Estonian IT Policy: Towards a More Service-Centred and Citizen-Friendly State

Principles of the Estonian Information Policy 2004–2006

PREFACE

Dear reader,

I would not consider it an exaggeration to say that "e" has put Estonia back on the world map. Living in a small country with limited resources, the pressure to make public administration as efficient as possible forced our Government to look for opportunities to take advantage of modern technology and turn Estonia into *e*Estonia. And these efforts have been crowned with success. E-developments in Estonia are well known both domestically and abroad. This should not, however, give us reason to rest on laurels. On the contrary – if Estonia is to maintain and increase its competitiveness in the ever-globalising world, a lot more has to be done.

ICT-related developments in Estonia have been development driven rather than policy led, ensuring thus a good level of co-operation between the public and the private sector. Nevertheless, the first IT policy, which was approved by the Estonian Parliament in 1998, was an important step in determining the principles of the information society development. The document you are holding in your hand – Principles of the Estonian Information Policy 2004-2006 – is a step further, aiming to strengthen the central IT co-ordination and increase consistency and collaboration in developing the information society.

To achieve the Lisbon goals and information society for all throughout Europe, principles have been agreed on also at the EU level. Our IT policy follows the objectives set out in the *e*Europe 2005 action plan and other strategic documents in Europe. Thus, the priority fields of the eEurope 2005 action plan – e-services in *e*Government, *e*Learning, *e*Health and *e*Business as well as their secure underlying infrastructure – are the key words of the Estonian information policy.

IT policy, however, will count for little if it remains a stand-alone strategy without any links to other policy fields. Using IT is not an objective itself, but means for giving added value to other spheres of life. Thus, the e-dimension has to be integrated into all policy documents and strategies in order to reap real benefits from IT.

Enjoy reading!

Meelis Atonen
Minister of Economic Affairs and Communications

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1. STATE-LEVEL ORGANISATION OF INFORMATION SOCIETY DEVELOPMENT

Pursuant to the Government of the Republic Act, co-ordination of state information systems as well as elaboration and implementation of economic policy in the field of informatics are assigned to the Ministry of Economic Affairs and Communications, in particular to the Department of State Information Systems.

By the organisational structure of IT co-ordination, Estonia is a rather decentralised country. The development of information systems mostly falls under the responsibility of IT managers in ministries, county governments, boards and inspectorates. The central co-ordination deals with strategic planning, setting of priorities and ensuring financing for these. In addition, creation of co-operation networks and ensuring their functionality, drafting IT legislation as well as elaboration of IT standards are the responsibility of the central co-ordination. Proceeding from Estonia's EU membership, the share of participation in the EU decision-making in the field of information society has been constantly increasing as has the share of international co-operation in general.

The Estonian Informatics Centre – an implementing body in the jurisdiction of the Ministry of Economic Affairs and Communications – is responsible for the development of computer networks, arranging of data communication in public administration, accomplishment of IT public procurement, as well as administration and development of bigger nationwide IT projects.

In order to ensure horizontal co-ordination between the public, private and the third sector, a government committee – the Estonian Informatics Council – has been established. The task of the Informatics Council, chaired by a minister responsible for the state information systems, is to advise the Government of the Republic on topics related to the development of information society.

In ministries, the development of information systems is co-ordinated by a ministry's IT council, which approves the ministry's IT strategy and, proceeding from the information policy, plans measures for its implementation.

At regional level, ICT development is co-ordinated by IT councils established at county governors' offices. IT councils organise the elaboration of counties' IT strategies and plan measures for their implementation.

The co-ordination of the present information policy is assigned to the Ministry of Economic Affairs and Communications. The implementation of the information policy is based on information policy action plans, drafted at the beginning of each year, and setting out activities that different state agencies are planning to initiate for the development of the information society. The action plans that state responsible authorities, expected outputs and evaluation of finances are submitted to the Government of the Republic for approval before the drafting of the state budget and will be considered when compiling the state budget strategy.

In drafting the action plan, the Ministry of Economic Affairs and Communications proceeds from the objectives and priorities set out in the Estonian information policy and EU strategic documents targeting the development of the information society. Representatives of the private and third sector will be involved in the drafting of information policy action plans.

2. PRIORITIES AND OBJECTIVES IN DEVELOPING THE INFORMATION SOCIETY

2.1. Main objectives

The main objectives of the Estonian information policy for the next five years are the following:

1) introduction of e-services in all state agencies together with respective training and awareness-raising activities for the whole society;

2) keeping the level of ICT use in Estonia at no less than the average level of the EU, ensuring thus the efficiency of the Estonian economy and society in general;

3) increasing the export capacity of the IT sector.

