

InterPARES Trust

Project Report



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Abstract or Executive Summary

A strong European political ambition is to implement eGovernment services with the aim to promote cross-border business development. Open, interoperable and public e-registries play an important role in this context. Therefore, it is urgent to establish harmonized models, processes and metrics for monitoring and auditing of compliance in the flow from registration to archive in e-registry.

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Background

Motivation for the project:

- Public registries, records and related data collections contain data on persons, space, properties and rights that *are the most important national information asset*.
- Credibility, consistency, safety and legality of the process of keeping the public registries and the data they contain are *prerequisites for the legal security of citizens and society* as a whole.
- Public registries require application of highest standards and best practices in the field of records management and archiving, which is *the subject of InterPARES project*.
- *Despite all the above, records management and archiving is underestimated, both in legislation and in practice public registries.*

Aims and Objectives/Goals

The project was originally conceived within a time frame of 8 months, with the objectives:

- determination of terminology related to public registries and e-registries,
- definition of underlying principles of public registries and e-registries, especially from the standpoint of long-term archiving and data storage,
- architectural and structural analysis of e-registries and definition of basic principles of e-registries from the standpoint of long-term archiving and data preservation,
- literature review regarding the quality and compliance of public registries as e-registries, as well as their processes and services.

The project has been subsequently extended and the individual research activities lasted for three years.

Methodology

Preliminary research included an analysis of the digital database of legislation in the Republic of Croatia in order to determine legal and subordinate acts that in some way prescribe or describe the management of registries and similar set of records.

The full-scale research continued in three directions:

- The first direction is the research of relevant scientific and professional literature related to the registration right and related areas, as well as standards and the deliverables of previous InterPares projects that deal with terminology.
- The second direction of the research was focused on Croatian legislation, i.e. regulations that explicitly mention registries and related terms, such as records, inventory, lists, census etc., that are also mentioned in the legislation but are not semantically defined and delimited.
- The third direction of the research aimed to address all objectives and challenges but focused on the domain of culture and cultural heritage and with the application of the specific methodology. According to this methodology, the thesaurus of terminology about five top classes of terms (*general terms, finding aids, accessibility, interoperability and data protection*) was constructed, and all laws and regulations were then parsed for all terms with the NooJ main lexical resources for the Croatian language.

Findings

Research of legislation

Preliminary research case study comprised 699 laws. Apart from the laws, there are two to three thousands of bylaws (regulations, mandatory instructions, decisions, etc.) that were not included in the survey.

The distribution of legal acts by area is shown in the following table:

Category	No
Constitution and political system	101
Judicial system	113
Public finance	41
Economic system	86
Regulation of economic activities	127
Technical regulation and quality of products	9
Public sector and NGO	69
Urban planning, construction and environment	59
Labor, health and welfare	89
International law	5
	699

Preliminary research results have shown the following:

- 251 out of the 699 laws stipulate the obligation of keeping a registry or records.
- Additional 72 out of the 699 laws provided for the consultation of an external registry or records, which are under the jurisdiction of other public authorities.

The full scope research was based on CADIAL database. The CADIAL project was finished on September 15, 2009 with the following main results:

- 31,285 texts of legal regulations and other documents published in the electronic edition of the Official Gazette and of the digitized texts of regulations published before 1990 in the official gazettes of the presidency states, which were still in force in 2007
- 1,797 texts of unofficial translation of regulations
- 529 texts of unofficial refined texts
- 3,239 texts of EU legal regulations with which Croatian legislation is harmonized
- 20,000 legal documents of the Republic of the Croatia indexed with descriptors from the Eurovoc thesaurus

- publicly accessible CADIAL search engine (cadial.hidra.hr) operates on that database
- the book *Technologies for the Processing and Retrieval of Semi-Structured Documents* (2009) summarizes the research work carried out within the framework of the CADIAL project and the implementations of the research results;

The full - scale research shows the following:

- 447 registries and other structured sets of records, such as inventory, list, census etc., prescribed or mentioned by laws and other regulation
- less than half of the these sets have a defined way of management an record keeping.

The third direction of the research, focused on the domain of culture and cultural heritage, shows the following:

- laws and regulations relating to registers and related finding aids in the GLAM sector do not include a significant number of terms on interoperability, open formats, etc., and that there is a need for the development of additional terminology (terms related to Linked Open Data and Semantic Web technologies) and alignment with existing terminology (InterPARES terminology, ISO 5127 Vocabulary of information and documentation, EUROVOC descriptors, etc.).
- moreover, it was also shown that laws and regulations need to be aligned with the EU Directives and Linked Open Data best practices (according to *The 5-star Deployment Scheme* developed by Tim Berners-Lee, most open data are data represented in LOD form).

