



Symposium *“Trust and Digital Records in an Increasingly Networked Society”*

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# **Models for monitoring and auditing of compliance in the flow from registration to archive in e-register**

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# Motivation

- Public registers, 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 registers and the data they contain are *prerequisites for the legal security of citizens and society as a whole*.
- Public registers 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 registers*.

# Objectives - 8 months timeline

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

# Further outcomes

(depending on the availability of doctoral students)

- comparative analysis of a practice of archiving ESI in public e-registers (Croatia, Sweden...),
- theoretical and methodological frameworks for improving policies and procedures related to recordkeeping as well as for monitoring and auditing of compliance in the flow from registration to archive in e-register,
- contribution to the best practice for monitoring and auditing compliance of digital recordkeeping of public registers,
- curriculum model or courses in professional education programs,
- distinction of organization and roles of authorities / archival institutions /archivists regarding monitoring and auditing of compliance in the flow from registration to archive in the e-register,
- quality of the auditing role versus from a professional knowledge and competence perspective.

# 1. Terminology - Public Register

- register 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
- open fully or partially for public inspection, searching, printing, and copying data according to certain rules,
- ....
- **Public register 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 and open to the public.**



# 1. Terminology – Public registers and similar concepts (2)

- Research case study is the Croatian national legislation (**699 laws**)
- Croatian case is to some extent representative for the **European ⇒ Continental ⇒ Central European** legal tradition
- Apart from the law, there are **2 – 3.000 of bylaws** (regulations, mandatory instructions, decisions, etc.) that are not (yet) included in the survey.

# 1. Terminology – Public registers and similar concepts (3)

- Research case study is the Croatian national legislation (**699 laws**)
- **251** out of the **699** laws stipulate the obligation of keeping a register 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 analysis did not take into account the bylaws.

# 1. Terminology – Public registers and similar concepts (3)

Category	No
Constitution and polytical 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
Labour, health and welfare	89
International law	5
	699



# 1. Terminology – Public registers and similar concepts (4)

- The initial analysis shows that Croatian legislation provides **150 to 200** collections that can be considered as registers and about 400-600 auxiliary, supplemental and derived collections of records
- Current research includes definition of a *register* and related terms of *records, inventory, lists, census.....* that are also mentioned in the legislation, but are not semantically defined and delimited.
- Full terminological study should include structural, semantic, legal and IT aspects, certainly from a comparative perspective (more countries).

# List of state registers

Legal entities	Court Registry
	Register of political parties
	Register of associations
	Records on religious communities
	Craft register
	Register of national minorities
	Registry of cooperatives
	...
Individuals	Registers of civil status (registers of births, deaths and marriages)
	Register of citizens
	Register of voters
	...
Space	Land registry and cadastre of real estate (land database)
	Evidence of spatial units
	...



# List of state registers

Interior	Register of citizens (Records of residence)
	Records on foreigners
	Records of passports and visas
	Records of identity cards
	Records of issued work permits
	...
Vehicles	Register of shipping
	Register of aircraft
S	Motor vehicle records
	...
Culture	Register of cultural property
	Register of protected areas
	Register of protected minerals and fossils
	Register of protected natural values
	...

# List of state registers

Finance	Unified register of bank accounts
	Registrar of securities
	Register of payment institutions
	Registers of electronic money institutions
	...
Taxes	Register of tax payers
	Records of personal identification numbers
	Register of taxpayers of income tax
	Register of Value Added Tax
	Register of excise duty payers
	Register of special tax
	Records of fiscalization
	...
Intellectual Property	Register of patents
	Trademark register
	Register of representatives for intellectual property rights
	Register of Intellectual property rights



# List of state registers

Social Security	Central register of insured persons
	Register of persons with disabilities
	Register of institutions in social security
	Register of foster parents and foster families
	Registry of accommodated persons
	Register of persons engaged in nanny
	Records of caregivers
	Records of refugees
	Records of humanitarian organizations and assistance programs
	...