In years 2004–2006, Estonia will proceed from the following objectives in developing the information society:

- **Development of e-services for citizens, entrepreneurs and public sector institutions**

  The development of basic public online services defined in the framework of the *e*Europe action plan (http://europa.eu.int/information_society/eeurope/2002/action_plan/pdf/egovindicators.pdf) will be continued, ensuring comparability of eGovernment related data at the EU level.

  Particular attention will be paid to the development of favourable environments in the field of eHealth and eLearning. Efficiency and sustainability of e-services will be ensured both in terms of supply and demand. Necessity for customer-oriented approach will be kept in mind when developing e-services by creating technical solutions that would enable multilingual communication and take into account consumer groups with special needs.

- ***e*Democracy**

IT solutions with the potential of contributing to the development of *e*Democracy will be identified and analysed. An Internet-based *e*Voting system will be created.

- **Increasing efficiency in the public sector**

Electronic document management in the public sector will be further developed and digital archiving will be launched. Particular attention will be paid to the development of Internet-based communication and information management between the state and local governments.

The development of databases will be continued with an objective to ensure integrity, availability and interoperability of data. Steps will be taken to create, in fields of life where deemed necessary, databases consisting of digitally signed documents.

In order to increase the quality of leadership and management in the public sector, operational information systems will be created for compiling the activity statistics and financial information of ministries and state agencies.

- ***e*Learning**

Measures will be taken to increase digital literacy of the population. Particular attention will be paid to the widespread training of the population so as to ensure coping in the information society and guarantee readiness for making use of IT solutions. The computerisation level of schools at all levels will be brought to the average of the EU. Introduction of web-based study forms in higher education and lifelong learning will be supported.

- **ICT industry and *e*Business**

Development and use of modern ICT solutions will be facilitated. ICT-related research and development as well as innovation in the private sector will be promoted.

The development of *e*Business will be advanced by promoting the use of ID card, digital signature, and authentication methods based on digital information. In addition, elaboration of IT standards in the field of *e*Business as well improvement of legislation will contribute to the process.

- **IT security**

Basic principles of common IT security policy will be elaborated. In co-operation with the private sector, a national IT security centre will be established as a contact point for respective EU institutions. The centre will be vested with the following tasks: registering of attacks, informing of all parties involved, elaborating and distributing safeguard measures, and increasing awareness of IT security.

- **Position at international arena**

Steps will be taken to maintain the high international reputation that Estonia has acquired as an *e*State. Fast integration with the *e*Europe 2005 action plan will be aimed at, as this will contribute to the linking of Estonian ICT related activities with EU programmes and projects (*e*Content, *e*TEN, IDA, MODINIS, *e*Learning, ENISA, Northern *e*Dimension etc). Attention will be paid to the need to promote and disseminate innovative concepts and standards elaborated in Estonia so as to ensure European-wide use for these.

- ***e*Inclusion**

In order to improve conditions necessary for coping in the information society as well as to avoid digital divide, access to ICT will be facilitated for the socially disadvantaged: the development of public internet access points (PIAPs) will be continued and basic computer skills will be ensured for all members of the society, including those representing risk groups. Public sector web pages that have been created with the aim to inform wider public and provide e-services for citizens and enterprises will be brought in accordance with the Web Accessibility Initiative Guidelines.

The Internet penetration level in Estonia will be further increased and access to communications infrastructure will be improved by ensuring more affordable Internet connection prices, prioritising the development of fast data communications networks as well as promoting competition between telecommunications operators.

ICT will also be used for increasing the employment rate: for the unemployed and people at risk of losing their job, opportunities will be created to study ICT. In addition, necessary incentives will be created for employers so as to increase the share of teleworking.

3. ACTION LINES

3.1. Education, research and development

Everyone probably agrees that it is not technology *per se* that improves the quality of education, but the way technology is used in learning and teaching processes. If used wisely, ICT can contribute to the quality of education considerably, allowing individualised studying methods, improved communication between the school and the students as well as greater mobility. Besides, the ageing of population resulting in the need to stay on the labour market for considerably longer than so far, as well as the constantly changing work processes brought about by modern technologies, will put the pressure on all of us to become lifelong learners. ICT has great potential to make lifelong learning more available and efficient for everybody. Thus, the priority activities in the field of education and R&D are:

- increasing the level of digital literacy so as to ensure that all adults will have at least basic computer and Internet skills. Computer-based learning opportunities will be significantly expanded;
- creating preconditions for improving the quality of technology-oriented higher education. The technical base of these fields will be strengthened and state commissioned education in these areas will be widened;
- development of vocational and continuing education system for training IT support personnel. This will be done in co-operation between the private sector, universities and vocational education institutions;
- training of top-level IT specialists with high-quality basic knowledge by colleges and higher education institutes in co-operation with the private sector;
- equipping all graduates of educational specialties with ICT skills necessary for teaching their subject;
- improving the IT base of educational institutions and increasing the use of *e*Learning. The computerisation level of schools at all levels will be brought to the average of the EU. Continuing education opportunities will be increased considerably, using web-based solutions together with traditional methods. In addition, the Tiger Leap and Tiger University programmes will be continued.
- publishing reference books, study materials and scientific articles in Estonian on the Internet.

