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## THE IMPACT OF REGULATIONS AND POLICY ON THE LONG-TERM PRESERVATION OF DIGITAL RECORDS

### Abstract

**Purpose:** *This research analyzes the impact of legal, political, and standardization factors on the long-term preservation of digital records in public archives, with a focus on the Slovenian case within the framework of European regulatory and strategic guidelines. Special attention is given to the connection between international standards such as ISO/IEC 27001, ISO 16363, ISO/TR 18128, and legal acts such as the GDPR and eIDAS 2, and their influence on archival practice.*

**Methodology:** *A qualitative methodology was used, including analysis of legal documents (laws, regulations), standards, political strategies, and professional literature. This is complemented by an analysis of cases from the Slovenian context that illustrate the influence of political decisions on archival legislation and the accessibility of records.*

**Results:** *This research confirms that long-term preservation of digital records, the establishment of trustworthy repositories, and archival policy are closely intertwined with the legal and political environment. Legal compliance is fundamentally ensured, but obstacles are mainly evident in the implementation of standards, political stability, institutional independence, and funding. Hypotheses  $H_1$  and  $H_2$  are confirmed, while  $H_3$  is partially confirmed – standards have high practical value, but limited implementation. The research also offers specific recommendations and suggestions for further study.*

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**Discussion:** *The article presents the first comprehensive study in the Slovenian context that systematically connects the archival profession with the concepts of political stability, digital transformation, and risk management. It highlights the possibilities of applying international standards within the national legal framework and emphasizes the need to align archival policy with other public policies and strategic documents. The results are directly useful for legislators, managers of archival systems, information security experts, and researchers.*

**Keywords:** *digital records, digital repository, archive, legal regulation, political influence, long-term digital preservation, ISO standards*

# 1. INTRODUCTION

## 1.1. CONTEXT AND REGULATORY FRAMEWORK

In the digital age, the long-term preservation of digital records (hereinafter: digital preservation) is no longer solely a professional issue of archival science, but a strategic challenge that intertwines the legal framework, information security, organizational governance, and political will. In Slovenia, it is defined by

- the *Act on the Protection of Documentary and Archival Materials and Archives* [*Zakon o varstvu dokumentarnega in arhivskega gradiva ter arhivih*]
  - further ZVDAGA (2014) with implementing acts:
    - the *Decree on the Protection of Documentary and Archival Material* [*Uredba o varstvu dokumentarnega in arhivskega gradiva*] – further UVDAG (2017) and
    - the *Rules on Uniform Technological Requirements for the Capture and Preservation of Material in Digital Form* [*Pravilnik o enotnih tehnoloških zahtevah za zajem in hrambo gradiva v digitalni obliki*] – further PETZ (2020). ZVDAGA, in its currently valid version from 2014, systemically regulates the conditions for the protection of documentary and archival materials, procedures for their transfer to public archives, and conditions of access, thus directly influencing the implementation of long-term preservation of digital records in Slovenia.
- The *General Data Protection Regulation* – GDPR (2016), and the *Personal Data Protection Act* [*Zakon o varstvu osebnih podatkov*] – further ZVOP-2 (2022). With the introduction of processing logs, restrictions on biometric data, and more detailed regulation of video surveillance, these acts have strengthened the requirements for security and traceability in the long-term preservation of digital records containing personal data.
- The *Information Security Act* [*Zakon o informacijski varnosti*] – ZInfV (2025), as the umbrella law for information security in the public sector, affects the security standards of archival information systems, which is crucial for long-term preservation.

The professional framework is provided by international standards: ISO 16363:2012, ISO/IEC 27001:2022, ISO/IEC 27002:2022, and ISO/TR 18128:2024, which emphasize the integration of technical, organizational, and legal requirements in ensuring the long-term accessibility, authenticity, and protection of digital records.

## 1.2. THE IMPORTANCE OF LONG-TERM DIGITAL PRESERVATION

Long-term digital preservation is essential for legal compliance, the realization of public interest, the safeguarding of the administrative, legal, and historical value of records, and the permanent protection of knowledge and cultural heritage. Properly preserved records serve as authentic evidence of business and legal decisions, enable traceability of procedures, and contribute to ensuring accountability and transparency of operations.

According to ISO/IEC 27002:2022 (e.g., control 5.12), information must be classified and handled according to its value, sensitivity, and need for protection, which includes measures to ensure its confidentiality, integrity, and availability.

It is also necessary to consider the role of policies, which can significantly influence which digital records are preserved long-term, under what conditions, and to whom they are accessible affecting their future usability and accessibility.

## 1.3. PURPOSE, OBJECTIVES, AND RESEARCH QUESTIONS

The purpose of this research is to determine how legal regulations, political orientations, and risk management shape the practices of long-term digital preservation.

The objectives of the study are to:

- analyze the impact of key legal regulations (ZVDAGA, GDPR, ZInfV) on long-term digital preservation processes,
- examine the role of politics in shaping approaches to long-term digital preservation and the development of archival practices,
- evaluate the applicability of international standards,
- identify gaps between normative requirements and practice.

