STRATEGY OF DEVELOPMENT OF INFORMATION SOCIETY IN THE REPUBLIC OF SLOVENIA

Niko Schlamberger[1],[2]
Slovenian Society INFORMATIKA

1. INTRODUCTION

This paper is a report on the capital Slovenian national document on information society titled *Strategija razvoja informacijske družbe v Republiki Sloveniji si2010* (Strategy of Development of Information Society in the Republic of Slovenia, further referred to as si2010). The references at the end of the paper are copied from the si2010 where it can be seen that the related Slovenian documents are relatively new – none of them is older than 2005[3]. Yet it seems necessary to make a few introductory explanations so as to better understand the document, its importance and also its advantages and weaknesses.

When discussing information society it is usually taken for granted that all know and understand what this is. It is also taken for granted that, as we from the history know pre-rural, rural, and industrial society, we also know the one that is historically to follow them. Nothing could have been more far away from the truth. The reason lies in that the societies of the past have been studied, described and analyzed while the one the advent of which we are witnesses is only emerging. Indeed, the information technology that is its enabler is a mere half-century old and the phenomena that are characteristic of it are even younger. It seems therefore necessary first to offer a definition of information society and then to explore what and how the country and its stakeholders are doing to provide for a transition from industrial to information society in such a way that no-one will suffer unnecessarily[4].

A common notion of information society is that this is a society of abundance which will keep all the advantages of the present one and additionally delivering new ones enabled by information technology. This tells practically nothing about its fundamental characteristics. As a consequence it does not provide any practical indication about what should be done to come there and who are the ones that have a function and a role in the process. Therefore it needs to be defined in more detail so as to be able to use as a basis to build upon, in particular to develop a consistent strategy of transition from the present form of society to the new one.

---

[1] Disclaimer: The ideas, views and opinions presented in this paper are not official positions of the Slovenian Society INFORMATIKA or any other entity.
[2] niko.schlamberger@gmail.com
[3] However, references are made to older European ones.
[4] Unlike in the transition from rural to industrial society when there has been no foresight as to what might happen if the process were left uncontrolled.

> A proposed and accepted[5] definition that has been further built upon is the following: *an information society is a society of abundance described by gross domestic product, by structure of the labour force, by deployment of means of information technologies, and by self-perception of the society in question.* It is important that every criterion reach a certain level if a society is to qualify as an information society. [6]

Abundance is understood as a situation where supply considerably exceeds demand; gross domestic product must be high enough; relative majority of the labour force must be employed in information services, information technologies must be generally available and in general use, and self-recognition of the society must be the one of an information society. It is not necessary to introduce other parameters into the definition as it seems to have withstood all criticisms so far. Also important is that all of the proposed criteria must be met, not just some of them, for a society to be regarded as an information society.

2. EARLY EFFORTS

The fact that the is2010 has been adopted does not mean that there were no such papers and efforts earlier[7]. Slovenian Society INFORMATIKA too has in 1998 started an idea to explain a vision of Slovenia as an information society. The plan was to publish a paper that has had the first working title *White Book* and which has been eventually published as a special issue of the quarterly journal[8] of SSI under the title *Blue Book – Slovenia as an Information Society*. It has provided three important insights: first, a definition of information society[9], second, a proposal of Slovenian Bangemann applications[10], and third, a proposal on how to carry out the suggested projects.

Soon it has become rather clear that a document itself, however rich and important, will not bring about any steps as envisaged in the Blue Book if there is not an operational structure available to support the project proposed in the document. The applications themselves needed a practical infrastructure to be realized as projects. As necessary further steps two more actions were therefore proposed in the Blue Book: first, to establish a Slovenian Information Society Forum[11] and, second, to establish an organization to provide for a minimal operational and also financial support to execute at least a minimal follow-up on proposals in the Blue Book. The result would then be the programme, the body to monitor the progress, and the organisational support for its work. The SISF has been established soon after the Blue Book has been printed but has never become a operational[12]. As the organization to offer the necessary support a special Foundation Informatika has been planned to establish but the plan has never been realized for reasons that

