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Utilizing ArchivesSpace for Data Archiving

A Case Study of the Digital Archive for Ethnological and Anthropological Resources at the Institute of Ethnology and Anthropology

Abstract

The purpose of this paper is to present and promote the positive experiences of the Institute of Ethnology and Anthropology in utilizing *ArchivesSpace* – an open-source web-based database management application that facilitates access, description, and arrangement of processed materials, including analog, hybrid, and newly created digital content. These materials are effectively represented through a public user interface and can be used across the domains of library, archival, and museum work. By focusing on the implementation and use of *ArchivesSpace* within the institute, this study underscores its potential as a sustainable solution for heritage institutions that seek to manage, preserve, and present their cultural resources in an efficient and accessible manner. The paper highlights the software's advantages, such as its open-source nature, adaptability, and capacity to handle various forms of materials, emphasizing its contribution to enhancing the visibility of cultural heritage and improving its accessibility for diverse audiences. Furthermore, this research reflects on the benefits of using *ArchivesSpace* in contexts that face financial and infrastructural limitations, illustrating how it can empower institutions with limited resources to digitize and preserve their collections while ensuring they remain publicly accessible. The paper concludes by encouraging other institutions, especially those in countries with emerging digital preservation strategies, to explore the potential of *ArchivesSpace* to support their archival and cultural heritage management needs.

Keywords: ArchivesSpace, digital cultural heritage, archiving, Institute of Ethnology and Anthropology, North Macedonia

Introduction

The digitisation of cultural heritage has emerged as a transformative strategy in the fields of heritage preservation, documentation, and public engagement. As the fragility of tangible and intangible cultural resources becomes increasingly evident – due to natural degradation, political instability, climate change,



and technological obsolescence – institutions around the world are turning to digital methods to safeguard and revitalize cultural memory.¹

At its core, cultural heritage digitisation involves converting physical or analog cultural materials – such as manuscripts, artifacts, audiovisual recordings, and oral histories – into digital formats that can be stored, managed, and disseminated. This process is not purely technical; it requires the integration of strategic planning, ethical considerations, and interdisciplinary collaboration.² Key strategies focus on prioritising collections, implementing metadata standards such as CIDOC CRM, ensuring long-term digital preservation, and designing accessible platforms for education and research.³

In the contemporary digital landscape, strategies for the protection and presentation of cultural heritage must address a wide array of challenges. These include technological limitations, institutional capacity, copyright and data sovereignty issues, and the need for cultural sensitivity and community involvement.⁴ Moreover, the use of open-source software and collaborative digital infrastructures is playing a crucial role in enabling smaller institutions – especially in the Global South and post-socialist regions – to participate in global heritage dialogues.⁵

Global and European Practices in Heritage Digitization: The Role of Digital Heritage in Contemporary Preservation Efforts

In recent decades, the concept of heritage preservation has expanded to include not only traditional forms – such as movable, immovable, and intangible heritage – but also digital heritage. This shift has become particularly important with the proliferation of digital technologies and their widespread application in preserving and sharing cultural and scientific knowledge. Digital heritage encompasses a wide array of human expression and knowledge, including texts, databases, images, audio, and more, whether created digitally or converted from existing analog resources. According to the Charter on the Preservation of Digital Heritage, digital heritage has been recognized as a form of common heritage of humankind, with profound implications for cultural identity, scientific research, and societal development.⁶

¹ Wagner 2023: 1915–1923; Khan et al. 2018: 3; Evens–Hauttekeete 2011: 158.

² Gervasi et al. 2022: 402; Bruseker 2017: 95.

³ Jansen 2023: 2183; Cohen–Rosenzweig 2005: 24; Portalés et al. 2018: 60.

⁴ Klinowski–Szafarowicz 2023.

⁵ Pandey–Kumar 2020: 71.

⁶ UNESCO 2003: Article 1; Adane 2019: 1; Arora 2009: 83.

Digital heritage, as defined in Article 1 of the Charter, is comprised of resources such as cultural, educational, scientific, and administrative materials, as well as legal, medical, and other forms of information created or converted into digital form. In particular, “born-digital” materials – those created in digital formats from the outset – are central to the discussion of digital heritage. These materials, which can include websites, digital archives, software, and multimedia content, are often ephemeral and thus require careful preservation efforts. The Charter underscores the importance of maintaining such resources for both current and future generations, as they contain enduring value and significance across various domains of human knowledge and expression.⁷

One of the key challenges highlighted by the Charter is the preservation of digital heritage in the face of rapid technological obsolescence. With the constant evolution of hardware, software, and digital formats, there is a significant risk of losing access to valuable digital materials if not properly managed.⁸ This issue underscores the need for systematic preservation strategies and policies, as outlined in Article 5, which stresses the importance of designing reliable systems to produce stable and authentic digital objects. To address these challenges, the Charter calls for the development of legal, technical, and organizational frameworks at the national and international levels to safeguard digital heritage against potential threats, including unauthorized alterations and data loss.⁹

