National Centre for e-Services[1]

Abstract

A modern knowledge society is expecting its government to provide a simple, easy-to-use, quick and effective communication systems with its citizens and businesses. An electronic government nationwide system in public administration may provide automated management processes and may ensure such communication modalities. In 2003, Belarus proceeded with forming an electronic government system nationwide, followed by a series of state information systems development and infrastructure-related solutions throughout to 2012. This ensured online communication of all stakeholders – state personnel, business and citizens. The state information systems continue to be transformed in order to eventually operate in a common and interdependent infrastructure. To date, Belarus has established its e-government platform, whose level of maturity allows for automation of management processes, including a comfortable, simple and quick communication with business and citizens. This development has substantially improved governance. The focus is now on scaling-up the provision of public e-services to citizens and business aiming to reduce further red tape in public service delivery.

Keywords: *e-government; interagency interaction; public e-services; e-identification; cross-border electronic interactions.*

Introduction

A modern knowledge-based society expects its government to provide a simple, comfortable, quick and effective communication with citizens and businesses. This could be provided by electronic Government, a public administration system based on nationwide automated management processes aimed to substantially improve the performance of public administration and reduce costs of social communication for all members of society. Thus, e-government is understood as a set of information and communication technologies put into use, enabling communication of people, business, government departments and public employees when delivering public services.

The objectives of e-government, in Belarus, are: [i] create new forms of collaboration among the different departments and organisations, which make up the public administration apparatus in the country; [ii] streamline delivery of public services to citizens and business; [iii] support and expand self-service opportunities for individuals; [iv] raise technology-related awareness and skills through the community; [v] increase citizens' participation in managing and administering their own country; and [vi] decrease the influence of the geographic location factor in providing and receiving, respectively, public services.

E-government provides effective and inexpensive administration and a realignment of government-to-community relationship.[2] E-government is not a complement to conventional government. It determines a new way of communication based on the operational use of information and communications technologies with the single purpose to improve delivery of public services.

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[2] Forms of information exchange under the e-Government framework: [a] Between government and individuals (G2C, Government-to-Citizen); [b] Between government and businesses (G2B, Government-to-Business); and [c] Between branches of power (G2G, Government-to-Government).

Belarus in Global Rankings

The United Nations carry out, twice a year, the global e-government survey. According to the latest report,[3] the number of countries using e-government to deliver their public services soared in 2016. In 2003, only 45 countries used a single platform for the online delivery of public services. The number of countries providing electronic services through a single platform has now doubled.

In this survey, Belarus ranks 49th out of 193 countries. Its e-government development index (EGDI)[4] stands at 0,6625 favourably comparing with the overall EGDI of 0,4922. Furthermore, on the e-participation index (EPART), reflecting the development of communication services between citizens and government, Belarus moved from position 92 in 2014 to position 76.[5] Though Belarus lags behind the leading countries, due to a number of primarily economic reasons, ITU and United Nations estimates refer to Belarus among the countries that directly follow the leaders, having a huge potential to develop its information and communication technologies infrastructure.[6]

History of e-Government in Belarus

The systematic nationwide formation of e-government in Belarus started in 2003, when the "*Electronic Belarus National Informatization Programme*" was adopted. Its objective was to build an information and telecommunication infrastructure and computerize government organisations, as well as deploy help desks and registration services delivered to citizens through electronic resources and systems operated by the state. The design and implementation of the e-government structure was further detailed in the "*National Programme of Accelerated Development of ICT-based Services 2011-15*".

Usually, experts outline four stages in developing any e-government system: [a] web presence; [b] interactive; [c] transactional; and [d] transformational. Currently, Belarus is implementing the second stage, so called interactive stage of e-government. At this stage, any individual may fill or submit e-forms, make payments, and visit a government organisation website to receive requested documents. Some electronic services of the third stage – transactional – are also available, in the case where a government organisation sends its decision in an electronic document.

