

Interoperability Data for Serbia, 2012

1. Interoperability as a strategic goal	
1.1. Strategic Priority on Interoperability	No (2011)
<p>Not Explicitly</p> <p>As eGovernment is currently generally underdeveloped in Serbia, the <i>Strategy and Action Plan for eGovernment Development until 2013</i>, does not refer explicitly to interoperability, yet it covers in its three main pillars i) the development and standardization of ICT infrastructure, including eIDs, electronic signatures and official eRecords, ii) the reform and modernization of essential procedures as a lever for intra- and inter-sectoral process automation and automated structured document exchange and iii) the establishment of electronic public services [1]. The importance of interoperability is also implicitly mentioned in a former strategic document, the <i>Strategy for Information Society Development (October 2006)</i>, where open systems' deployment, coherence and functional unity stand as principles for the implementation of the e-Government concept, within which e-Government is viewed as one coherent system, where unity and interoperability among its heterogeneous parts is achieved through standardization and coordinated development [2, 3]; yet no further directions are provided. It is also remarkable that as a consequence of the participation in several EU projects, some institutions (e.g. Custom Administration, Serbian Business Register Agency, Ministry of Finance) have their own strategies, interoperability frameworks and standards and are better linked with the appropriate EU agencies than institutions in the own country; however, there are no common standards for exchanging data at national level [2, 4].</p> <p style="text-align: right;">(2011) [13, 14, 15, 16]</p>	
1.2. National Interoperability Strategy Status	Not planned (2011)
2. National Interoperability Frameworks	
2.1. National Interoperability Framework Status	
2.1.1. Title	Unknown
2.1.2. Version	<i>Not applicable</i>
2.1.3. Release Date	<i>Not applicable</i>
2.1.4. Focus / Scope	Unknown (2011)
2.1.5. Audience	Unknown (2011)
2.1.6. Status	Under development (2011)
<p>The Interoperability Framework project is covered by the NITIA (Serbian National Information Technology and Internet Agency) implementation plan. In cooperation with INA, NITIA has applied for the IPA (Instrument for Pre-Accession Assistance) fund assets with the project proposal entitled "eGovernment Interoperability Framework". The adoption of the National Interoperability Framework which takes into account the European administration interoperability framework has the goal of ensuring compatibility and cooperation between systems, processes and human resources, which would eventually result in the quality user oriented services.</p> <p style="text-align: right;">(2011) [13]</p>	
2.1.7. Responsible Agency	National Information Technology and Internet Agency (NITIA) (2011)
2.2. Compatibility of National Interoperability Framework with the European Interoperability Framework	<i>Not applicable</i>

(It is envisaged that the National Interoperability Framework will take into account the European administration interoperability framework.)

(2011) [13]

3. Interoperability Projects and Activities

3.1. Number of interoperability-related projects of local or national scope

Moderate

National-Public Administration Portal:

- **eUPRAVA**, the state portal, as the outcome of the National eGovernment Portal Project (Nov 2009 – Feb 2010) on the improvement of the already existing portal (initially launched in 2007), representing a unique access point for delivering electronic public services for citizens, businesses and officials, and planned to initially provide at least 10 electronic services to citizens and companies using qualified e-certificates. Over 40 services are to be implemented on the new portal with more than 10 of them on the level of on-line availability – the portal is intended to enable on-line submission of service requests, electronic identity management, electronic payments and digital time stamp (<http://www.euprava.gov.rs/>) [1].

E-Government Backbone:

- **eSerbia Project** (2006), targeting the creation of a unique computer network of government institutions in the Republic of Serbia and institutions of special importance, to provide a secure and collaborative work environment, and to serve as the backbone for e-Government services [6, 7].

Research & Education Network:

- **SEE Light Project** (construction 2009-2011, network provision until 2026), The SEE Light project tackles the development of the South-East European Lambda Network Facility for the regional research, academic and education communities. The network will enable the provision of end-to-end network services to meet user demands, serving as a test bed for development of new networks and services, and allowing the SEE research and education community to participate in international networking activities (<http://www.grnet.gr/>) [12].