---

[5] The Blue Book: Slovenia as an information society (Journal of the Slovenian Society INFORMATIKA, Ljubljana 2000), special issue
[6] N. Schlamberger: On measurement of Information Society, L'Aquilla, 2003
[7] Many national documents of the sort are listed at the end of the paper.
[8] Uporabna informatika, published regularly as of 1992.
[9] The definition is provided above and it is good to notice that it has withstood all criticisms so far.
[10] Obviously, the Bangemann Report was used as a model but as the tradition and circumstances of every country are particular so necessarily the projects to provide the motor of the process of transition must be sought out related to the country.
[11] At that time a very popular action in many European countries.
[12] The reasons are beyond the scope of this paper a sthe intention is only to prove that the strategy has not stared with si2010.

are beyond the scope of this paper. Nevertheless, the Blue Book has been offered to all political parties of the time and some ideas were used by the coalition in power at that time. It can be proudly said that the document has served its purpose.

3. si2010

The idea of information society has been first fully developed in European Union by the Bangemann Report which has served as an initiative, a model and a paradigm for many EU, non-EU, and non-European countries in their quest for further development. It has been adopted by European Commission and supported and further elaborated by many documents to follow, notably Lisbon Strategy of 2000, action plan eEurope 2002 followed by eEurope 2005, and finally i2010. Based upon these documents various national strategic documents have been written, some starting at the top as national strategies and some elaborating particular issues of interest to the country in question. The Slovenian case is the latter in that specific strategic documents have been prepared before a national IS strategy document has been produced.

3.1 si2010 Outline
It would take too much copying to present the strategy in detail as the document is 67 pages long. The following paragraphs therefore only summarize highlights of is2010 by presenting its structure and a short outline of the content of si2010.

Purpose
The declared purpose of the strategy is to define a national framework for stimulating development of information society in the Republic of Slovenia until 2010 by defining directions that will take into account technology, societal and legal situation. Based upon i2010 it defines principles of action, shows possible domains to be involved as well as detailed suggestions whereas goals, indicators and measures are left to particular domain strategies. This already positions si2010 as an umbrella strategic document and at the same time announces specific strategies for particular domains[13].

Goals
Main goals of si2010 are to accelerate further development of information society that will significantly influence innovativeness of Slovenian economy and society in general, to increase employment in industries with a high added value, to increase the quality of life and to provide for a balanced regional development.

Based upon the strategy of economic development of the Republic of Slovenia development of information society has been defined already in 2001 as a priority task. Transition into knowledge society has been envisaged as the basic mechanism for increasing competitiveness which must be supported by policies of development of human resources, labour market and employment, development of information society and of research and development. For the period 2006 – 2013 a special document - the Strategy of the Republic of Slovenia 2006 - 2013 has been adopted by the government in 2005 where important domain strategies and respective stakeholders were defined with probably the most important
- e-Health 2010 (Ministry of Health)
- e-Government (Ministry of Public Administration)

---

[13] The reality is that some of specific domain staregic documents appeared earlier that si2010. At least one important such documents was strategy of e-government.

- e-Education (Ministry of High Education, Science and Technology)

There are other strategies that are referred to in the si2010. Not all of them relate directly to information society but mostly they are more or less connected to it. One closer to information society is national strategy of e-education and an example of one not so close is strategy of development of broad-band networks.

Present situation
Regarding information society as compared to EU countries Slovenia is in the average. Some indicators show above-average results and some lower that that. The indicators that have been considered are broad-band access, usage of information technology and internet, and e-commerce in general.

Major Challenges
The following major challenges are identified in si2010 but without an indication of their influences:
- low competitiveness of electronic communication market such as leased lines, broad-band networks
- low coverage with broad-band networks in rural areas
- transition to digital broadcast systems
- low level of IT skills
- low use of information technology at school
- digital data archives
- low level of interoperability and open standards
- insufficient usage of e-business
- low general degree of confidence in internet-based operation
- low usage of e-government services by households

SWOT Analysis
SWOT analysis has been performed merely identifying the factors related to the four SWOT categories but no conclusions or recommendations have been drawn thereof.