Research questions (**RQ**<sub>x</sub>):

**RQ**<sub>1</sub>: How do legal regulations influence long-term digital preservation and access to digital records?

**RQ**<sub>2</sub>: How do strategic political documents and budgetary priorities guide the development of archival practices?

**RQ**<sub>3</sub>: In what ways do political decisions influence the selection of materials for long-term preservation and the conditions of access and availability?

**RQ<sub>4</sub>**: How does the use of international standards contribute to a greater alignment of practices with legislation and political guidelines?

**RQ<sub>5</sub>**: What are the key obstacles and opportunities for ensuring reliable and compliant long-term digital preservation in a changing legal and political environment?

Hypotheses (**H<sub>x</sub>**):

**H<sub>1</sub>**: Legal regulations significantly shape archival procedures and affect the compliance of digital preservation with legal requirements.

**H<sub>2</sub>**: Political strategic documents and sectoral directives have a substantial impact on the execution of the archival function in the public sector, particularly in the allocation of resources and the development of operational practices for long-term digital preservation.

**H<sub>3</sub>**: The use of international standards for risk management significantly enhances the resilience of archival solutions and their compliance with legal and political requirements.

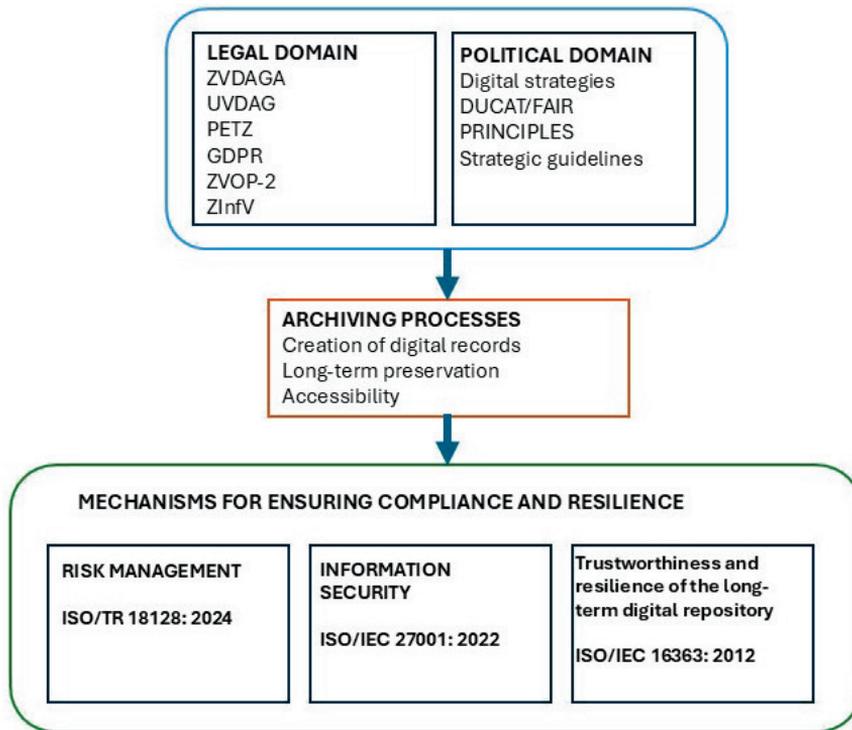
#### **1.4. RESEARCH MODEL AND METHODOLOGY**

This research is based on an interdisciplinary analytical framework that integrates three key areas relevant to the long-term preservation of digital records:

- Legal domain: analysis of legal regulations and potential inconsistencies in their implementation.
- Political domain: influence of national strategies and FAIR (Findable, Accessible, Interoperable, Reusable) principles on the institutional positioning of archives.
- Risk management domain: use of international standards as a mechanism for ensuring stability and compliance.

The method includes a qualitative analysis of regulations, strategies, and standards, as well as a synthesis of findings into a conceptual model (Figure 1), which illustrates how the legal-political framework and risk management jointly affect the processes of long-term preservation and archiving of digital records.

**Figure 1: Research model of the influence of regulations, political orientations, and risk management on the long-term preservation of digital records.**  
Source: Author's own work



## 2. PREVIOUS RESEARCH AND KEY SOURCES

Research in the field of long-term digital preservation in the past decade increasingly addresses the interplay of legal, organizational, and technological factors that shape archival strategies and practices. Most studies focus on individual aspects of long-term preservation, such as legal compliance, metadata, or file format selection, while fewer comprehensively examine the impact of legislation, policies, and risk management on the actual implementation of archival functions. Conway (2010) highlights the gap between established archival policies and their operational implementation, often conditioned by a lack of resources and strategic management. Lavoie (2014) points out the lack of standardization, while Wilkinson et al. (2016) emphasize the importance of the FAIR principles (Findable, Accessible, Interoperable, Reusable), which go beyond the scientific context and increasingly influence the archiving of public records.