Terminology

Public registry is a registry under the authority and under the direction of some organization with public authority, including government bodies, international organizations, etc., established and maintained manually or by computer in accordance with certain statutory regulation or other act, and open fully or partially for public inspection, searching, printing, and copying data according to certain rules. Public registry is a collection of data on individuals, legal entities, documents, assets and other items of registration, which is operated by the registration body in accordance with prescribed procedure.

Concept of the *public registry* is similar to some other concepts and determining the terminology is an important task of the project. As part of the study similarities and differences will be determined in relation to the following:

- *index of cases* and the *registry of actions in case management and workflow management systems*,
- *index of documents in document management systems* etc.

Contemporary public registries are **information systems**. In addition to registration, they provide services to public agencies, citizens, businesses by mediation of information and communication technologies. Internet is the main channel of delivery while mobile phones, public kiosks and other channels of delivery are also considered. Thus public registries reflect main properties of **e-services** (Rowley, 2006) and may be considered as **e-registries**. Operational risk management, legal compliance, and ease of discovery using role-based permissions have become key business imperatives.

Regarding e-service component of e-registries, an objective of the project is analysis of applicability of current service quality models. One of the quality models is SERVQUAL, developed in the mid of 1980s, and RATER (Reliability, Assurance, Tangibles, Empathy, Responsiveness) a few years later (Zeithaml, Parasuraman, Berry, 1990). The five attributes of this model are: reliability, responsiveness, assurance, tangibles, and empathy.

Terminology regarding registries has been created at the time of manually created registry in book format, and it is used today. So a registry typically consists of:

- the general ledger(main book)which contains data on the status of subjects of registration,
- the registry of changes (registry of action) which contains information on the contents and status of proposals for change of the data related to the subject of registration,
- a collection of authentic documents on which entries in the registry are made and other documents related to the subject of registration, such as auxiliary books and records, such as indexes and catalogs, delivery records etc.

Because of the ubiquitous ICT registration bodies must pay more attention to the semi or unstructured information and records, broadly referred to as **electronically stored information** (ESI), which include e-mail, instant messages, spreadsheets, images etc. Therefore is the study of good practice a special challenge and a prerequisite for standardization of archiving ESI in public e-registries and regulatory requirements.

Another issue for discussion is the **distinction of archiving process at archives and long term preservation of records in public registries**, which is for the public sector also regulated by legislation. For example, in the Swedish public sector there is no distinction between records and archives, since records is equal to archives (Archive Act SFS 1990:782). The public records are part of the cultural heritage and must be preserved, kept and managed so that they meet the right of access to public records, the need for justice, administration and research. This includes appraisal, retention, disposal, description, protection and responsibility issues.

Public registries, as well as other parts of public sector, need records to carry out business activities, but also to meet **legislative and regulatory requirements**

(International Organization for Standardization, 2001, section 3:3). Legislation is important since it determines which records are needed for legally legitimate actions. As stated by Iacovino (2005, p. 260): “The role of record reliability and authenticity in a juridical system is a key element of governance. Within juridical thinking, reliability and authenticity are both necessary for the record to be trustworthy. The reliability of the record is associated with the degree of control exercised over its creation procedures”.

Principles of reliability and authenticity are just some of the ***principles underlying the public registries***, including e-registries (Strahonja, 2001).

Some of other principles underlying the public registries are: the principle of constitutionality, the principle of credibility, timeliness principle, the principle of priority in the order of registration, the principle of consent of the parties, the principle of publication, etc. (Strahonja, 2001).

The research also established and defined an extended set of principles underlying the public registries:

1. Principle of constitutionality
2. Principle of registration (constitutive effect of registration)
3. Principle of regulation
4. Principle of legality
5. Principle of credibility
6. Principle of timeliness
7. Principle of the priority
8. Principle of authenticity
9. Principle of truthfulness
10. Principle of consent
11. Principle of obligatoriness
12. Principle of identification
13. Principle of publication
14. Principle of publicity
15. Principle of privacy
16. Principle of allowed views to registry
17. Principle of purpose
18. Principle of accessibility
19. Principle of openness
20. Principle of security
21. Principle of consistency of data
22. Principle of interoperability
23. Principle of archiving
24. Principle of records management
25. Principle of historicity (temporality)
26. Principle of discrete states

These principles are partly prescribed by laws, while others are part of good practice. The legislation differs from country to country which is a complicating factor and there is a need for a comprehensive study of principles underlying public registries and e-registries, especially from the standpoint of long-term archiving and data storage.