It is worth mentioning that the e-government-related national strategies and programmes adopted in recent years envisage a considerable number of measures to intensify electronic interaction between citizens and government organisations. The "*Belarus Informatization Development Strategy 2016-22"* sets, inter alia, an objective for Belarus to become one of top 50 countries on the UN E-Participation Index. However, to achieve this objective, the share of administrative procedures and public services provided in electronic format should be over 75 percent by 2022.

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[3] *E-Government Survey 2016: E-Government in Support of Sustainable Development*, UNDESA, New York, 2016.

[4] EGDI is a composite of the Online Service Index, the Telecommunications Infrastructure Index, and the Human Capital Index.

[5] Great Britain is leading on the e-Government (index value: 0,9193). Other top five countries include Australia (0,9143), South Korea (0,9915), Singapore (0,8828) and Finland (0,8817). Lithuania is ranked 23rd, Kazakhstan 33rd, Russia 35th, Poland 36th, and Latvia 45th. Ukraine is ranked 62nd, having moved up 25 positions in two years. On the e-participation index, Great Britain is also a leader (index value: 1,0000), followed by Australia (0,9831) and Japan (0,9831). Poland stands at the 14th position, Lithuania 17th, Russia and Ukraine 32nd and Kazakhstan at the 67th position.

[6] *Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities.*

Regulatory Framework

The regulatory framework on e-government formation and development includes several laws, presidential decrees, Cabinet council resolutions and other regulations, which are the following:

Laws

Electronic Document and Electronic Digital Signature dated 28 December 2009, № 113-3 (National Register of Legal Acts, 2010, № 15, 2/1665);
Fundamentals of Administrative Procedures dated 28 October 2008, № 433-3 (National Register of Legal Acts), 2008, № 264, 2/1530);
Information, Informatization and Information Protection dated 10 November 2008, № 455-3 (National Register of Legal Acts) 2008, № 279, 2/1552).

Presidential Decrees

Use of Telecommunication Technology by State Bodies and Other State-owned Organizations dated 23 January 2014, № 46 (National Legal Internet Portal, 29.01.2014, 1/14787);
Amendments to Certain Decrees of President of Belarus dated 4 April 2013, № 157 (National Register of Legal Acts, 2013, 1/14175; National Legal Internet Portal, 06.04.2013, 1/14175);
Certain Aspects of Developing Knowledge Society in Belarus dated 8 November 2011, № 515 (National Register of Legal Acts, 2011 r., № 125, 1/13064; National Legal Internet Portal, 06.04.2013, 1/14175).

Cabinet Council's Resolutions

Implementation of Belarus Law Concerning Amendments to the Belarus Law on Fundamentals of Administrative Procedures dated 22 August 2017, № 637;
Administrative Procedures Subject to Delivery in Electronic Form dated 14 July 2017, № 529;
Approval of Measures for Implementation of 2016-2020 Belarus Socioeconomic Development Program dated 12 January 2017, № 18;
Approval of 2016-2020 State Program of Digital Economy and Knowledge Society dated 23 March 2016, № 235;
Approval of Action Plan for Implementation of Belarus President's Directive dated 27 December 2006 № 2 Concerning De-Bureaucratization of State Machinery and Improving Livelihood of Population dated 10 July 2015, № 584;
Approval of List of Organizations Acting as Information Brokers for Delivery of E-Services via National Automated Information System dated 4 October 2013, № 882;
Basic E-Services dated 10 February 2012, № 138;
Delivery of Electronic Services and State Duties in Electronic Format via National Automated Information System dated 9 August 2011, № 1074;
Approval of 2011-2015 National Program of Accelerated Development of ICT-based Services dated 28 March 2011, № 384;
Approval of Authenticating Procedures for printed e-Documents dated 20 July 2010, № 1086;
Certain Measures for Implementing Belarus Law on Information, Informatization and Information Protection and Recognition of Certain Resolutions by Belarus Cabinet Council Null and Void; and other laws and regulations.