At the legislative level, the GDPR (2016) raises questions about the relationship between the right to be forgotten and the principle of long-term accessibility of archived content. In Slovenia, the ZVDAGA (2014) and its implementing regulations define the foundations of digital preservation based on the DUCAT principles (accessibility, usability, integrity, authenticity, durability). The combined application of FAIR and DUCAT principles strengthens legal compliance (RQ<sub>1</sub>), responsiveness to political guidelines (RQ<sub>2</sub>–RQ<sub>3</sub>), and supports the architectural implementation of standardized solutions (RQ<sub>4</sub>).

European initiatives such as eArchiving emphasize the importance of open, interoperable, and sustainable specifications for long-term preservation. The FAIR principles are concretely linked to the digital transformation of the public sector through these approaches (European Commission, n.d.). The European Open Science Cloud – EOSC initiative (EOSC Association, 2024) further establishes long-term preservation as a foundation of open science, with FAIR principles guiding the design of interoperable and reusable archives.

The national strategy Digital Slovenia 2030 also emphasizes goals such as the development of digital competences, open public services, and the strengthening of cybersecurity. In this way, it indirectly supports the core principles of findability, accessibility, and reusability of public data (Ministry for Digital Transformation, 2022).

The methodological framework for ensuring compliance, reliability, and security of preservation is defined by international standards:

- ISO 14721 (OAIS reference model),
- ISO 16363 (audit of trustworthy repositories),
- ISO/IEC 27001 and ISO/IEC 27002 (information risk management), and
- ISO/TR 18128 (risk assessment for records management).

The latter specifically highlights political factors as external sources of risk that can affect long-term preservation through legislative changes, strategic priorities, and institutional instability.

Together, these initiatives confirm the need for an integrated approach, where legislation, strategic policies and international standards are aligned in resilient archival policies that enable effective responses to changes in the legal and political environment (RQ<sub>5</sub>).

### **3. DIGITAL RECORDS AND THE BASIC REQUIREMENTS FOR LONG-TERM DIGITAL PRESERVATION**

A digital record is a structured unit of data in digital form, created or received as evidence of business or legal activity (ISO 15489-1:2016). It includes content and metadata that establish its business, legal, and informational context, as defined in Sections 5.2.2 and 5.2.3 of ISO 15489-1:2016. Its value derives from this connection to the context of creation, which gives the record legal, administrative, or informational weight (ISO 15489-1:2016, Clause 3.15; ISO/TR 18128:2024). This contextual linkage is emphasized both by ISO 15489-1, which defines a record as evidence and a tool for action, and by ISO/TR 18128, which highlights the importance of the political, legal, and organizational context as a key factor for the reliability of records over time in the framework of risk assessment.

In the Slovenian legal framework, the digital record falls under the broader concept of documentary material, as defined by the ZVDAGA (2014). The key requirements for managing digital records throughout their life cycle are represented by the DUCAT principles, which serve as the fundamental criteria for assessing the legal compliance and functionality of archival information systems. The implementation of these principles goes beyond technical solutions, as it requires alignment among legal regulations, technical standards, and management practices.

These principles are operationalized in practice through PETZ (2020), which defines the minimum requirements regarding file formats, metadata structures, security measures, system maintenance, and information management for preservation. PETZ establishes a direct connection between the legal framework and technological solutions and enables the execution of the archival function in the digital environment of the public sector.

Digital records thus form the core of the archival function in the digital realm, and their long-term preservation depends on the coordinated functioning of legal, strategic, and technical mechanisms. A clear understanding of these requirements is essential for the establishment of stable and compliant archival solutions, forming the basis for an in-depth analysis of compliance factors in the following sections.

## 4. LEGAL AND INSTITUTIONAL FRAMEWORK FOR THE LONG-TERM PRESERVATION OF DIGITAL RECORDS

Reliable long-term preservation of digital records is based on a comprehensive legal framework that regulates the conditions for processing, protection, use, transfer, and preservation at all stages of their life cycle—from creation to archiving and access. This framework encompasses European and national regulations as well as strategic documents that influence archival practice in the digital environment.

### 4.1. EUROPEAN REGULATORY FRAMEWORK

At the EU level, the key documents are the General Data Protection Regulation (GDPR; Regulation (EU) 2016/679) and Regulation (EU) 2024/1183 on European Digital Identity (eIDAS 2).

The GDPR sets out principles for the lawful processing of personal data, of which Articles 5 (principles of processing), 17 (right to erasure), and 89 (special provisions for archiving in the public interest) are crucial for long-term preservation. The right to erasure, which contrasts with the principle of permanent preservation, poses a challenge for archival practice, although exceptions in the public interest are permitted.

The eIDAS 2<sup>3</sup> Regulation establishes a legal framework for trusted services such as electronic signatures, electronic time stamps, electronic delivery services, and digital identities. These elements are essential for ensuring the authenticity, integrity, traceability, and verifiability of digital records over time. The 2024 extension of the regulation additionally introduces the European Digital Wallet and enables cross-border identification and authentication of individuals and legal entities—an important development for public archives and other institutions that manage sensitive data and preserve digital documents in the long term. eIDAS 2 thus contributes to secure electronic information exchange, builds trust in the digital environment, and enhances the interoperability of archival information systems across the EU.