# List of state registers

Agriculture	Farm register
	Register of forest owners
	Register of newly created varieties of agricultural and forest plants
	Register of producers of agricultural seeds
	Registrer of producers of forest seeds
	Registrer of producers of planting materials
	Registrof producers of forest seedlings
	Registrer of manufacturers of high quality breeding stock
	Register of fertilizer
	Register of grape and wine
	Register of animal carrier
	Register for animals
	The register of state aid to agriculture and rural development
	Unified register of domestic animals (Cattle register, Register of sheep and goats.. )

# List of state registers

Agriculture	Register of agricultural buildings ( 5 )
	Register of authorized veterinary organizations
	Register of approved veterinarians
	Register of pets
	Register of animal shelters
	Register of controlled geographic origin of wine
	Register of distillers
	Vineyard register
	Register of issued licenses for fishing
	Register of issued licenses for the cultivation
	Register of subjects in organic production
	...

# 1. Terminology – Conclusion (5)

- Research case study is the Croatian national legislation (699 laws).
- 251 out of the 699 laws stipulate the obligation of keeping a register 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 analysis did not take into account the bylaws.
- So far has been conducted a manual analysis of legislation, without the use of tools based on language technologies.
- In the next stage, the intention is to analyze all the laws and bylaws with the aid of tools based on language technology.
- We are considering the possibility of development of a domain ontology.



## 2. Underlying principles of public registers

- Set of underlying principles has been defined.
- These principles are aimed to be used to check whether a some collection of records meets the requirements of the public register.
- Each of the principles is well described.
- Conditions and indicators of fulfillment of principles are also defined (in some cases also unfulfillment).
- We conducted a validation of compliance with the conditions on the example of one fundamental register (Land Registry), which included legislation on which it is based.

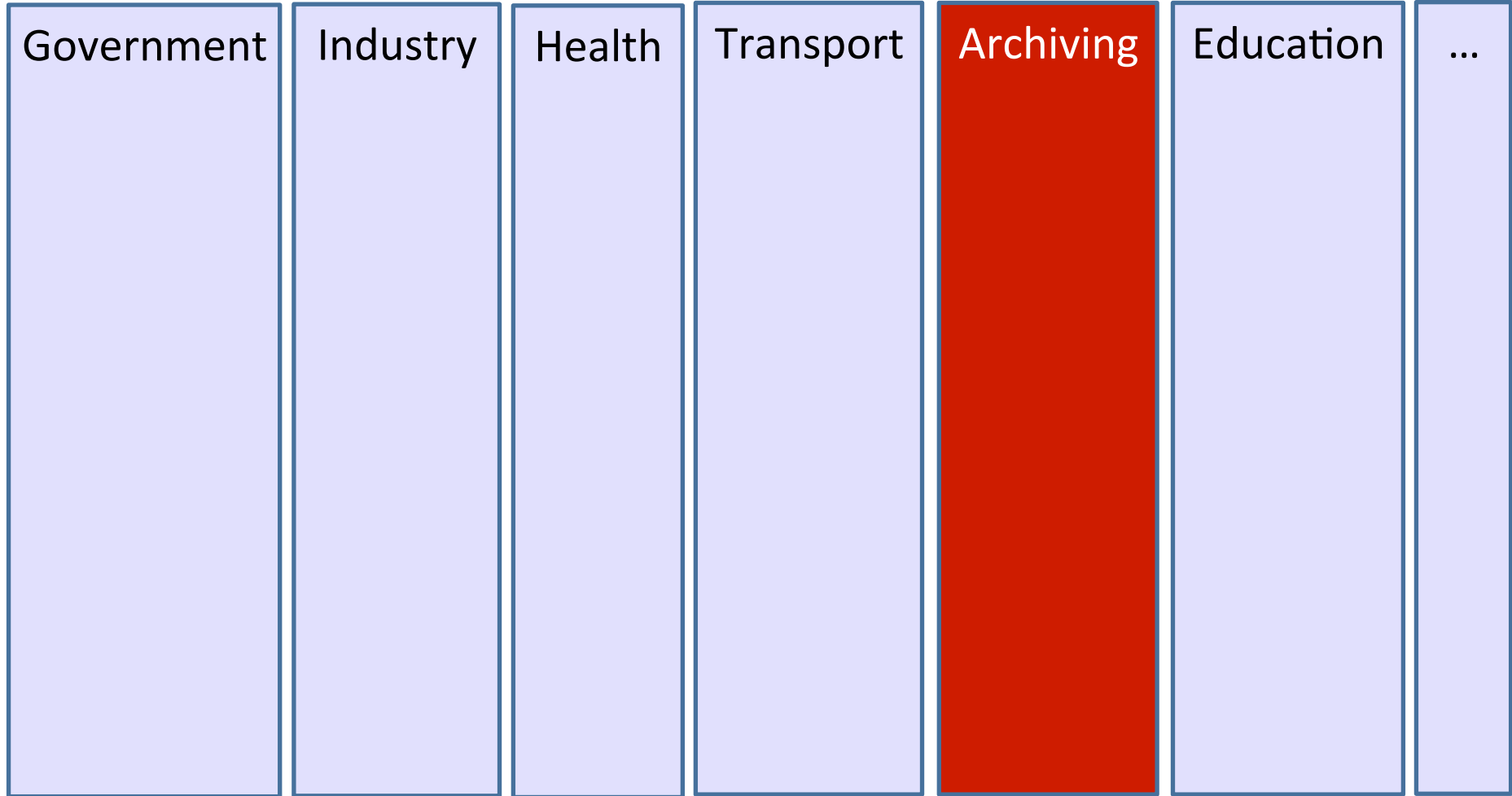
## 2. Underlying principles of public registers (2)