Furthermore, the preservation of digital heritage is recognized as a global effort, requiring collaboration between governments, international organizations, and other stakeholders. Article 10 of the Charter assigns roles and responsibilities to various actors, calling for cooperation among developers, creators, and heritage institutions to ensure the long-term sustainability of digital heritage. This includes fostering partnerships, training programs, and research initiatives that can enhance the collective capacity for digital preservation.¹⁰

The European Union has been at the forefront of digitization initiatives, particularly in the field of cultural heritage. The EU's efforts have been shaped by various policy documents, including the eEurope action plan and the Lund Principles, both of which emphasize the role of digitization in enhancing access to Europe's cultural heritage and promoting cultural diversity.¹¹ The Lund Principles, established in 2001, advocated for coordinated national efforts to digitize cultural and scientific heritage, highlighting the

⁷ UNESCO 2003.

⁸ UNESCO 2003: Article 3.

⁹ UNESCO 2003: Articles 6–8.

¹⁰ UNESCO 2003: Article 10.

¹¹ European Commission 2001.

potential for digital technologies to facilitate broad dissemination of heritage materials.¹² These principles underscored the importance of ensuring long-term access to digital documents and materials, a goal that would later be formalized in the EU's MINERVA and MINERVA Plus projects.¹³

Since then, the European Commission has continued to prioritize digital heritage preservation, with significant efforts culminating in the creation of EUROPEANA, the European digital library, archive, and museum. Launched in 2008, EUROPEANA provides access to millions of digital objects from European institutions, enabling users to explore a diverse array of cultural heritage materials online.¹⁴ EUROPEANA serves as a key example of the EU's commitment to optimizing the cultural and economic potential of Europe's heritage, promoting not only access but also the preservation of invaluable cultural assets.¹⁵

Despite these advancements, the EU's efforts to digitize and preserve cultural heritage have faced challenges related to consistency and coordination across member states. In 2006, the European Commission issued a recommendation calling on member states to optimize the online accessibility of Europe's cultural heritage, recognizing the potential for digital technologies to support education, research, and the creative industries.¹⁶ However, the Commission's assessment in 2010 revealed that the implementation of digitization strategies varied significantly across countries, with some member states making considerable progress while others lagged behind.

In response to these challenges, the Commission has advocated for increased cooperation at the European and national levels to maximize the effectiveness of digitization efforts. The MINERVA and MINERVA Plus projects have been central to these efforts, helping to establish a unified network for digitization and ensuring that heritage materials are digitized efficiently and made accessible online to users worldwide. By preventing the unnecessary duplication of digitization efforts, these initiatives have saved resources and increased the accessibility of digital heritage materials across Europe.

The growing emphasis on digital heritage preservation is not confined to Europe alone. Globally, institutions and governments have recognized the need for robust strategies to safeguard digital materials, especially given the increasing volume of digital content created daily. For example, UNESCO's commitment to preserving digital heritage extends beyond policy frameworks

¹² The Lund Principles 2001.

¹³ European Commission 2011.

¹⁴ European Commission 2011.

¹⁵ <https://www.europeana.eu/> – 17. 01. 2025.

¹⁶ European Commission 2006.

to include active engagement with international organizations, educational institutions, and the private sector.¹⁷ This broad, collaborative approach is essential for addressing the challenges posed by the rapid evolution of digital technologies and ensuring the longevity and accessibility of digital heritage for future generations.

North Macedonia and the Digitalization of Cultural Heritage

The established European strategy has contributed to the swift implementation of procedures by member states, not only in the creation of national policies but also in the practical approaches to their cultural heritage. Thus, the extent to which digitalization and the publication of heritage collections online are implemented „*can be seen as a primary indicator of an organization's ability to innovate in creating new information services for heritage, expand public reach, or add new value to the collections.*”¹⁸

As a candidate country for the European Union since 2005, North Macedonia continues to regulate its cultural policies according to the Law on Culture, passed in 1998, which has undergone 16 amendments and supplements over the years. In the consolidated, unofficial, revised version published on the Ministry of Culture's website (<https://kultura.gov.mk/zakoni/>), the term „digitalization” is mentioned only once. In Article 61, regarding the adoption of the annual plan for achieving the national interest in culture, paragraph 3 specifies „*the digitalization of cultural heritage and contemporary artistic creation*” as one of the general guidelines.¹⁹ Similarly, the Law on the Protection of Cultural Heritage, which was enacted in 2004 and has undergone 16 amendments until 2023, also mentions digitalization only once. In Article 49, which concerns the National Strategy, paragraph 3 defines „*the goals and basic principles of protection and strategic decisions,*” where, alongside other issues, „*digitalization of cultural heritage*” is mentioned.²⁰ Despite this, North Macedonia still lacks a national strategy for the protection and utilization of cultural heritage, and the procedure for its adoption is ongoing.