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3 Regulation (EU) 2024/1183 of the European Parliament and of the Council of 11 April 2024 on a framework for a European Digital Identity (revised eIDAS Regulation 2) extends the scope of the original eIDAS Regulation (910/2014) and lays down rules on electronic identification, authentication, and trust services relevant for cross-border use in the EU (Regulation (EU) 2024/1183, 2024).

The European legal framework thereby establishes fundamental standards that national archival practices must consider ensuring compliance in long-term preservation—further examined in the following chapter.

#### **4.2. THE IMPACT OF THE SLOVENIAN LEGAL FRAMEWORK ON THE IMPLEMENTATION OF THE ARCHIVAL FUNCTION**

Slovenian legislation sets out key obligations and limitations for public archival solutions. The central piece of legislation, the Act on the Protection of Documentary and Archival Materials and Archives (ZVDAGA, 2014), defines the conditions for managing documentary and archival materials, where the fundamental DUCAT principles (Articles 3–6) serve as a benchmark for legal and functional compliance. Although the law applies to both physical and digital records, its provisions are often rooted in the logic of physical storage and are not fully adapted to the digital environment.

An example is Article 42 of ZVDAGA, which prohibits the permanent export of archival material and makes temporary export conditional upon the minister's consent—this originates from physical handling practices but is also applied to digital records in practice. The Decree on the Protection of Documentary and Archival Material (UVDAG, 2017) further restricts the storage of digital records in public cloud services, which limits cross-border cooperation and raises questions of digital sovereignty. Specifically, Article 44 of UVDAG prohibits the use of cloud services by public entities and their providers of digital storage (service providers), even when the solutions are within the EU.

The Information Security Act (ZInfV, 2025) complements the archival framework from the perspective of technical protection of information systems. It requires entities to implement cybersecurity measures, risk management, and ensure system resilience, which also applies to archival solutions.

The Personal Data Protection Act (ZVOP-2, 2022), together with GDPR (Regulation (EU) 2016/679), influences access to digital records, emphasizing the need to reconcile the principle of long-term preservation with the right to erasure (GDPR, 2016, Article 17). Although the law allows exceptions in the public interest (GDPR, 2016, Article 89), there is often a lack of operational guidance for archives on how to implement this in practice.

In practice, several concrete issues reveal gaps in the existing legal framework:

- Outdated concepts, such as treating digital materials by analogy with physical ones (ZVDAGA, 2014, Article 42).
- Restrictions on cross-border digital preservation that are not aligned with the development of cloud architectures.
- Direct legal prohibition of cloud services for storage (UVDAG, 2017, Article 44).
- Lack of guidance for implementing GDPR provisions in the archival context (Articles 17 and 89).

To improve legal clarity and operational effectiveness, it would be necessary to:

- develop supplementary professional guidelines based on international standards (e.g., ISO 14721, ISO 16363, ISO/TR 18128),
- and update legislation with provisions addressing the challenges of the digital environment, cybersecurity, and cross-border interoperability.

## **5. POLITICAL AND STRATEGIC INFLUENCES ON THE LONG-TERM PRESERVATION OF DIGITAL RECORDS**

### **5.1. INTRODUCTION TO THE RELATIONSHIP BETWEEN POLITICS AND ARCHIVAL PRACTICE**

Although archival policy is fundamentally a professional domain, archives—due to their role in safeguarding collective memory—often find themselves at the center of political debates. In transitional societies, where the past continues to influence the current social order, archives become symbolic arenas of political conflict. Issues such as the right of access, personal data protection, the confidentiality of certain information, and historical research frequently go beyond technical discussions and enter the realm of political decision-making.

In addition to professional tasks such as appraisal, selection of formats, and metadata description, archives are also subject to political influences manifested through funding, staffing appointments, and the determination of access embargo periods. Standard ISO/TR 18128:2024 (section 4.2.3) explicitly highlights political and legislative factors as one of the key categories of external risks that can undermine the reliability and sustainability of long-term digital preservation systems (ISO, 2024).

## 5.2. INTERNATIONAL AND EUROPEAN GUIDELINES

The FAIR principles, originally developed within the scientific community, are increasingly influencing archival practice, as they offer a conceptual framework for ensuring the accessibility, interoperability, and reusability of archival material. Their implementation goes beyond the technical domain, contributing to greater transparency and sustainable management of digital records, in line with the goals of open science and digital sovereignty (Wilkinson et al., 2016; EOSC Association, 2024).

Within this context, European initiatives and strategic documents play a key role, including the Digital Europe Programme, the European Open Science Cloud (EOSC) initiative, and national digital strategies such as Digital Slovenia 2030, which emphasize the development of digital competencies, openness of public services, data security, and cross-border connectivity (Ministry for Digital Transformation, 2022; European Commission, 2023; EOSC Association, 2024).