Concept and Structure
The si2010 is based upon the orientation of i2010 to provide for a clear relation of national issues to the EU ones. The strategy consists of three vertical (common European information space and Slovenia, innovation and investment in information technology, inclusive information society) and six horizontal (interoperability and open standards, security and privacy, intellectual property, availability and inclusion, knowledge and skills, Slovenian language and cultural identity) domains of action. Particular activities are planned to fit into particular domain of action.

For every horizontal domain there is a description of contents and a statement in a form of a principle of action that describes the commitment of the government with relation to every domain. For some, a vision is put forward and some particular projects proposed.

Carrying Out the Strategy
This part of the document offers for every domain the entity in charge of realization of the goals. The organizations are mostly ministries as appropriate regarding their authority. Four sources of finance are considered: national budget, commercial companies (in form of public-private partnership), structural funds, and EU programmes. It is foreseen that the strategy will be monitored by a special two-prong body to consist of professional council (an advisory body) and professional group (to monitor individual content domains).

Indicators

Effect of carrying out the strategy are intended to be measured according to indicators of information society as defined and published by Eurostat and Statistical Office of the Republic of Slovenia, at the same time to be harmonised with the indicators of measuring the effects of 12010. The indicators are defined for each domain and for most indicators, a start and target value. It is also planned to monitor some common indicators according to relevant domain action plans that are already in place and are being carried out[14]. As the indicators provide the best illustration of the ambition of the strategy they are shown below.

INDICATOR	START VALUE	TARGET VALUE
COMMON EUROPEAN INFORMATION SPACE AND SLOVENIA		
Wide-band coverage (no. of subscribers per 100 residents)	8	20
No. of wide-band subscribers of wide-band connections (DSL, cable Internet, optical connection, wide-band wireless connection)	*	*
Share of households with wide-band connection	36 %	90 %
Share of households with access to Internet from home	54 %	70 %
Share of companies with wide-band connection	75 %	80 %
Access speed to internet (256, 512, 1024 (Kbps), 2 & 4 Mbps)	*	*
mode of access to the internet (via computer, TV, mobile device)	*	*
Share if individuals that regularly use the Internet (at least once a week)	56 %	80 %
Share of individuals that have been users of particular services on the internet (by activity, internet access mode, and age)	*	*
Share of IT sector in GDP and employment in IT sector	*	*
Growth of IT industry (value added)	*	*
INNOVATION AND INVESTMENT IN IT		
Investment in R&D in IT in public sector, calculated as a share in GDP vs. share of all R&D investment	*	*
Investment in R&D in IT in companies, calculated as a share in GDP vs. share of all R&D investment	*	*
Share of companies that use LAN and intranet or extranet	LAN 78 % intranet 27 % extranet 13 %	*
Share of companies with broad-band connection	75%	80%
Share of companies that use open-code systems	browsers (32%) operation systems (30%)	*

---

[14] One such domain is e-government.

	data base programs (19%)	
Share of sales by Internet (e-commerce)	*	*
Share of companies that take orders via computer networks	9 %	20 %
Share of companies that place orders via computer networks	21 %	30 %
share of companies with internal automatic coupled business systems (ERP)	14 %	*
Share of companies with automatic business systems coupled to those of vendors/buyers (SCM)	6 %	*
Share of companies using program solutions oriented towards improvement of customer relations (CRM)	7 %	
Share of companies that give or receive e-invoices	*	*
Share of companies that provide safe Internet	*	*
Share of companies that use e-signatures (digital certificates)	*	*
Share of employees using Internet connected workstation	*	*
Share if informatics professionals among employees	*	*
Share of employees with IT skills	*	*
INCLUSIVE INFORMATION SOCIETY AND QUALITY OF LIFE		
Reasons for inaccessibility to Internet from home or Reasons for inaccessibility to wide-band access to internet from home	*	*
Degree of development of basic public services offered via Internet as measured according to UE IDABC Programme	*	*
Share of population that use government web pages	30 %	*
Share of companies that use government web pages	75 %	*

* value is not available in the original document

4. DISCUSSION

The first impression is that the is2010 is too extensive. To think of it, it is indeed if its ambition is really to be a strategy. On the other hand, for a strategic document it is by far not ambitious enough. To develop any country strategy for only two years is not ambitious nor is such document strategic but rather an action plan for which it is unfortunately too general. The really strategic part of si2010 is the indicators part but unfortunately even assuming that the right ones have been identified, not all indicators are elaborate enough to be able to quantify. More than a vision they

prove conformity with EU documents which is politically correct but not sufficient and good enough for a strategy.