Environmental Geoportal: -

Marine Data Management Infrastructure: -

Legislation & e-Justice System:

- **“ePravda”** (eJustice) project (2008 - 2011), to integrate all initiatives and projects carried out in the area of Justice [2, 3, 4].

e-Health System: -

e-Tax Portal & Infrastructure:

- **Fides** (Fiscal Decentralization in Serbia) project, to create a system to support fiscal decentralization of the tax system on the level of local governments with direct exchange of data with the central tax administration and the Ministry of Finance [3, 4].
- **Single Electronic Window and Electronic Submission of Tax Declarations** (2005) projects within the frame of updating the Serbian Custom Administration Information System [5, 6].

Other projects:

- **e-Procurement project** (2007), enabling the entire procurement process to be carried out electronically, and increasing thereby effectiveness, efficiency and transparency (<http://portal.ujn.gov.rs>, <http://www.ujn.gov.rs>) [1].
- **REPS** project to develop the Serbian Business Register, allowing within the context of business entities' registration, electronic submission of requests, receiving of electronic slips, electronic payment and electronic data exchange of the Serbian Business Registers Agency (SBRA) with other public and private institutions, and enabling thereby simplification and speeding up of the registration process and decrease of administrative costs, and with the view of providing an one-stop-shop for company registration and being integrated with the European Business Register (until 2007) [3].
- **FMIS** (Information System of the Treasury), to implement an integrated IT solution and enable electronic service access for improving the operation of the respective body [4].
- **e-Cards** project, for issuing electronic IDs and passports to the citizens of Serbia [2].
- Project on the "Development and Implementation of an **Electronic System for Office Functioning and Documentation Management**" [2].
- Project for the **Integration of the Computer and Telecommunications Network of Public Institutions** (1998) [1].
- **Common Database for Public Information Systems** (1997), containing data from the Citizens' Registry, the Legal Entity Registry and the Land registry [1].

[1, 2, 3, 4, 6, 7, 12]

3.2. Number of EU-funded interoperability-related projects

Moderate

3.2.1. Indicative projects

- **SWEB** ("Secure, interoperable cross-border m-services towards a trustful European cooperation with the non-EU member Western Balkan countries") project to develop a secure, interoperable, open, affordable platform upon which secure cross border government services will be built (<http://www.sweb-project.org/>) [5].
- **EGEE-III** (Enabling grids for e-science III, May 2008 – April 2010), to expand, optimize and simplify the use of Europe's largest production Grid by continuous operation of the infrastructure, support for more user communities, and addition of further computational and data resources, and prepare the migration of the existing Grid from a project-based model to a sustainable federated infrastructure based on National Grid Initiatives. By strengthening interoperable, open source middleware, EGEE-III will actively contribute to Grid standards and will ensure that the European Grid does not fragment into incompatible infrastructures of varying maturity, but constitutes a world class, coherent and reliable infrastructure (<http://www.eu-egee.org/>) [6].
- **SYNERGY** (Supporting highly adaptive Network enterprise collaboration through semantically enabled knowledge services, Feb 2008 – May 2011), envisaging the delivery of Collaboration Knowledge services through trusted third parties offering web-based, pay on demand services, exploitable through interoperability service utilities (ISUs) (<http://synergy-foss.org/>) [7].
- **VAMDC** (Virtual Atomic and Molecular Data Center, July 2009 – Dec 2012), aiming to build a secure, documented, flexible and interoperable e-science environment-based interface to the existing atomic and molecular (AM) databases (<http://synergy-foss.org/>) [8].
- **IOT-I** (Internet of Things Initiative, Sep 2010 - Aug 2012), representing the first serious attempt in building a unified IoT community in Europe, going across boundaries of disparate technology sectors, in order to create a joint European strategic vision for an interoperable Internet of Things and aligning this vision with the current developments on the Future Internet (<http://www.iot-i.eu/public>) [9].

- **SMARTSANTANDER** (Sep 2010, Aug 2013), proposing a unique in the world city-scale experimental research facility, secure, open and flexible to enable horizontal and vertical federation with other experimental facilities, stimulate development of new applications, and enable better understanding and insight into the issues of Future Internet required capacity, scalability, interoperability and architectural design (<http://www.smartsantander.eu/>) [10].
- **IOT6** (Universal Integration of the Internet of Things through an IPv6-based Service Oriented Architecture enabling heterogeneous components interoperability, Oct 2011 – Sept 2014) to research, design and develop a highly scalable IPv6-based Service-Oriented Architecture to achieve interoperability, mobility, cloud computing integration and intelligence distribution among heterogeneous smart things components, applications and services (<http://www.iot6.eu/>) [11].