Building an Inter-Agency Electronic Interaction System

In the early 2000s, there was almost no mechanism of electronic interaction of the state bodies with each other, and with legal entities and individuals in Belarus. Only some departments had electronic interaction in a form of heterogeneous information systems, with their own

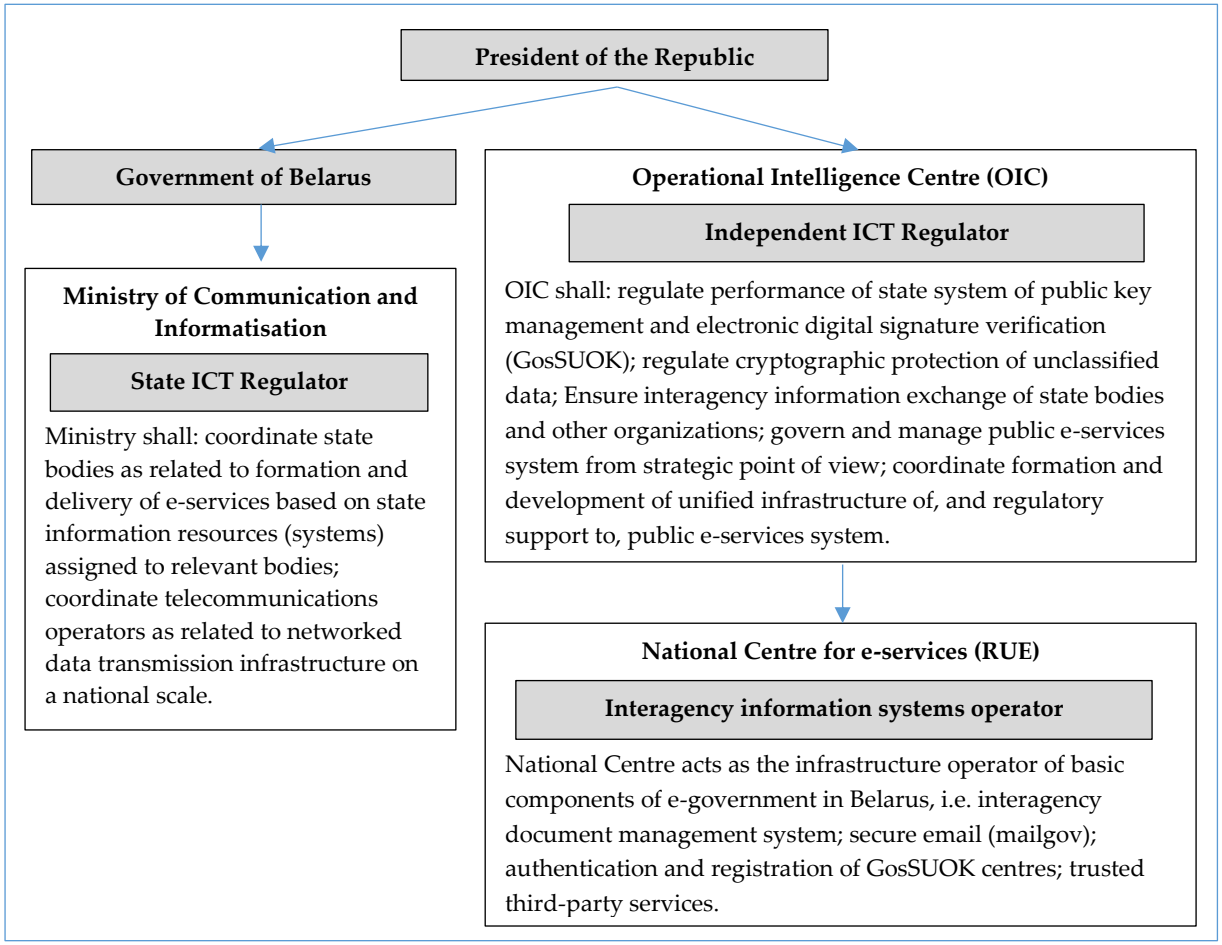
target-specific identification techniques, information protection systems and functions. Such electronic interaction did no go beyond the boundaries of a given entity, making it difficult to address real-world challenges (for legal entities) and life situations (for citizens).