International standards such as ISO/TR 18128, ISO 14721, and ISO/IEC 27001 provide a crucial normative framework for ensuring long-term accessibility, security, and compliance of archival solutions. ISO/TR 18128 warns that political instability, lack of resources, and fragmented responsibilities constitute systemic risks for the long-term preservation of digital records (ISO, 2024a). The inclusion of archival institutions in European initiatives, particularly participation in CEF eArchiving (where the DLM Forum develops open interoperable specifications), and alignment with international standards contribute to greater interoperability, reliability, and security of archival systems (European Commission, n.d.; DLM Forum, n.d.).

## 5.3. INSTITUTIONAL POLICIES AND GOVERNANCE

Internal policies of institutions, particularly in the public sector, significantly affect the establishment and maintenance of long-term digital preservation. Strategic documents—such as digital transformation policies, IT strategies, and information security policies—define objectives, priorities, and budgetary constraints for managing digital records. The alignment of these documents with standards such as ISO/IEC 27001 and ISO/IEC 27002 is essential for risk management and ensuring the stable operation of archival systems (ISO/IEC, 2022a; ISO/IEC, 2022b).

Distinguishing between strategic and operational policies enables more effective management—strategic policies guide long-term transformations (e.g., digital transformation, transition to e-government), while operational ones define specific procedures for day-to-day work (e.g., data backup, access management, email archiving). The absence of aligned operational rules can lead to fragmented preservation practices and reduce system resilience.

Challenges arise in research and educational institutions, where internal policies must comply with principles of open science, digital preservation, and open access. It is also important to consider factors such as political shifts, organizational changes, and budgetary pressures, which can impact the continuity and support for digital preservation (ISO, 2024a).

Key to the sustainability of the archival function are clearly defined responsibilities, ongoing staff training, and long-term stable funding—all of which should be reflected in both strategic and operational institutional policies.

Effective institutional policies also require clearly defined responsibilities, continuous professional development for staff, and secured long-term funding, which together form one of the key conditions for the long-term sustainability of the archival function.

#### **5.4. THE ROLE OF THE STATE, STRATEGIC DIRECTIONS, AND STAKEHOLDERS**

The establishment of trusted digital preservation largely depends on national strategic directions, the legislative framework, and the provision of stable institutional conditions. The state plays a multi-layered role—as a regulator, funder, and policy implementer—which directly affects the execution of digitization and long-term preservation projects.

National digital transformation strategies, IT policies, and public tenders guide the development of digital preservation by setting standards and choosing technological solutions. Transparency in resource allocation, the inclusion of the professional public, and effective monitoring of policy implementation are key conditions for enforcing consistent and stable preservation practices.

External stakeholders—IT service providers, research organizations, and the non-governmental sector—also have a significant impact, as they co-shape tech-

nological and legal directions by participating in working groups and advisory bodies. This dispersion of responsibilities requires a comprehensive and inclusive national strategy for long-term digital preservation.

Standard ISO/TR 18128:2024 warns that the resilience of archival systems is influenced by political conditions, institutional responsibilities, and the availability of resources (ISO, 2024a). Despite the existence of strategic documents such as Digital Slovenia 2030 (Ministry for Digital Transformation, 2022) and the Resolution on the National Programme for Culture 2024–2031 (2024), archival activity remains substantively and strategically neglected in national digital policies.

An analysis of the annual reports of the Archives of the Republic of Slovenia (2022; 2023; 2024) confirms that the capacities for implementing the archival function are often limited. In the period 2022–2024, discrepancies arise between plans and execution, especially regarding the issuance of technical guidance and staff development in the field of digital preservation and IT. Even plans for digitization and the development of the Virtual Archival Reading Room (VAC<sup>4</sup>) often exceed the actual capabilities of the archive, as adequate expansion of staff and infrastructure development funding is not ensured.

Poor strategic positioning of the archival function, lack of operational support, and understaffing together contribute to its systemic vulnerability, especially in times of political or financial fluctuations.

## 5.5. POLITICAL INFLUENCE ON ARCHIVAL LEGISLATION

Standard ISO/TR 18128:2024 in section 4.2.3 warns of external risks related to political, legislative, and regulatory influences on long-term preservation systems. Political decisions can affect the management, preservation, or access to digital records, with risks often arising in the form of legislative instability, short-term interests, and institutional uncertainty.

The Slovenian experience of two referendums on the amendment of Article 65 of ZVDAGA (2006 and 2014) illustrates the direct influence of politics on archi-

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4 The Virtual Archival Reading Room (VAC<sup>4</sup>) is a web-based application designed for searching, viewing, and accessing digitised and born-digital archival records preserved by public archives. It represents a key user interface of the Slovenian public electronic archive *e-ARH.si*, enabling remote access to archival materials and thus contributing significantly to the transparency and openness of archival activities. VAC<sup>4</sup> is the result of years of development and collaboration within the Slovenian Public Archival Service (SJAS). Its further development and availability are closely linked to stable funding, as well as to the digital competencies and capacities of archival staff.

val legislation. Although this is a technically demanding field, political debates placed the archival profession at the center of ideological disputes, where professional assessments were often overshadowed by symbolic and political meanings related to access to archival records.