The scientific base necessary for the technological development of IT companies will be further developed by supporting the following actions:

- promotion of scientific research in the field of IT;
- encouraging participation in EU research and development framework programmes;
- elaboration of a national information and communications technology programme as set out in the Estonian research and development strategy “Knowledge-based Estonia”;

- intensifying international co-operation, shaping and forming the *e*Europe current and future action plans, as well as fostering participation in EU technology co-operation networks.

3.2. Business development

No enterprise can expect to survive in the information society without digitalising its work processes. Smart exploitation of ICT together with organisational and managerial change allows businesses to increase productivity and improve their competitiveness – factors that are extremely important for staying alive in the ever-globalising market and toughening competition. The responsibility of *e*Business development mainly lies with the private sector – the state's role is to ensure the removal of legal barriers and creation of favourable development environment (ICT infrastructure). Besides, it is the state's task to raise awareness of the benefits of *e*Business and facilitate the communication between businesses and state agencies by making use of electronic channels. Therefore, the priority actions in the field of business development are the following:

- supporting SMEs, including IT companies, in entering export markets and developing respective competence in enterprises;
- improving *e*Business related legislation and developing IT support structures; promoting the use of authentication methods based on ID card, digital signature and digital information;
- elaboration of *e*Business related standards and organising awareness-raising activities.

3.3. Culture

For a small country with rich cultural heritage like Estonia the protection and preservation of language and culture are of vital importance. Modern technology provides us with opportunities to preserve the cultural heritage and make it widely available both for educational and scientific purposes. In addition, the use of IT for systematic collection and preservation of cultural information allows to improve the quality of decisions related to cultural policy. Considering the above-mentioned, the priorities of the Estonian information policy in the field of culture in 2004–2006 are the following:

- creation of common databases for public libraries and introduction of e-services for readers;
- drafting a national programme for the long-term digital preservation of national cultural heritage as well as for its integration with the e-environments of educational institutions;
- collection of digital information with archival value;
- digitisation of records.

3.4. Health

People need to turn to the health sector from time to time and each time the health care provider obtains certain information about the individual. These data are stored in various

medical documents: health records, medical histories, blood records, dental records etc. To ensure the efficiency and first-rate quality of health care, however, it is of vital importance that medical information about patients would be available for all doctors treating them. Thus, ICT can considerably facilitate the management and exchange of information related to medicine.

Estonia does not have yet an integrated and functioning health information system. However, different components for such a system are in place: information systems of hospitals, general practitioners, emergency care institutions and pharmacies, the information system of the Health Insurance Fund, as well as different registers and databases, which have not yet been linked together and which do not systematically exchange information at this point. The conceptual starting point for an integrated system and a different approach lies in the transition from institution-centred approach to human-centred one.

Considering the above-mentioned, the following activities will be prioritised in 2004–2006 in the health sector:

- implementation of the Digital Health Record or summary chart of health-related activities that have taken place in an individual's life from birth to death. The Digital Health Record will provide an environment for information exchange in the whole health sector, joining different information sets to an integrated system. The following projects will be launched as sub-components of the Health Information System:
    - common nationwide digital health record, which ensures commonly agreed movement of data on a patient's treatment and conducted medical examinations between health care institutions, subject to strict security requirements;
    - system for digital prescriptions;
- development of health related e-services.

3.5. Environmental and spatial data

Environmental and spatial data are essential for the state's development from the standpoint of public interest, since they serve as a basis for the elaboration of socio-economic development and settlement policy (plannings, development plans, programmes), regulation of economic activities, imposing of restrictions on ownership rights and freedom of movement. Thus, lack of officially approved data and shortage of balance sheets of natural resources may result in incompetent decisions hindering development and unpredictable number of court decisions with unexpected results.

Estonia already has a well-functioning Land Information System the aim of which is to facilitate the administration of land related information and ensure better access to it through the Internet. The system is constantly being developed and new e-services are introduced. In years 2004–2006, the priorities in the Estonian information policy in the field of environmental and spatial data are:

- compilation of environmental data into a general national register (the Environmental Register) that links all environmental data in time and space. Environmental monitoring

data and respective databases (the Fisheries Information System, the Register of Environmental Permits, the Forestry Information System).