For instance, it was impossible to file online enquiries and exchange data between different agencies to reach an administrative decision. The citizen had to retrieve and collect any necessary information individually by visiting each relevant state body. In other cases, where it was possible to obtain data remotely by using data encryption tools (user key with Electronic Digital Signature), the citizen had to acquire several EDS keys to operate in a given system. As a result, any attempt to address any life situation was time consuming and incurred substantial financial costs.

Thus, it gradually became necessary to build universal information systems and services using unified communication channels, data protection and identification systems applicable across all public administration and accessible by businesses and citizens. By 2012, a set of national information systems and infrastructure solutions were determined in Belarus to ensure online communication for every stakeholder – state bodies, citizens and businesses, including the following: [i] National Automated Information System (OAIS); [ii] Interagency Electronic Document Management System (SMDO); and [iii] State System of Public Key Management and Electronic Digital Signature Verification (GosSUOK).

The *National Centre for e-*Services, a Republican Unitary Enterprise was appointed as the Operator of the interagency information systems. The Centre was established on 19 March 2012 (Presidential Decree "*On Certain Aspects of Developing Knowledge Society in Belarus*", № 515, 08.11/2011. From that time onwards, the state information systems have been continually transformed to operate in a common interdependent infrastructure.

E-Government Regulation Structure



Delivery of Public Electronic Services

The system of delivery of high-quality public e-services to citizens and businesses has been introduced and is evolving within the framework of unified organizational and information and communication space. Furthermore, the introduced e-Government infrastructure allows expanding electronic interaction beyond boundaries of Belarus.
For example, as pertaining to interagency information exchange in Belarus, there is:

Unified technology infrastructure of electronic interaction established for the state bodies and other state-owned organizations based on interagency information systems, data processing centres and Unified Republican Data Transfer Network (ERSPD);

Legal foundation set to form and develop e-services delivered by state bodies;

Unified mechanism provided to identify and authenticate stakeholders of information interaction when using national information systems and receiving e-services;

Universal mechanism created for performing administrative procedures electronically and delivery of e-services via Unified E-Services Portal;

Cross-border legally binding electronic communication process underway.

National Automated Information System (OAIS)

The OAIS is one of the most important interagency information systems designed for electronic interaction between the government and citizens. It is a basic element of e-Government in Belarus, aimed to integrate every and all state information resources (systems) and, based on their data, deliver e-services to any customer. OAIS is not a stand-alone system, it is rather an **integration and infrastructure tool** for upgrading functions and e-services to meet the ongoing needs of users both domestically and abroad. It provides unified data exchange mechanisms and modes for the connected state information resources (systems).

The connection in OAIS is based on a software environment capable of determining the content and format of information available online from any given information resource and fulfilling procedures to retrieve it (Web-publishing). Data from one information resource holder or operator become available in real-time mode for any user connected to OAIS. Uniform user access via the OAIS Unified E-Services Portal is built on similar e-government schemes of some developed countries leading in e-government, which experts positively assess the progress in Belarus. Uniform principles ensure safe and authorized access to OAIS-integrated state information resources. The time of chaotic data exchange between the information resources without OAIS is obviously gone. Furthermore, the OAIS platform was upgraded, in 2016, by adding an ERIP e-payment system among other things, for providing fee-based e-services.