A comparison of Articles 65–68 of ZVDAGA between 2006 and 2014 reveals greater normative precision and formalization of procedures, especially in defining the conditions for access to archival records. A 2014 addition, Article 66.a, for the first time specifies the possibility of exceptionally extending access restriction periods, whereby public legal entities can propose continued closure even after the standard deadlines have passed. Before a decision is made, the *archival commission*<sup>5</sup> must provide a professional opinion, but the final judgment remains under the jurisdiction of the Government of the Republic of Slovenia. Despite built-in professional mechanisms, this process allows political factors to influence the accessibility of archival information.

A less publicized but significant consequence of political decisions is the amendment to Article 40 of ZVDAGA. The 2006 version stipulated that web publications, internal documents, and publications of public legal entities were also considered archival material, whereas the 2014 amendment softened this requirement. Now, such materials may be considered archival material, which means they are no longer automatically subject to mandatory preservation. This has increased the importance of archival value assessments conducted by authorized archivists—often based on inconsistent information provided by the creators. This raises the risk of selective enforcement of obligations and the loss of important digital content.

An important reference framework is also provided by standard ISO 16363:2012, which, among the criteria for trustworthy *digital repositories*<sup>6</sup>, emphasizes the need for:

- stable funding sources (section 3.1.1.3),

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5 The Archival Commission is a professional and advisory body composed of representatives from the Archives of the Republic of Slovenia, research organisations, records creators, and non-governmental organisations in the field of human rights. In accordance with Article 66.a of the Public Archival Service Act (ZVDAGA), its task is to issue opinions on proposals to extend access restriction periods, while the final decision is made by the Government of the Republic of Slovenia (ZVDAGA, 2014).

6 A *digital repository* is an information system designed for the long-term preservation, management, and access to digital data and records. Such repositories play a key role in ensuring the durability, integrity, and accessibility of digital content over time, particularly in the context of institutional memory, research data preservation, and archival functions. They are essential for implementing strategies aligned with FAIR principles and standards for trustworthy digital repositories (e.g., ISO 16363:2012).

- clearly defined institutional mission and operational independence (sections 3.1.1.1 and 3.1.1.2), and
- systematic risk management, including political influences (section 3.1.2.2).

The Slovenian example demonstrates the vulnerability of these conditions, as the archival function is not structured as a stable, strategically protected public service, but remains dependent on current political priorities and fluctuations in funding.

## 6. FINDINGS, HYPOTHESES VERIFICATION, AND CONTRIBUTION OF THE RESEARCH

### 6.1. FINDINGS AND HYPOTHESES VERIFICATION

The results of the research confirm that the long-term preservation of digital records and the establishment of trustworthy archival systems depend on a combination of legal regulation, political decisions, and the application of internationally recognized standards. This chapter synthesizes the findings regarding the influence of legislation, strategic orientations, and the use of international standards, while answering the research questions (RQ<sub>1</sub>–RQ<sub>5</sub>) and testing the hypotheses (H<sub>1</sub>–H<sub>3</sub>).

**RQ<sub>1</sub>:** The legal framework (ZVDAGA, ZVOP-2, ZInfV, GDPR) defines the fundamental obligations of public institutions in relation to the capture, storage, and access to digital records. Particularly, the amendments to Articles 40 and 65 of ZVDAGA demonstrate that legislation not only defines deadlines and access criteria but also transfers part of the responsibility for value assessment to the creators, which entails operational and implementation consequences.

**H<sub>1</sub> is confirmed** – *the legal framework has a decisive influence on archival practice.*

**RQ<sub>2</sub>:** Despite the inclusion of the archival function in national strategies (e.g., Digital Slovenia 2030), it remains subordinate to broader administrative priorities. There is a lack of targeted funding, increasing the vulnerability of long-term preservation. The institutional dependency of archives on budgetary and political decisions means their capacity is often unpredictable.

**H<sub>2</sub> is confirmed** – *political orientations influence the development of archival infrastructure.*

**RQ<sub>3</sub>:** Political influences are evident in the referendum practices and legislative changes (2011, 2014), where access to archival records became part of a broader

ideological conflict. The amendments to Articles 65–68 of ZVDAGA, especially the introduction of Article 66.a, allow for exceptions to access, where the executive branch plays a key role.

***H<sub>3</sub> is partially confirmed** – political influences are systemically present, although formal safeguards exist.*

**RQ<sub>4</sub>:** Standards (ISO/TR 18128, ISO 27001/27002, ISO 16363) enable structured risk management and reliability assurance of archival systems. However, in the Slovenian context, their application often remains at a declarative level, without systematic implementation. The example of standard ISO 16363 highlights the need for stable funding, institutional independence, and formalization of responsibilities – conditions that are not fully met.

***H<sub>3</sub> is partially confirmed** – international standards have high practical value, offering structured approaches to risk management and ensuring long-term preservation, but their practical enforcement in Slovenia is limited, reducing their actual impact.*

**RQ<sub>5</sub>:** The key barriers include legal inconsistency, political instability, unstable and insufficient funding, lack of operationally aligned internal policies, and staffing shortages in the area of digital preservation.