1. Principle of constitutionality
2. Principle of registration (the principle of 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 register
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

## 3. Archiving

- analysis of current registers, based on legislation and some fully operational systems
- definition of basic requirements (regulation, procedures, (meta)data, technology...) regarding registers and e-registers from the standpoint of long-term archiving and data preservation

# 3. Archiving - as a vertical industry (2)



### 3. Archiving - as a vertical industry (3)

- Generally applicable procedures, policies, collections and records:
  - **Law on Archives and Archival Institutions:**
    - Register of Archival Funds and Collections in Croatia
    - Records of archival material;
    - Records of persons employed in the state archives;
    - Records of the creators and owners of archives and register content in their scope:
    - Records on the use of archives;
    - Records of archives and collections of archives;
    - Register of Archives in Croatia;
    - Register of owners of archival material, Croatia;
    - Register of owners of private archives;

# 3. RM & Archiving - as a horizontal function (4)



Government	Industry	Health	Transport	Archiving	Education	...
R &D						
CRM						
HRM						
Production / Service Delivery and Support						
Financial Management and Accounting						
<b>RM &amp; Archiving</b>						
QA						
....						



### 3. RM & Archiving - as a horizontal function (5)

- Generally applicable procedures, policies, collections and records:
  - Law on Archives and Archival Institutions
- Public administration and services:
  - Law on Administrative Procedure
- Judiciary:
  - Court Rules of Procedure
- ...
  - Internal regulation ...

# 3. RM & Archiving - as a horizontal function (6)



- Archiving is mentioned in **37** out of the **699** laws
- An example: *The law on the system of internal financial control in the public sector*
  - Prescribes registers:
    - *Registry of internal audit;*
    - *Registry Charter of Internal Auditors;*
    - *Register of Certified Auditors;*
    - *Register of persons involved in the financial management and control*
  - RM & Archiving:
    - *Article 5 (16): **Documented audit trail** shows the flow of financial and other transactions from inception to completion, in order to allow reconstruction of all individual activities and their approval. Includes systems, documentation, reporting, accounting and **archiving***
    - *Article 13 (2): The information must be adequate, prompt, accurate and accessible in order to enable:
      - c) *documenting all processes and transactions, including descriptions of the system through the flow diagram, accounting and filing system in order to develop an **appropriate audit trail****



# Further research issues

1. Establishment and maintenance of public registers in the following cases:
  - the register is established as the computer based registry, or
  - the register 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 registers:
  - merging registers,
  - separation of registers,
  - allocation of archive 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.

## Further research issues (2)

4. Preserving referential integrity in a situation where a single record references:
  - other records of the same register or catalog, including authentic hybrid document related to records in the public register, which are operated and maintained within the registry,
  - records of other registers and common catalogs that are used by more registers or other information systems, which are under the jurisdiction of the same body and governed by the rules which that apply to internal registers and catalogs,
  - records of other registers 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 registers and collaboration of cross-border services:
  - the European eGovernment Action Plan 2011-2015, cross-border eGovernment services, regardless of country of origin, interoperability of systems etc.
6. Harmonization of procedures and metadata



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We are open for collaboration and partnership

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Thank you for your attention