Unified e-Services Portal (EPEU)

The EPEU at: portal.gov.by offers 90 e-services and 5 administrative procedures to legal entities and individuals. Any service and administrative procedure is based on remote enquiry and online delivery technology. There are e-services on finance and tax, labour and social protection, commerce and procurement, land and property, court proceedings, trade, finance and many more based on data from 20 different state information resource centres.[7]

[7] These are: [1] Unified National Register of Legal Entities and Sole Proprietors; [2] Unified National Register of Immovable Property Rights and Transactions; [3] National Taxpayer Register; [4] Belarus Commercial Register; [5]

There are 9,000+ users registered on the Portal, with nearly 300,000 e-services delivered monthly. E-services are categorized by policy area[8] and they are user-friendly. Most individuals are concerned with social policy-related services, i.e. amounts of allowances, pensions or other social benefits. A wider range of e-services is available to legal entities. Data like whether a company is bankrupt, or if any proceedings or tax liabilities are enforced may be retrieved from the portal.

The portal enables interactive processing of e-services, starting from the enquiry submitted from user account up to payment for the services provided. *User account* is granted when registering on the portal, providing: [a] access to services in accordance with User rights; [b] possibility to order a service in accordance with User rights; [c] update on enquiry status; and [d] user data storage.

It is important to emphasize that apart from the Unified e-Services Portal, citizens may receive a number of e-services via information brokers. The institute of information brokers is aimed to provide benefits of e-government and e-services to any citizen across the country, who have limited access to a computer or for a one-off/occasional service enquiry. Information brokers provide e-services to individuals, legal entities and sole proprietors upon their request. A network of 274 information brokers with their automated workstations located at *Beltelecom* RUE *и Belpochta* RUE provide e-services within walking distance to anyone.

Administrative Procedures in Electronic Format

EPEU is an entry point for customers, who remotely apply for any administrative procedure to be performed in electronic format and receive the administrative decision of the state bodies and organizations in the form of an electronic document.[9] Using the EPEU to fulfil administrative procedures electronically (e-application, e-registration, e-enquiry, etc) will streamline information exchange of state bodies with each other, and of citizens with state bodies and organizations. *Single Window* Software, an OAIS subsystem, has been programmed to enable electronic administrative procedures for citizens, thus facilitating stepwise conversion of high profile or popular administrative procedures into electronic format.

Belarus Consumer Services Register; [6] National Domain Name Registry; [7] Passport Data Entry Information System; [8] Insolvency (Bankruptcy) Records; [9] Status of Applications under Writ Proceedings; [10] National Crime and Delinquency Data Bank; [11] Registry of Personal Accounts of National Insurance Policy Holders; [12] List of Goods for Government Needs; [13] Welfare Payment Data Bank; [14] Belarus National Registry of Administrative-Territorial Units and Subareas; [15] Unemployed Registration and Monitoring Database; [16] Tax Calculation; [17] Registry of High Economic Risk Business Entities and Sole Proprietors; [18] EEU Exports Validation Registry; [19] Customs Procedure Follow-up Registry; and [20 Computer-Aided Border Police Operations and Citizen Help and Support System.

[8] E-services offered, by policy area are: [1] in finance: payers; other parties liable; insolvency / bankruptcy cases; tax liabilities of sole proprietors; legal entities and individuals; [2] in family and household: national subsistence allowances; [3] in commerce and public procurement: characteristics of products made in Belarus; Belarussian manufactures and producers; conformity certificates for goods manufactured in Belarus; technical regulations for output and period of validity; [4] in education and science: eligibility for chartered accountant certification; [5] in security and law enforcement: invalidity of machine-readable documents; basic personal profile of individuals; domain names registration with National Domain Name Registry, i.e. .gov.by, .bel); records in National Crime and Delinquency Data Bank; status of applications under writ proceedings; [6] in job and employment: unemployed status; names of legal entities and sole proprietors; employment and dismissal of a policyholder and insurance amounts paid; policyholder's period of employment verification; [7] in land and property: any limitation (encumbrance) of real estate title upon issuance; real estate title of a given individual or legal entity; affected property; factsheet and history of any administrative-territorial unit or subarea.