However important it is for a country to have such a document — if for nothing else then to prove that its leaders have a vision — a look from a distance is needed to be able to judge clear picture of what the country's priorities are supposed to be for the near future. Formally it is also a token of the political conformity with the EU strategic documents and goals. It is also good that the proposed tasks are assigned to particular ministries so that for each one its responsibility is obvious. All proposed tasks are defined in terms of deadlines but not also in financial terms. This is a disadvantage as it is clear that any project to be carried out will require financial resources, among other things. There are no provisions in the strategy for its check and balance. Given that the society is a dynamic system and that information technology offers new instruments daily it would be naïve to expect that such strategy will be able to use unchanged even for two years.

si2010 seems to have been written rather hastily which make one think that its authors and its institutional sponsors have been aware of its being somehow late. The projects already in progress such as e-justice and e-health prove such a feeling. It is also to be regretted that because of the haste civil society has not been invited to take part in developing si2010. Only after it has been written the SSI as one of many other organisations has been offered an opportunity to comment and make suggestions if found useful. SSI did not see any realistic possibility to use its Blue Book experience and to influence the already written document which needed more or less only to be edited. Another disadvantage is that it is not translated at least into English if not also into some other languages. Given that it will need to be used both nationally and in European space such translations would make it a useful reference and guidance.

At this time it is also not sure if the body to advise monitor monitor carrying out the strategy has been established. Based upon the Blue Book experience it can be safely declared that such a body is vital for the success of the strategy. Moreover, it needs to be independent of politics if the strategy is to survive any longer as until the next parliamentary elections which would be a pity as any strategy should not be a document for the needs of the day but rather a visionary programme for the future of a country. A useful advice would be to start writing a new strategic document, say si2050. si2010 was a good exercise and all involved as well as onlookers have learned enough that in common effort they should be able to deliver a truly strategic document. The time to start is now.

LIST OF KEY DOCUMENTS[15]

[1] Strategija razvoja Slovenije; http://www.gov.si/umar/projekti/srs/srs.php; Vlada Republike Slovenije, junij 2005
[2] Okvir gospodarskih in socialnih reform za povečanje blaginje v Sloveniji; http://www.sigov.si/vrs/index.php?vie=cnt&gr1=dloVld&gr2=vlaPro; Vlada RS, 2005
[3] Državni razvojni program 2007-20013 (osnutek); http://www.svlr.gov.si/index.php?id=1182 ; SVLR, 2006

---

[15] Copied from si2010

[4] Nacionalni strateški referenčni okvir (delovno gradivo);
http://www.svlr.gov.si/fileadmin/svlsrp.gov.si/pageuploads/KOHEZIJA/NSRO-SLOVENIJA-05_12_06.pdf; SVLR, 2006

[5] Operativnii program regionalnih razvojnih potencialov za obdobje 2007–2013 (osnutek);
www.mra.si/admin/upload/dat/OP%20krepitev%20regionalnih%20razvojnih%20potenci alov.doc; SVLR, 2006

[6] Operativni program za razvoj človeških virov za obdobje od 2007 do 2013 (osnutek);
http://sl.zveza-zdos.si/sitedata/10/upload/File/Dokumenti/OP_ESS-Osnutek-4.julij_2006.pdf; SVLR, 2006

[7] Operativni program razvoja okoljske in prometne infrastrukture za obdobje 2007–2013 (delovno gradivo);
http://www.svlr.gov.si%2Ffileadmin%2Fsvlrp.gov.si%2Fpageuploads%2FKOHEZIJA %2FOP_ROPI-Osnutek-4._julij.2006-Internet.doc; 2006