Improvement opportunities include strengthening the institutional independence of archival authorities, ensuring long-term budgetary stability, incorporating international standards into national legislation and strategic documents, consistent implementation of FAIR and DUCAT principles in digital records management, and the development of cross-border cooperation and standardized mechanisms to ensure compliance and interoperability.

## **6.2. CONTRIBUTION OF THE RESEARCH AND RECOMMENDATIONS**

The conducted analysis contributes to the scientific and professional understanding of the political and legal factors affecting long-term digital preservation, which has not yet been systematically addressed in the Slovenian context. The research offers an integrated connection between the legal framework, political context, and the application of international standards for risk management. It emphasizes that the long-term sustainability of the archival function is based on professional independence, stable funding, normative clarity, and strategic alignment.

Based on the findings, we offer several recommendations to:

- *legislators*: ensure greater legal predictability and involve the archival profession in legislative processes; long-term funding of archival infrastructure is crucial.
- *institutions and archival system managers*: we recommend the implementation of standards ISO 16363, ISO/TR 18128, and ISO/IEC 27001, strengthening internal policies and staff training.
- *decision-makers in the public sector*: include the archival function in key strategic documents of digital transformation and ensure interdepartmental cooperation.
- *the research community*: further research into the effects of political (in) stability, comparative analysis of practices in the EU, and the development of methodologies for risk assessment in the archival context is encouraged.

These conclusions serve as a professionally substantiated basis for further strengthening institutional capacities in the field of long-term digital preservation and the reliability of archival systems.

## 7. RECOMMENDATIONS FOR FUTURE RESEARCH

The results of the research open several important directions for further scientific work. One key opportunity is a longitudinal analysis<sup>7</sup> of the impact of political changes on archival legislation and practice in different EU countries, with an emphasis on comparing institutional responses and the effectiveness of safeguard mechanisms. It would also be meaningful to deepen research on the actual effectiveness of the implementation of international standards in archival environments—both at the institutional level and in terms of technical requirements (e.g., interoperability and repository stability).

An additional research challenge lies in exploring the connections between the principles of open science, archival accessibility, and the protection of sensitive information, where conflicts of interest often arise. Special attention should be given to the impact of funding and human resource capacities on the long-term sustainability of archival solutions, as well as the role of artificial intelligence in automating the processes of selection, appraisal, and preservation of digital records.

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7 A *longitudinal analysis* of the impact of political changes on archival legislation and practice in different EU countries refers to a comparative, time-based study that examines how archival laws and practices evolve under the influence of political decisions. Such an analysis reveals long-term trends, the stability or instability of legislation, and enables the identification of patterns and differences between countries.

## REFERENCES

- Arhiv Republike Slovenije. (2022). *Poročilo o delu Arhiva Republike Slovenije za leto 2022* [Report on the work of the Archives of the Republic of Slovenia for 2022] [Electronic resource]. Ljubljana: Arhiv Republike Slovenije. Retrieved at <https://www.gov.si/assets/organivsestavi/ArhivRS/Zakonodaja/KIJZ/LetnoporociloArhivaRS2022.pdf> (accessed 8. 6. 2025) (*in Slovenian only*).
- Arhiv Republike Slovenije. (2023). *Letno poročilo za leto 2023* [Annual report for 2023] [Electronic resource]. Ljubljana: Arhiv Republike Slovenije. Retrieved at [https://www.gov.si/assets/organivsestavi/ArhivRS/Zakonodaja/KIJZ/PorociloARS2023\\_ver\\_1.0\\_P.pdf](https://www.gov.si/assets/organivsestavi/ArhivRS/Zakonodaja/KIJZ/PorociloARS2023_ver_1.0_P.pdf) (accessed 8. 6. 2025) (*in Slovenian only*).
- Arhiv Republike Slovenije. (2024). *Poročilo o delu Arhiva Republike Slovenije za leto 2024* [Report on the work of the Archives of the Republic of Slovenia for 2024] [Electronic resource]. Ljubljana: Arhiv Republike Slovenije. Retrieved at [https://www.gov.si/assets/organivsestavi/ArhivRS/Zakonodaja/KIJZ/PorociloARS2024\\_ver\\_1.0\\_P.pdf](https://www.gov.si/assets/organivsestavi/ArhivRS/Zakonodaja/KIJZ/PorociloARS2024_ver_1.0_P.pdf) (accessed 8. 6. 2025) (*in Slovenian only*).
- Conway, P. (2010). Preservation in the age of Google: Digitization, digital preservation, and dilemmas. *The Library Quarterly*, 80(1), 61–79. Retrieved at <https://doi.org/10.1086/648463> (accessed 14. 6. 2025).
- DLM Forum. (2022). *eArchiving Building Block and the DLM Forum*. Retrieved at <https://www.dlmforum.eu/index.php/earchiving/> (accessed 15. 6. 2025).
- DLM Forum. (n.d.). *Updates: DLM Forum in EARK4ALLconsortium*. Retrieved at <https://www.dlmforum.eu/index.php/updates-feed/17-updates/108-dlm-forum-is-the-partner-in-eark4all-consortium> (accessed 15. 6. 2025).
- EOSC Association Long-Term Data Preservation Task Force. (21. 3. 2024). *LTDP TF Final Report & Recommendations*. EOSC Association. Retrieved at <https://doi.org/10.5281/zenodo.10820893> (accessed 14. 6. 2025).
- European Commission. (2023). Digital Europe Programme Work Programme 2023–2024. Retrieved at <https://digital-strategy.ec.europa.eu/en/activities/work-programmes-digital> (accessed 17. 5. 2025).
- European Commission. (n.d.). *CEF eArchiving Building Block*. Retrieved at <https://digital-strategy.ec.europa.eu/en/activities/earchiving> (accessed 14. 6. 2025).