[9] According to the Cabinet Council Resolution № 584, 10.07.2015 "*On Approval of Action Plan for Implementation of the Presidential Directive № 2, 27.12.2006 "On the De-Bureaucratization of State Machinery and Improving Livelihood of Population"*.

The NCEU has successfully implemented pilot projects with the State Customs Committee and the Ministry of Anti-Monopoly Regulation and Commerce to convert a number of administrative procedures the two agencies provide to legal entities and individuals into electronic format. For instance, via EPEU, owners of retail facilities and consumer services may lodge their applications to relevant state registers; sole proprietors may declare refund of down payments online.

The Cabinet Council has specified administrative procedures to be performed online via the Unified e-Services Portal in the case of citizens, and legal entities and sole proprietors, with the corresponding decision legislated in the Cabinet Council Resolution № 529, 14.07.2016 "*On Administrative Procedures Subject to Delivery in Electronic Form"*. Citizens may initiate 149 online administrative procedures, including official registration of land rezoning; offset and refund of taxes, fees (duties), fines; issuance of certificate of real estate title or statement of interest in land (generalized information), etc. For legal entities and sole proprietors, there are 197 administrative procedures to be provided electronically like issuance of certificate confirming that a sole proprietor is not a single tax payer; offset or refund of extra paid (charged) taxes, fees (duties) and fines; inclusion in the Leasing Company Register and issuance of respective certificate; receiving opinion on urban development projects with general and detailed planning; receiving opinion on design documentation for maintenance and reconstruction with subsequent increase in capacity, and re-designation of social, manufacturing, transport, engineering infrastructure assets, etc.

This Resolution also determines the timing of organizational and technical measures to set the stage for the specified administrative procedures to be provided via Unified e-Services Portal, ways of access to the portal, including state bodies and other organizations designated for the provision of administrative procedures. The Resolution has been adopted in execution of the Law of Belarus of 9.01.2017 "*On Amendments to the Law of Belarus On Fundamentals of Administrative Procedures"*, put into force on 15 July 2017. The full cycle of online administrative procedures is available for citizens at the Unified e-Services Portal to: submit an application for specific administrative procedure; attach required documents (scanned copies or phone snapshots); make payment via ERIP; trace one's application in user account.

The *Single Window* modality suggests three ways of receiving information required for any administrative procedure: [i] *Interaction with state information resources:* This arrangement allows receiving data from the largest information resources across the country, thus saving time for application completion and administrative feedback; [ii] *Operator-to-Operator interaction:* This arrangement enables data inquiry from another, remote operator of *Single Window*; and [iii] *Interaction with SMDO:* Interagency e-document management system will facilitate remote retrieval of data from any connected agency or ministry. In addition to e-services and administrative procedures, EPEU is an access point to multiple attractive interactive services: portal.gov.by contains over 200 external links to organizations in Belarus, where visitors can find solutions to address their life situation, for instance book air tickets, make appointments, declare goods, monitor enrolment campaigns, etc.

In sum, the Unified e-Services Portal serves as a handy platform providing citizens with public services and administrative procedures. EPEU will become a known brand and popular resource for citizens and businesses as new interactive services and benefits offered by ministries and agencies in Belarus will be integrated with the portal.

Interagency Electronic Document Management System in Government Agencies of Belarus

The decision for the full-scale implementation of the e-document management system was made at the highest level. The Presidential Decree №157, 04.04.2013 "*On Amendments to Certain Decrees of Belarus President"* was enacted to strengthen communication of state bodies and other state-owned organizations step by step, harnessing in-house e-document systems, and improving quality and accessibility of e-services. The system of Interagency Electronic Document Management (SMDO) is introduced in Belarus to operationalize e-document exchange among various agencies and avoid its circulation within one entity only. SMDO is one of basic infrastructure components of e-Government in Belarus.