[5, 6, 7, 8, 9, 10, 11]

4. National Interoperability Practices

4.1. Number of Interoperability Cases with Good Practice Label	Low (2011)
<ul style="list-style-type: none"> - eUPRAVA, the state portal (as the outcome of the National eGovernment Portal Project to improve the already existing portal, Nov 2009 – Feb 2010), representing a unique access point for providing electronic public services for citizens, businesses and officials, and planned to initially provide at least 10 electronic services to citizens and companies using qualified e-certificates. Over 40 services are to be implemented on the new portal with more than 10 of them on the level of on-line availability – the portal is intended to enable on-line submission of service requests, electronic identity management, electronic payments and digital time stamp (http://www.euprava.gov.rs/). 	
(2011) [13]	
4.2. Best Interoperability Practice	
4.2.1. Title	eUPRAVA, the state portal (2011)
4.2.2. Description	
<p>eUPRAVA, the state portal (as the outcome of the National eGovernment Portal Project to improve the already existing portal, Nov 2009 – Feb 2010), representing a unique access point for providing electronic public services for citizens, businesses and officials, and planned to initially provide at least 10 electronic services to citizens and companies using qualified e-certificates. Over 40 services are to be implemented on the new portal with more than 10 of them on the level of on-line availability – the portal is intended to enable on-line submission of service requests, electronic identity management, electronic payments and digital time stamp (http://www.euprava.gov.rs/).</p>	
(2011)	
4.2.3. Status	
Project completed in February 2010.	
(2011)	
4.2.4. Indicative interoperability aspects covered	
<i>Unknown – Implementation details are not available.</i>	
(2011)	
4.2.5. Impact	
<p><i>Benefits - Reusable Components – Patterns:</i></p> <ul style="list-style-type: none"> - The implemented solution contains a service generator that enables new services to be added without additional programming. This ensures continuous improvement of the portal and expansion of the scope of its services. 	

- All services are grouped according to areas of life (education, health, etc.), while it is possible to do a service search according to title, institution or life situations.
- The portal also contains news, polls, RSS feeds, the option to present multimedia content and the option for eParticipation through a forum.

Lessons Learnt:

- The main project challenge was how to overcome the practice of weak cooperation between institutions, since the National Information Technology and Internet Agency coordinated the activities but portal content was placed and updated exclusively by the institutions in charge of the specific services. This challenge was successfully overcome by involving the persons appointed by the institutions to work on the portal as early as in the software solution testing phase of the project.
- The service generator was improved during service implementation. The implementation of electronic payments using DINA credit cards also represented one of the risky elements of the project. This was because it demanded well synchronised cooperation between the Treasury, the National Bank of Serbia, the Postanska Stedionica Bank, the Processor and the Payment Gateway.
- The institutions with the most developed services initially expressed the highest degree of enthusiasm, but later it turned out that they were the most reluctant to implement their services on the central Portal. This was because it reduced their role in the implementation of sophisticated services. In the future, special effort should be made to involve all institutions with services on the portal more directly in the project and to properly promote their involvement.

(2011)

5. e-Government Interoperability

5.1. Interoperability Level of core e-Government services to citizens / businesses	50.0% (2010) [17]
5.2. Connected Government Status	0.0% (2008) [18]

6. e-Business Interoperability

6.1. Intra-organizational Integration Level	<i>Not available</i>
6.2. Cross-organization Integration Level	<i>Not available</i>
6.3. Cross-organization Application-to-Application Integration Level	1.0% (2010) [17]
6.4. e-Invoicing Status	2.0% (2010) [17]
6.5. B2B Data Standards Usage	
6.5.1. EDI-based standards	<i>Not available</i>
6.5.2. XML-based standards	<i>Not available</i>
6.5.3. Proprietary standards	<i>Not available</i>
6.5.4. other technical standards	<i>Not available</i>
6.6. Interoperability Awareness	
6.6.1. Within their sector	<i>Not available</i>
6.6.2. Between sectors	<i>Not available</i>
6.6.3. For producing or providing products and services	<i>Not available</i>

 **Interoperability Barometer**

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