is not justified by objective factors.

DEMOCRATIC DEFICIT
Influence (for example) of inadequate gender balance on the legitimacy of democracy.

PARITY DEMOCRACY
Social concept according to which it is equally constituted of men and women and in which their full exercising of civic rights depends on equal representation on the positions of political decisions, and in which the participation of women and men is close or equal to the relation 40 to 60, in the whole democratic system, represents the principle of democracy.

QUOTA
Determined proportion or distribution of positions, parliamentary mandates, means that are intended for particular group, most frequently according to certain rules or criteria, and aimed at correction of disproportion in the previous period, usually on the decision-making positions or in the approach to the employment of education opportunities.

DIGNITY ON THE PLACE OF WORK
The right to respect dignity, especially to protection from sexual and other forms of harassment on the work.

DIVISION OF WORK (BASED ON GENDER)

Division of paid and unpaid work between women and men in private and public life.

SEGREGATION OF WORKING POSTS / SEGREGATION IN EMPLOYMENT

Representation of women and men in different forms and at different levels of activities and employment, whereas women are limited to the narrower selection of responsibilities (horizontal segregation) than men, and the work of lower rank (vertical segregation).

EQUAL REMUNERATION FOR EQUAL VALUES OF WORK

Equal income for the equal value of work, which evaluation does not comprise discrimination based on the gender or marital status and relates to all aspects of payment and rewarding conditions.

ACKNOWLEDGEMENT AND VALUATION OF UNPAID WORK

Estimation, in quantitative sense, including the valuation and presentation of values of unpaid work, such as house chores, care for children and other supported persons, preparation of food for the family, community and other voluntary work.

FEMINISATION OF POVERTY

Intensified and prevalent occurrence of impoverished women compared to men.

FAMILY VIOLENCE

Any form of physical, sexual or psychological violence that endangers the safety of family member and/or threat with physical force, including sexual violence within family of household. Includes children abuse and physical violence and sexual or other abuse of any member of the household.

TRAFFICKING IN HUMAN BEINGS / WOMEN AND CHILDREN

Trafficking in human beings, primarily women and children, used for modern slavery, cheap labor force or for sexual exploitation.

SEXUAL HARRASEMENT

Unwanted behavior of sexual nature or other act based on sex, and which insults the dignity of women and men on their working posts, including the behavior of their superiors and colleagues.

REPRODUCTIVE HEALTH

Statuses of complete physical, mental and social welfare, and not only the absence of diseases or weaknesses, in all cases related to reproductive system and its functions and processes.

REPRODUCTIVE RIGHTS

The right of every individual or pair to according to his/her/their own free will, decide on the number, interval and term of his/her/their children birth, as well as the right to obtain information and means on how to do it and to acquire highest possible standards of sexual and reproductive health.

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