Today around 8,500 organizations and agencies of Belarus operate in SMDO, smoothly and promptly exchanging relevant e-documents. These include every ministry and agency, inclusive of those reporting (or are subordinate) directly to President of Belarus, education and healthcare, culture and sports, real sector of economy and social affairs. This has become possible due to the uniform exchange format like XML[10], which enables agencies using different e-document management systems, produced by various manufacturers, to exchange their e-documents.[11]

The current number of SMDO subscribers makes it possible to suggest the scale of benefits and advantages of the system, i.e. operational communication with state bodies and organisations throughout the country; accelerated decision making by management personnel; considerable reduction of expenditure for paper document flows.[12]

Public Key Management System for Electronic Digital Signature Verification in Belarus

Electronic Digital Signature

The concept of the *Electronic Digital Signature Key* (EDS) is an attribute of any electronic document resulting from encryption of information by using a private signature key, thus ensuring integrity, authenticity and safety of an e-document. The EDS is becoming engrained in the daily life of legal entities and sole proprietors, as it is used to save time, automate legally binding actions like incorporation or registration of sole proprietors, or filing a tax return.

There were many Certification Centres in Belarus until recently, each issuing EDS keys fit for a specific information system. For instance, one e-key was used to submit e-invoices, another for e-services, a third one for e-bill of lading, etc. Thus, in 2014, the Republican Certification Centre (RUC) was introduced to address this challenge and release state bodies and other relevant institutions from the expensive operation and maintenance of individual certification centres. The RUC is accredited with the Public Key Management System for Electronic Digital Signature Verification to issue EDS keys compatible with any possible information system of state bodies and organizations.

Nowadays the EDS by RUC is used for legally binding interagency information exchange, including: incorporation and registration of sole proprietors; filing tax returns; submission of e-invoices on VAT; e-declaration and registration of conformity of goods with customs regulations of Eurasian Economic Union member states; statistical reporting; submission to

[10] The XML format is the basis of e-Government processes, services and documents, because it is: open source; no ownership claimed; transparent as it readable by both machines and people; flexible as it uses new tags to describe new data types, which are added as and when necessary. XML is not only a comfortable data-modelling tool, but also the best data exchange language across multiple systems and agencies utilising e-government.

[11] There are 23 different e-document management systems in the market of Belarus.

[12] It seems that the number of active users of the electronic document exchange system between agencies is growing by 200 every month.

Belgosstrakh; handling the Unified e-Services Portal; handling the Unified National Register of Immovable Property Rights and Transactions; and Land Information Geoportal; for e-commerce transactions; and for banking purposes, among other. There are more than 250,000 EDS holders in Belarus today, with their number increasing by 500 to 1,500 every day. Furthermore, 34 registration centres are networked to provide a range of services on user registration, issue public key certificates, EDS tokens in all *oblast* (province) and *rayon* (district) levels.[13]

Mobile Electronic Digital Signature

It is customary to use EDS on a PC with special software, which apparently limits any user's mobility. In 2016, the National Centre for e-Services offered a new service to its users – SIM card-based EDS or mobile EDS. The mobile EDS addresses similar tasks as any other EDS technology: identity check using a public key certificate and signing electronically. Usability is a major convenience and difference of the mobile EDS from other similar technology, as there is no need to have a separate EDS token, install or fine tune a software. All EDS functions are performed by a tailored SIM-card in one's mobile telephone. This SIM card-based EDS allows for remote handling of documents, their approval, signature, etc.[14]

Cloud Electronic Digital Signature

In the near future EDS in Belarus will be available through Cloud EDS technology. This technology is an electronic signature system, which identifies the signer and renders an e-document legally binding. However, its key is stored not on a USB flash drive, SIM card or PC, but at the Certification Centre's server. This service will be useful for those, who often work off site like lawyers or auditors visiting their customers, and managers or directors, who need to sign documents wherever appropriate. It seems that the cloud digital signature may become an indispensable part of their work. the advantages of cloud-based digital signature are: unlosable and unbreakable; secure; cost-efficient (the medium cost is not included); no extra software required and fits any operating system.

