

Interoperability Data for Estonia, 2012

1. Interoperability as a strategic goal	
1.1. Strategic Priority on Interoperability	Yes
<p>Estonia has not published a National Interoperability Strategy, yet the increase of the interoperability of State information systems is mentioned as one of the priority areas of the Implementation Plan for 2010-2011 of the Estonian Information Society Strategy 2013.</p> <p style="text-align: right;">[1]</p>	
1.2. National Interoperability Strategy Status	Not planned (2011)
2. National Interoperability Frameworks	
2.1. National Interoperability Framework Status	
2.1.1. Title	Estonian IT Interoperability Framework [8, 9]
2.1.2. Version	2.0 (A new version is currently under public review) (2011)
2.1.3. Release Date	April 2006 [1]
2.1.4. Focus / Scope	Unknown (2011)
2.1.5. Audience	Government sector (2011)
2.1.6. Status	Published (2011)
2.1.7. Responsible Agency	Department of State Information Systems (RISO), part of the Ministry of Economic Affairs and Communications (http://www.riso.ee/en/) [1]
2.2. Compatibility of National Interoperability Framework with the European Interoperability Framework	Yes (2011)
<p>The EU Interoperability Framework has been taken into account when drafting the Estonian IT framework.</p> <p style="text-align: right;">(2011) [10]</p>	
3. Interoperability Projects and Activities	
3.1. Number of interoperability-related projects of local or national scope	Low
<p>National-Public Administration Portal:</p> <ul style="list-style-type: none"> - The State Portal ("eesti.ee"), whose recently updated version is based on user involvement and their feedback. One of the major benefits of the new version is that search for information is much faster, as articles, services and contacts are better interconnected [1]. <p>E-Government Backbone: -</p> <p>Research & Education Network: EU-Funded</p> <p>Environmental Geoportal: EU-Funded</p> <p>Marine Data Management Infrastructure: EU-Funded</p>	

Legislation & e-Justice System: -
e-Health System: EU-Funded

e-Tax Portal & Infrastructure: -
Other projects:

- **DEC** (Paperless Document Exchange) is an information system providing a common central document exchange service for various ERMSs (Electronic records management systems) as well as other information systems dealing with documents. ERMSs of public sector institutions have an interface with the DEC. They periodically send documents to other systems and receive them (<http://www.ria.ee/28567>) [2].
- **CrossBorderDS** (Cross-border digital signature in company registration portal) aiming to make establishing a company in a foreign country an easier process (especially for SMEs) and allow to overcome at least some of the obstacles on the way. (<https://ettevotjaportaal.rik.ee>) [3].
- **Mobile-ID** (Authentication and digital signatures with mobile phone) – a SIM card that holds its owner’s mobile identity that enables providers of internet services to identify him and allows him to provide digital signatures, make electronic transactions, just like an ID-card, log into internet banks and sign various contracts digitally. (<http://www.id.ee/10995>) [4, 5].
- **eNotary** (eNotary and GOV registers) an information system suitable for the compilation of notarial deeds (by guiding and assisting the notary upon obtaining and entering data necessary for the elaboration of a contract), serving simultaneously as the basis for a digital archive and enabling communication with other registers (<http://www.rik.ee/e-notary>) [6].

[1, 2, 3, 4, 5, 6]

3.2. Number of EU-funded interoperability-related projects

Moderate (2011)

3.2.1. Indicative projects

- **Organic.Edunet** (Oct 2007 – Sep 2010), a multilingual federation of learning repositories with quality content for promoting awareness and education of the European youth about Organic Agriculture and Agroecology. Organic.Edunet has focused on achieving interoperability between the digital collections of OA and Agroecology content that producers in various EU countries have developed, as well as on facilitating access, publication, search, retrieval and use of this content in multilingual learning contexts through a single European reference point (<http://www.organic-edunet.eu>) [10].
- **OGE** (OneGeology-Europe, Sep 2008 – Aug 2010) on the development and deployment of a nascent international interchange standard for geology, GeoSciML, enabling the sharing of data within and beyond the geological community, and facilitating thus the re-use of geological data by a wide spectrum of public and private sector users, while addressing licensing and multilingual aspects of access, and moving geological knowledge closer to the end user where it has greater societal impact. The project has brought together a web-accessible, interoperable geological spatial dataset for the whole of Europe at 1:1 million scale based on existing data held by the pan-European Geological Surveys (<http://onegeology-europe.org/home>) [11].
- **ACSI** (Artifact-Centric Service Interoperation, June 2010 – May 2013), aiming to dramatically reduce the effort and lead-time of designing, deploying, maintaining, and joining into environments that support service collaborations, by developing a rich framework around the novel notions of dynamic artefacts and interoperation hubs, enabling a substantial simplification in the establishment and maintenance of service collaborations (<http://www.acsi-project.eu/>) [12, 13].