- development of information infrastructure related to land and geographic location (national spatial data); further development of the Land Information System (including the improvement of data quality) in order to provide state agencies and local governments with e-services related to the publication and administration of spatial data;

3.6. State and local government administration

The use of ICT in the public sector, just like in all other walks of life, allows significant savings both in terms of time and finance. Besides, modern technology contributes considerably to the facilitation of communication between citizens, businesses and the state.

The state-level IT architects in Estonia often jokingly say that the public sector should proceed in its activities from the principle "Let us have less state". Indeed, the development of the information society and modern technologies has significantly reduced the need for citizens to turn directly to state agencies. Citizens of the information society do not necessarily have to know all agencies and inspectorates, their fields of responsibility or officials dealing with their affairs – ICT should be used in ways that make citizens' communication with the state comprehensible and convenient without deeper understanding of how the state apparatus works.

Integration of ICT in daily public administration, however, requires extensive organisational and administrative change without which the expected benefits will remain just a dream. Officials' mindset must change and they have to become lifelong learners.

Considering the above-mentioned, the following activities have been set out as priorities in the field of public administration in the Estonian information policy 2004–2006:

- speeding up the implementation of projects that enable electronic communication with the state so as to complete the bulk of such projects by the end of 2006;
    - IT solutions will be created for the electronic provision of all basic services, the digitisation of which would give added value;
    - the development of the Citizen portal www.eesti.ee will be continued with an aim of turning the portal into one of the main communication channels between the state and the citizens;
    - most of the registers and databases of the Republic of Estonia will be linked with the service layer of databases – the X-Road.
- ensuring balanced regional development: opportunities will be created for the financing and coordination of information society projects, initiated at regional level and carried out in co-operation between the state and local governments. In order to avoid incompatibility of solutions, waste of resources and uneven implementation, local governments will be involved in the development of e-services;
- promotion of information society related know-how. In co-operation between the public and the private sector a mechanism will be elaborated for promoting Estonian e-solutions and e-experience;

- modernisation and optimization of state databases;
- development of support systems for databases in order to enable their use pursuant to the Databases Act in the administration of all state and local government databases;
- drafting of basic principles for a common IT security policy;
- modernisation of electronic document management in the public sector and ensuring that within the range of 75% of communication between state agencies duplication of electronic documents with paper-based versions will be eliminated;
- launching of digital archiving for the preservation of digitally created public records;
- consideration of the priorities of this information policy in the setting of annual training priorities for the public sector as well as in planning central training;
- elaboration of IT solutions for the development of *e*Democracy. A functioning *e*Voting system will be created for the local government elections in 2005;
- increasing administrative capacity in the field of population counting: improvement of data quality in the population register and ensuring better access to it; development of e-services;
- development of the Police and Border Guard information system; preparations for the integration with the Schengen information system.
- preparing IT support systems for the administration of the means of EU structural funds by evaluating the existing systems and, if necessary, establishing new structures;
- collection and dissemination of information society statistics: taking into account the statistics collection practice at the EU level, a set of indicators will be elaborated and the availability of information society statistics will be ensured for all;
- further development of eTax and eCustoms Board in order to increase the efficiency of tax and customs procedures;
- promoting Estonia in the world with the help of modern IT solutions. Web sites of the Estonian representations will be further developed and linked with the e-environments providing business and tourism services.

4. LEGISLATION IN SUPPORT OF THE INFORMATION SOCIETY

In order to further strengthen the legal basis in support of the information society, the following areas call for continued action:

- protection of citizens against threats of the information society. A charter of information rights will be created, regulating individual's relation to different types of data. When drafting legislation, it will be ensured that the transition to e-environment takes into account the necessity to consider everyone's fundamental rights;
- ensuring legal base for all new public sector IT solutions. A regulatory environment will be created for the *e*State and the system of state registers and databases will be modernised.
- ensuring security of information systems: creation of regulatory environment for the systematic implementation of security measures for information systems.

5. USEFUL LINKS:

Department of State Information Systems: www.riso.ee
Ministry of Economic Affairs and Communications: www.mkm.ee
Estonian Informatics Centre: www.ria.ee
Estonian Tax and Customs Board: www.emta.ee
Estonian Land Board: www.maaamet.ee

*e*Citizen portal: www.eesti.ee
*e*Government portal: www.riik.ee/en/
Use of ID cards: www.id.ee
Passport and ID card: www.pass.ee

*e*Governance Academy: www.ega.ee
Look@World Foundation: www.vaatamaailma.ee
Estonian Information Technology Society: www.eits.ee
Estonian Information Technology Foundation: www.eitsa.ee
IT College: www.itcollege.ee

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