The draft National Strategy for the Protection and Utilization of Cultural Heritage (2021–2025), which has yet to be adopted as of March 2023, outlines the results of analyses conducted in recent years, highlighting significant weaknesses in the protection and digitalization of cultural heritage. It particularly

¹⁷ UNESCO 2003.

¹⁸ Borowiecki 2017: 228.

¹⁹ Law on Culture 1998: Article 61.

²⁰ Law on the Protection of Cultural Heritage 2004: Article 49.

underscores the acute shortage of skilled personnel in the field of cultural heritage protection and outdated, inadequate technical and human resources across all national cultural institutions, hindering the application of modern technologies and the appropriate documentation and digitalization of cultural resources.²¹

As a result, North Macedonia lacks a national platform for the protection and management of cultural heritage. In institutions where attempts have been made to digitize cultural heritage, rudimentary forms of protection and management can be found, along with attempts to digitize segments of cultural heritage.

ArchivesSpace: A Software for Archiving Data – The Case of the Digital Archive for Ethnological and Anthropological Resources at the Institute of Ethnology and Anthropology

The Need for a Systematic Approach to Archiving and Digitization. Ethnography of Digitization

The digitization of ethnological and anthropological resources has become a central focus for cultural heritage organizations globally, but the challenges of ensuring that such collections are appropriately protected, organized, and accessible remain significant.²² Since its inception in the late 1990s, the Archive of ethnological, anthropological, and folklore materials in the Republic of North Macedonia faced the challenge of lacking a cohesive national strategy and platform for the management and digitization of archival materials. The absence of a systematic approach to archival practices, particularly in terms of the preservation and digitization of both analog and born-digital resources, hindered efforts to effectively manage these important cultural assets.²³

The lack of centralized and professional resources meant that the responsibility of digitizing these materials was placed primarily on the Institute of Ethnology and Anthropology (IEA), located at the Faculty of Natural Sciences and Mathematics. Without substantial institutional backing, early efforts were piecemeal and largely informal, driven by resourcefulness rather than formalized, large-scale support. Early attempts at developing a database through collaborations with the Institute of Informatics, although commendable, fell short of the institutional needs for efficient data management and retrieval.

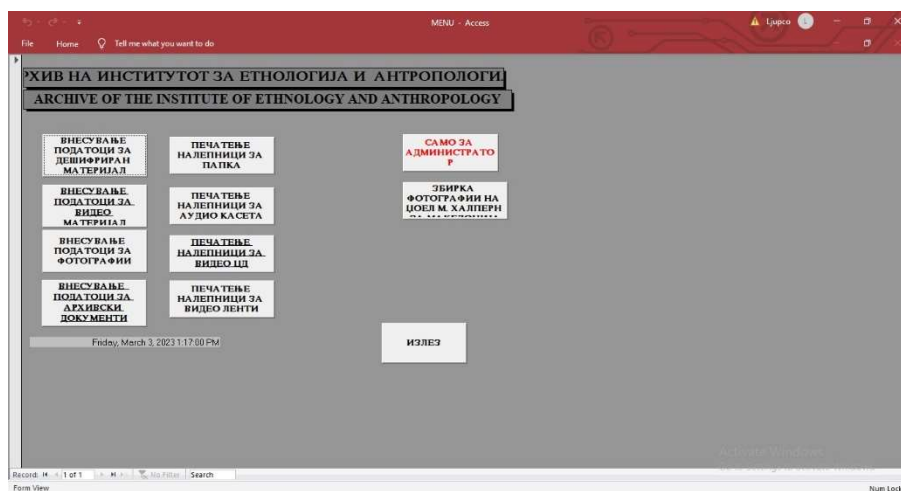
²¹ Draft National Strategy for the Protection and Use of Cultural Heritage 2022: 12–15.

²² UNESCO 2003: n.p.

²³ Cohen 2005; Bruseker 2017: 97; de Clippele 2023: 2070.

Early Solutions: Microsoft Access and the Limitations of Amateur Approaches

In the absence of institutional infrastructure and formalized support, the IEA turned to Microsoft Access, a database management system (DBMS) with a graphical user interface and programming tools, as a temporary solution to catalog ethnological and anthropological materials. Although Microsoft Access facilitated the entry, organization, and searchability of materials, it lacked essential features required for modern archival management, particularly in terms of web-based access.²⁴ The database management system, though functional for its time, was not designed for public access or the complex demands of modern archival systems. This limitation restricted the potential for wide dissemination of the digital archive and prevented its integration into larger, web-based platforms.