- **CALLIOPE** (“CALL for InterOPERability”) project, aiming to promote an effective uptake of and advance eHealth interoperability (<http://www.calliope-network.eu/>) [14].
 - **MOBI3CON** (Developing mobile 3d data collection, processing and dissemination solution for construction SME-s, Jan 2009 – June 2011), aiming to develop a rugged and robust handheld 3D navigation and 3D data processing system, usable on construction sites, and enabling easy 3D data management, and interconnection and interoperability with generally accepted engineering software tools and existing 3D data processing systems respectively (<http://mobi3con.eii.ee/>) [15].
 - **CLARIN** (Common language resources and technology infrastructure, Jan 2008 – June 2011), with the goal to develop and operate a shared distributed infrastructure, making available language resources and technology to the humanities and social sciences research communities, based on data and interoperability standards (<http://www.clarin.eu/external/>) [16].
 - **GEO-SEAS** (Pan-european infrastructure for management of marine and ocean geological and geophysical data, May 2009 – Oct 2012), to effect a major and significant improvement in the overview and access to marine geological and geophysical data and data-products from national geological surveys and research institutes in Europe by upgrading and interconnecting their present infrastructures, and adopting the SeaDataNet interoperability principles, architecture and components wherever possible to avoid duplicative effort (<http://www.geo-seas.eu/>) [17].
 - **SeaDataNet** (Pan-European Infrastructure for Ocean and Marine Data Management, April 2006 – March 2011), aiming to develop an efficient distributed Pan-European Marine Data Management Infrastructure for managing large and diverse marine research data sets, and to network the existing professional data centers of 35 countries, active in data collection, and provide integrated databases of standardized quality on-line (<http://www.seadatanet.org/>) [18].
 - **SeaDataNet II** (Pan-European infrastructure for ocean and marine data management, Oct 2011- Sept 2015) aiming to upgrade the present SeaDataNet infrastructure into an operationally robust and state-of-the-art Pan-European infrastructure for providing up-to-date and high quality access to ocean and marine metadata, data and data products originating from data acquisition activities by all engaged coastal states, by setting, adopting and promoting common data management standards and by realising technical and semantic interoperability with other relevant data management systems and initiatives on behalf of science, environmental management, policy making, and economy (<http://www.seadatanet.org/>) [19].
 - **BALTICGRID-II** (Baltic Grid second phase, May 2008 – April 2010), aiming to increase the impact, adoption and reach, and to further improve the support of services and users of the recently created e-Infrastructure in the Baltic States (<http://www.balticgrid.org/>) [20].
- (2011) [11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21]

4. National Interoperability Practices

4.1. Number of Interoperability Cases with Good Practice Label

Low

- **DEC** (Paperless Document Exchange) - an information system providing a common central document exchange service for various ERMSs (Electronic records management systems) as well as other information systems dealing with documents. ERMSs of public sector institutions have an interface with the DEC. They periodically send documents to other systems and receive them (<http://www.ria.ee/28567>) [5].
(ePractice Good Practice Label 2009)
- **CrossBorderDS** (Cross-border digital signature in company registration portal) aiming to make establishing a company in a foreign country an easier process and (especially for SMEs) and overcome at least some of the obstacles on the way (<https://ettevotjaportaal.rik.ee>) [6].
(European eGovernment Awards Finalist 2009)

[2, 3]

4.2. Best Interoperability Practice	
4.2.1. Title	DEC (Paperless Document Exchange) (2011)
4.2.2. Description	
<p>DEC (Paperless Document Exchange) - an information system providing a common central document exchange service for various ERMSs (Electronic records management systems) as well as other information systems dealing with documents. ERMSs of public sector institutions have an interface with the DEC. They periodically send documents to other systems and receive them (http://www.ria.ee/28567).</p> <p>(ePractice Good Practice Label 2009)</p>	
[2]	
4.2.3. Status	
Operational since November 2006.	
(2011)	
4.2.4. Indicative interoperability aspects covered	
<ul style="list-style-type: none"> - Technical - Semantic - Organisational - Legal - Standardization 	
(2011)	
4.2.5. Impact	
<p><i>Impact</i></p> <p>The transition to document exchange through the Document Exchange Centre (DEC) and the implementation of harmonized XLM forms for documents will make the administrative and records management processes more effective, faster, and more transparent. The entire life cycle of a record will be reflected in its metadata, enabling to:</p> <ul style="list-style-type: none"> - monitor and control the progress; - obtain access to the document at every stage of the process; - guarantee the authenticity, reliability, usability and integrity of the record at all times. <p>A record can be automatically transmitted through the DEC from one records management system to another without being converted into paper format at any stage. The need for repeated entry of digitally created records disappears, which means that:</p> <ul style="list-style-type: none"> - errors produced through the repeated entry are avoided; - officials are able to work more quickly and easily and with greater efficiency. <p>In the course of the project conditions will be created for the long-term preservation of digital records. In addition, the transition to an XML-based creative process and automatic forwarding will provide both ordinary citizens and the creators of the records with the opportunity to better monitor the progress.</p> <p>In June 2009, 280 users of the DEC – including 100% of ministries, 100% of county governments, 85% of state agencies, 65% of local governments, and 33% of constitutional institutions of Estonia – exchange documents safely and conveniently between dispersed ERMSs. The number of documents exchanged during the first 5 months of 2009 has increased 5 times compared with the same period of the previous year, and is continuously growing.</p>	

DEC has enabled to simplify registration processes in ERMSs (through automated extraction of metadata from XML files). Moreover, the DEC project has facilitated transition to paperless administration in public sector institutions. DEC has created a basis for connecting ERMSs to other information systems and state registers, enabling thus the development of e-services. As document exchange covers different types of documents (including invoices, applications, etc), citizens and business enterprises will also benefit.

Lessons Learnt

- Transition to electronic records management and paperless administration is a long-term process, which is better to be organized gradually, by groups of agencies and document types.
- Transition to electronic document exchange facilitates transition to paperless administration in general.
- For paperless administration and document exchange, organizational, legal and political interoperability are at least as important as technical and semantic interoperability.

(2011)

5. e-Government Interoperability

5.1. Interoperability Level of core e-Government services to citizens / businesses	34.0% (2010) [22]
5.2. Connected Government Status	6.57% (2008) [23]

6. e-Business Interoperability

6.1. Intra-organizational Integration Level	48.0% [7]
6.2. Cross-organization Integration Level	37.0% [7]
6.3. Cross-organization Application-to-Application Integration Level	16.0% [7]
6.4. e-Invoicing Status	40.0% [7]
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>

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