[8] Program reform za izvajanje lizbonske strategije v Sloveniji;
http://www.sigov.si/zmar/projekti/ostalo/lizbonska-strategija/pr-lizbona.pdf; 2005

[9] Resolucija o nacionalnih razvojnih projektih za obdobje 2007–2023;
http://www.slovenijajutri.gov.si/uploads/tx_publikacije/061127_resolucija.pdf; Vlada, 2006

[10] Background report, The Working Group of Internet Governance; http://www.wgig.org/; 2005

[11] Eurostat, R&D and internationalization, Statistics in focus, EUROSTAT;
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NS-06-015/EN/KS-NS-06-015-EN.PDF; 15/2006

[12] Preliminary analysis of the contribution of EU Information Society policies and programmes to Lisbon and Sustainable Development Strategies, EC;
http://ec.europa.eu/dgs/information_society/evaluation/data/pdf/studies/2005_lisbon_ann ex_4.pdf; 2004

[13] i2010 – A European Information Society for growth and employment, Communication from the commission to the council, the european parliament, the european economic and social committee and the committee of the regions, EC;
http://europa.eu.int/information_society/eeurope/i2010/index_en.htm; 2005

[14] i2010 – A European Information Society for growth and employment, Commission staff working paper, EC;
http://europa.eu.int/information_society/eeurope/i2010/index_en.htm; 2005

[15] Challenges for the European Information Society beyond 2005, EC;
http://europa.eu.int/information_society/eeurope/2005/doc/all_about/new_chall_en_adop ted.pdf; 2004

[16] Sharping Europe's future throug ICT, ISTAG, 2006

[17] Fostering the competitiveness of Europe's ICT industry, ICT Task Force;
http://ec.europa.eu/enterprise/ict/policy/doc/icttf_report.pdf; 2006

[18] Facing the challenge, The Lisbon strategy for growth and employment (Kok Report), EC;
http://ec.europa.eu/growthandjobs/pdf/kok_report_en.pdf; 2004

[19] The MIPs study, Technopolis;
http://ec.europa.eu/dgs/information_society/evaluation/data/pdf/studies/2003_monit_outp ut_c.pdf; 2004

[20] Creating an Innovative Europe, Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit, 2006

[21] Preliminary analysis of the contribution of EU Information Society policies and programmes to the Lisbon and Sustainable Development Strategies, ECOTEC;
http://ec.europa.eu/dgs/information_society/evaluation/data/pdf/studies/2005_lisbon_ann ex_4.pdf; 2004

[22] Economic impact of open source software on innovation and the competitiveness of the Information and Communication Technologies (ICT) sector in the EU, EC; http://ec.europa.eu/enterprise/ict/index_en.htm; 2006

[23] Strategija za varno informacijsko družbo – Dialog, partnerstvo ter povečanje vpliva in moči, sporočilo komisije svetu, evropskemu parlamentu, ekonomskosocialnemu odboru in odboru regij, EC; http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0251:FIN:SL:HTML; 2006

[24] Report on a European Information Society for growth and employment, Committee on Industry, Research and Energy, EP, 2006

[25] Integrated guidelines for growth and jobs, EC; http://ec.europa.eu/growthandjobs/pdf/integrated_guidelines_en.pdf; 2005

[26] Rethinking the European ICT agenda, Ten ICT-breakthroughs for reaching Lisbon goals, PriceWaterhouseCoopers; http://europa.eu.int/information_society/eeurope/i2010/docs/rethinking_the_european_ict_agenda.pdf; 2004

[27] The internet and other computer networks and their use by European enterprises to do eBusiness, EUROSTAT; http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-028/EN/KS-NP-06-028-EN.PDF; 2006

[28] Information economy report 2006, The Development Perspective, UN; http://www.unctad.org/Templates/WebFlyer.asp?intItemID=3991&lang=1; 2006

[29] Politika Vlade RS pri razvijanju, uvajanju in uporabi programske opreme in rešitev, temelječih na odprti kodi, Vlada RS; http://mid.gov.si/mid/mid.nsf/V/K6C08D4EE25C03327C1256F0300203BB9/$file/Strategija_spletnega_nastopa_koncna_20040902.pdf; 2003.