- European Commission. (s. d.). *eArchiving Initiative*. Retrieved at <https://digital-strategy.ec.europa.eu/en/activities/earchiving> (accessed 14. 6. 2025).
- International Organization for Standardization (ISO). (2012). *ISO 14721:2012 – Space data and information transfer systems – Open archival information system (OAIS) – Reference mode*.
- International Organization for Standardization (ISO). (2012). *ISO 16363:2012 – Audit and certification of trustworthy digital repositories*.
- International Organization for Standardization (ISO). (2024a). *ISO/TR 18128:2024 – Information and documentation – Risk assessment for records processes and systems*.
- ISO/IEC. (2022a). *ISO/IEC 27001:2022 – Information security, cybersecurity and privacy protection – Information security management systems – Requirements*.
- ISO/IEC. (2022b). *ISO/IEC 27002:2022 – Information security, cybersecurity and privacy protection – Code of practice for information security controls*.
- Lavoie, B. (2014). *The Open Archival Information System (OAIS) Reference Model: Introductory Guide (2nd Edition)*. DPC Technology Watch Report 1402). Digital Preservation Coalition. Retrieved at <https://www.dpconline.org/docs/dpc-technology-watch-publications/technology-watch-reports-1/1359-dpctw14-02/file> (accessed 14. 6. 2025).
- Ministry for Digital Transformation. (2022). *Digitalna Slovenija 2030* [Digital Slovenia 2030]. Ljubljana: Ministrstvo za digitalno preobrazbo. Retrieved at <https://www.gov.si/zbirke/projekti-in-programi/digitalna-slovenija-2030/> (accessed 15. 6. 2025) (*in Slovenian only*).
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons regarding the processing of personal data and on the free movement of such data (GDPR). (2016). *Official Journal of the European Union*, L 119. Retrieved at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0679> (accessed 14. 6. 2025).
- Regulation (EU) 2024/1183 of the European Parliament and of the Council of 11 April 2024 on a framework for a European Digital Identity (eIDAS 2). (2024). *Official Journal of the European Union*, L 1183. Retrieved at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1183>

(accessed 14. 6. 2025).

Resolucija o nacionalnem programu za kulturo [Resolution on the National Programme for Culture] 2024–2031. (2024). *Official Gazette of the Republic of Slovenia*, (61/2024). Retrieved at <https://pisrs.si/pregledPredpisa?id=RE-SO158> (accessed 7. 6. 2025). (in Slovenian only).

Rules on the uniform technological requirements for the capture and storage of records in digital form – PETZ. (2020). *Official Gazette of the Republic of Slovenia*, (118/20).

Uredba o varstvu dokumentarnega in arhivskega gradiva (UVDAG) [Decree on the Protection of Documentary and Archival Materials]. (2017). *Official Gazette of the Republic of Slovenia*, (66/17). Retrieved at <https://www.uradni-list.si/1/objava.jsp?sop=2017-01-2553> (accessed 7. 6. 2025) (in Slovenian only).

Wilkinson, M. D., et al. (15. 3. 2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, 3, 160018. Retrieved at <https://doi.org/10.1038/sdata.2016.18> (accessed 17. 5. 2025).

Zakon o informacijski varnosti (ZInfV) [Information Security Act]. (2025). *Official Gazette of the Republic of Slovenia*, (38/25). Retrieved at <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2025-01-1234> (accessed 19. 6. 2025) (in Slovenian only).

Zakon o varstvu dokumentarnega in arhivskega gradiva ter arhivih (ZVDAGA) [Protection of Documentary and Archival Materials and Archives Act]. (2006). *Official Gazette of the Republic of Slovenia*, (30/2006). Retrieved at <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2006-01-1229> (accessed 7. 6. 2025) (in Slovenian only).

Zakon o varstvu dokumentarnega in arhivskega gradiva ter arhivih (ZVDAGA) [Protection of Documentary and Archival Materials and Archives Act]. (2014). *Official Gazette of the Republic of Slovenia*, (30/06, 51/14). Retrieved at <https://www.uradni-list.si/1/content?id=117173> (accessed 7. 6. 2025) (in Slovenian only).

Zakon o varstvu osebnih podatkov (ZVOP-2) [Personal Data Protection Act]. (2022). *Official Gazette of the Republic of Slovenia*, (163/22). Retrieved at <https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2022-01-3957> (accessed 11. 5. 2025) (in Slovenian only).