Cross-Border Electronic Interaction (Trusted Third Party)

There are several substantial differences in the electronic digital signatures various governments apply, i.e. encryption algorithms; regulatory framework; and approaches to information protection. Thus, before building any cross-border electronic interaction on intergovernmental level, the trust factor of electronic documents should be taken into consideration and should be put in place.

The most prominent tool is the Trusted Third Party (TTP) concept. The TTP seems to be the only ultimate solution, both from the technical and the legal perspective, that allows users to conform with the legal conditions of a domestic electronic signature without accepting alien rules and not imposing own rules to other systems in other countries.[15] The TTP system ensures e-document integrity, validity and reliability. Using TTP helps to: streamline exchange of e-documents signed by foreign EDS; improve safety and security of cross-border interstate

[13] At the premises of: Beltelecom RUE; Velcom UE; Data Processing Center under Ministry of Finance UE; Tax and Fee Information and Publishing Centre RUE; Mobile TeleSystems JLLC; NII TZI State Enterprise; State Border Control Committee of Belarus; Belorusneft Production Association RUE; National Bank of Belarus.

[14] To date, SIM card-based EDS is offered by Mobile Telesystems JLLC, Velcom UE and the National Centre for e-Service.

[15] The TTP services may be used, inter alia, for e-commerce, public procurement, telemedicine, distance learning, stock market, mobile payment systems, e-libraries, etc.

information interaction; and resolve disputable issues arising between the participants of cross-border information processes.

In accordance with the provisions of the Presidential Decree № 515, 08.11.2011 "*On Certain Aspects of Developing Knowledge Society in Belarus"*, the NCEU was appointed as the National Operator of the Trusted Third Party system with the responsibility to recognize authenticity of e-documents in the course of interstate electronic interaction; and as Authorized Operator of the domestic integration gateway of the Eurasian Economy Union's integrated information system (EEU IIS).

Currently, TTP of Belarus communicates with TTP of Kazakhstan, where the operator is the State Technical Service Republican State Enterprise under the Ministry of Information and Communication. Cross-border electronic communication with other EEU member states will be improved in the long run.

Conclusion

Belarus has already established its e-government system, whose level of maturity facilitates automation of management processes, and has substantially improved governance, including simple, comfortable and quick communication with citizens and businesses. However, the existing e-government system in place, though ensuring interagency communication, still does not provide substantial number of services the end users may enjoy. Thus, in the short term, focus should be placed to further enhance e-government, as the development of electronic communication of state organisations with citizens and business is a primary tool in achieving reductions in red tape.

The *2016-2020 National Programme of Digital Economy and Knowledge Society* envisages further enhancement of e-government efficiency and shared information space to deliver e-services based on integrated information systems and common infrastructure. Such enhancements include the following: identification and authentication; data access, delivery of e-services and administrative procedures, e-document exchange, among others.

The National Programme of Digital Economy and Knowledge Society also envisages the BISRS[16] project, a large-scale innovative project, whose implementation will help improve quality and effectiveness of communications between government, citizens and business, including provision of a nationwide e-payment system. Principal users of this system will be citizens, legal entities, government agencies, executive administrative bodies and other organisations providing e-services and administrative procedures.

Apart for the implementation of the BISRS, the National Programme also envisages many other activities to form a shared information space for e-services delivery, i.e. upgrade of the GosSUOK; creation of a national open data portal based on the Unified e-Services Portal; creation of a national segment of an EEU integrated information system; development of a nationwide automated information system; building a hardware and software complex for a dynamic trusted execution environment to place interagency information systems attributed to different data entry classes; establishment of *Interagency Interaction* automated information system; and building an OAIS-based *Register of Administrative Procedures against Legal Entities and Sole Proprietors*.

[16] Belarus Integrated Service and Payment System (BISRS).

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