[30] EU Commission Recommendation on the digitisation and online accessibility of cultural material and digital preservation, 24 August 2006; http://europa.eu.int/information_society/activities/digital_libraries/doc/recommendation/recommendation/en.pdf; (2006/585/EC)

[31] EU Council Conclusions of 13. November 2006 on the Digitisation and Online Accessibility of Cultural material, and Digital Preservation; http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/c_297/c_29720061207en00010005.pdf.

[32] European Commission: Television Without Borders' Directive, 2005The Lund Principles: Conclusions of Experts Meeting, Lund, Sweden, 4 April 2001

[33] Lund Action plan on coordination of digitisation programmes and policies: Implementation framework for digitisation coordination actions in Europe; http://cordis.europa.eu/ist/ka3/digicult/eeurope-overview.htm; 2001

[34] Minerva Action Plan: Dynamic Action Plan for the EU co-ordination of digitisation of cultural and scientific content, Bristol 15 November 2005

[35] Ministerial declaration "ICT for an inclusive society", 11 Junij 2006, Riga, Latvija; http://ec.europa.eu/idabc/en/document/5808/254.

[36] EURAB report on "SMEs and ERA", EURAB 04.028-final, 2004

[37] The Economy of Culture in Europe: study prepared for the European Commission, Oktober 2006; http://www.cultural-economy.eu/documents/2006.pdf.

[38] Strategija razvoja širokopasovnih podatkovnih omrežij v Republiki Sloveniji (Ministrstvo za gospodarstvo); http://mid.gov.si/mid/mid.nsf/V/K4E44AB0FC848C3C5C1256F18004BED88/$file/SRSPO_RS_vlada_23092004.pdf.

[39] European Commission: Impact Assesment on the digitisation and online accessibility of cultural material and digital preservation, 28.8.2006, {C(2006) 3808}{SEC(2006) 1075}

[40] Online Availability of Public Services: How Is Europe Progressing?
http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/online_availa
bility_2006.pdf

[41] Akcijski načrt e-uprave do leta 2010;
http://www.mju.gov.si/fileadmin/mju.gov.si/pageuploads/mju_dokumenti/doc/Akcijski_
nacrt_e-uprave_2010__1.7_.doc

[42] Strategija e-uprave RS za obdobje od 2006 do 2010 (SEP 2010);
http://www.mju.gov.si/fileadmin/mju.gov.si/pageuploads/mju_dokumenti/pdf/SEP-
2010.pdf

[43] i2010 Akcijski načrt za e-upravo;
http://europa.eu.int/information_society/activities/egovernment_research/doc/highlights/c
omm_pdf_com_2006_0173_f_en_acte.pdf

[44] eZdravje 2010 – Strategija informatizacije slovenskega zdravstvenega sistema 2005–
2010 (Ministrstvo za zdravje);
http://www.ris.org/uploadi/editor/1130935067OsnutekeZdravje2010-01.pdf.

[45] Strategijo prehoda v digitalno radiofuzijo (Ministrstvo za gospodarstvo),

[46] Strategija razvoja širokopasovnih omrežij v Republiki Sloveniji;
http://www.mg.gov.si/fileadmin/mg.gov.si/pageuploads/EKP/Predlogi/V_medresorskem/
Z.Unijat_-_Strategija_BB_Rev3_medresorsko.pdf.

[47] Nacionalna strategija e-izobraževanja 2006−2010 (Ministrstvo za visoko šolstvo, znanost
in tehnologijo).

[48] Stanje poslovne informatike v Sloveniji 2005/2006, UL Ekonomska fakulteta, Inštitut za
poslovno informatiko; 2006

[49] i2010 High Level Group - Benchmarking Framewor,
http://ec.europa.eu/information_society/eeurope/i2010/docs/i2010_high_level_group/i20
10_benchmarking_framework.doc; April 2006

[50] Strategija razvoja Digitalne knjižnice Slovenije – dLib.si 2007-2010. Ljubljana, Narodna
in univerzitetna knjižnica, 2007