It should be noted that some of these principles partly overlap semantically. Some national laws and legal theories also somehow define different principles of the same name.

One of the greatest challenges is the *transition from paper-based to electronic public registries* (Delmas, 2001; Dollar, 1992) *and recordkeeping of e-registries*. The complexity of handling electronic records requires organizations to take a strategic and holistic approach to compliance to ensure the business, technological and legal challenges of records management (International Council on Archives, 2008). Hurley (2004) notes that technical developments have changed how the way business and recordkeeping is conducted, since re-engineering of business systems has not been matched by re-engineering of the recordkeeping systems which support the business. Recordkeeping processes cannot be separated from the business processes. It is important to integrate recordkeeping functionality into business processes (Hurley, 2004). However, several European studies identifies a lack of recordkeeping awareness within public organizations (Barata, 2004; Riksarkivet, 2010; Shepherd, Stevenson, & Flinn, 2009; Valtonen, 2007). In addition, research demonstrates that records within public organizations business systems are valued and handled differently concerning the legal status compared to electronic records management systems(Kallberg, 2011).

Establishing and managing of a registry is governed by law. Subordinate acts and instructions detail the manner and conditions of keeping the registry, which includes computerized registries.

In the Republic of Croatia, the general framework for management of all registries is defined by the Law on State Information Infrastructure (OG 92/14, the SII Act), and partly by the General Administrative Procedure Act and related provisions.

It should be noted that V. Strahonja participated in the preparation of the SII Act, and that some of the findings gained by research on the project were implemented in the law. That is why the E05 project also has a **policy** role.

This research also points to the need of development of terminology in the forms of a thesaurus and ontology vocabularies (further development is needed in directions started with InterPARES 2 Project Glossary, InterPARES 2 Project Dictionary and Record Ontologies).

The project partners from the Mid Sweden University, ADV, contributed to the project by a study of how Swedish public organizations use electronic registers. It was a master

thesis under the title “E-register – what is that?“, that was prepared and defended by Monica Fällgren, Mid Sweden University, under the supervision of prof. Karen Anderson. The objective of this thesis was „to describe the current situation of electronic registers (e-Register) in Swedish public organizations and find out whether or not there is a need for monitoring and compliance auditing. Other aims are to explore the meaning and use of the word “e-Registry”, and to examine competence and responsibility to register public documents (records). Information was collected through a survey (a web questionnaire) distributed to employees connected to the registry or archive in Swedish public authorities on state, regional and local levels with a publicly accessible electronic register. The result of the survey indicates that there is a need and desire for monitoring and auditing. The need is partly demonstrated by critical comments received after inspection of the recordkeeping system and of the registry. Swedish public agencies are independent from the government and applicable legislation mainly consists of framework laws.“ (Fällgren, 2015).

Conclusions

The results of this research are representative and in a wider context, because Croatian legislation follows the European continental tradition, more specifically the Central European legal tradition.

Further research issues:

1. Establishment and maintenance of public registries in the following cases:
 - the registry is established as the computer based registry, or
 - the registry has been established in paper, and at some point moves to keeping by computer system, with two following sub cases: data entry of all historical states or the last valid state of all active records.
2. Problems of complex operations to registries:
 - merging registries,
 - separation of registries,
 - allocation of archival records.
3. Hybrid records management, i.e. management of records:
 - which have some contextual relationship, regardless of their format and throughout their entire lifecycle, for the purposes of data entry, access, security and disposal, and/or
 - which are keeping one or more parts of the registry in writing or as separated sets of records, depending on the laws and regulations.
4. Preserving referential integrity in a situation where a single record references:
 - other records of the same registry or catalog, including authentic hybrid document related to records in the public registry, which are operated and maintained within the registry,
 - records of other registries and common catalogs that are used by more registries or other information systems, which are under the jurisdiction of the same body and governed by the rules which that apply to internal registries and catalogs,
 - records of other registries and common catalogs which are under the jurisdiction of another body and governed by the rules which are determined by this body autonomously.
5. Internal and external interoperability of registries and collaboration of cross-border services:
 - cross-border eGovernment services, regardless of country of origin, interoperability of systems etc.
6. Harmonization of procedures and metadata
7. Applying of Linked Open Data and Semantic Web technologies for achieving further internal and external interoperability of registers and collaboration of cross-border services

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