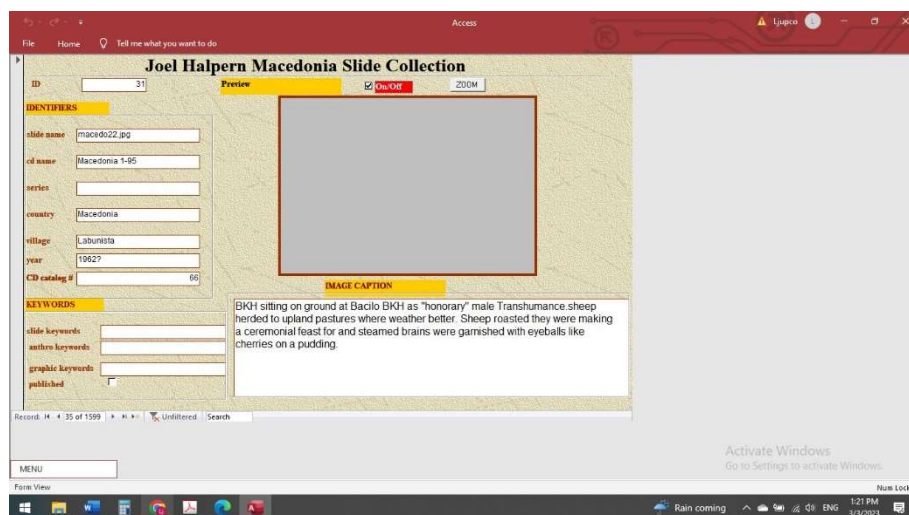


Pic. Nr. 1. *Interface of the initial data entry page for the Archive of the Institute of Ethnology and Anthropology, developed in Microsoft Access and used until 2015.*

The integration of digitized resources (such as digital photographs, audio, video, and transcriptions) with data stored in Access, while feasible, was inefficient and cumbersome. Over time, as the volume of archived materials grew, it became apparent that a more sophisticated and scalable solution was required

²⁴ Becker–Antunes–Barateiro–Vieira 2011: 9.

to address the ongoing needs for digital preservation, access, and dissemination.²⁵ Consequently, efforts began to seek more appropriate, sustainable software solutions.



Pic. Nr. 2. Interface displaying entered data for archived audiovisual (photographs and video) fieldwork material in the Archive of the Institute of Ethnology and Anthropology, developed in Microsoft Access and used until 2015.

The Discovery of ArchivesSpace: A Solution for Archival Management

In the search for a more suitable software system, *ArchivesSpace* emerged as a promising open-source solution. Designed as a web application for managing archival information, *ArchivesSpace* supports the core functions of archival administration, including the arrangement, description, and access to both analog and born-digital materials.²⁶ As a tool tailored for cultural heritage organizations, *ArchivesSpace* provides the necessary features for fostering access to historical records and primary sources, including robust archival processing capabilities and community support.

ArchivesSpace was born out of a collaborative effort in 2009, when major institutions such as New York University, the University of Illinois Urbana-Champaign, and the University of California San Diego joined forces with the Andrew W. Mellon Foundation. The aim was to integrate two pre-existing archival systems – Archivists' Toolkit and Archon – into a unified application

²⁵ Ross 2012: 110.

²⁶ ArchivesSpace 2023: n.p.

that would optimize functionality and ensure long-term sustainability.²⁷ With funding from the Mellon Foundation, *ArchivesSpace* was developed and launched in 2013, and by 2023, it had evolved to Version 3.3.1.²⁸

One of the defining characteristics of *ArchivesSpace* is its open-source nature, which makes it freely available to any institution without financial barriers. This is particularly crucial for institutions in low-budget or underfunded contexts, where access to expensive proprietary software may be a significant limitation. *ArchivesSpace* also offers flexible membership options for institutions of varying sizes, ranging from small archives to large academic repositories. This accessibility is integral to ensuring that cultural heritage organizations across the globe can adopt and implement digital preservation practices.²⁹

Challenges and Growth: ArchivesSpace at the Institute of Ethnology and Anthropology

At the IEA, *ArchivesSpace* was adopted in 2014 as part of the effort to digitize and organize ethnological and anthropological materials. However, the lack of formal institutional backing and funding meant that the implementation was entirely self-supported. A private individual was contracted to provide technical support, including the installation, maintenance, and data backup services required to ensure the system's smooth operation. Despite the lack of formal membership or access to full technical documentation from the *ArchivesSpace* community, the system was operational by 2014, providing a platform for archiving and managing the institute's growing collection of digital and analog materials.

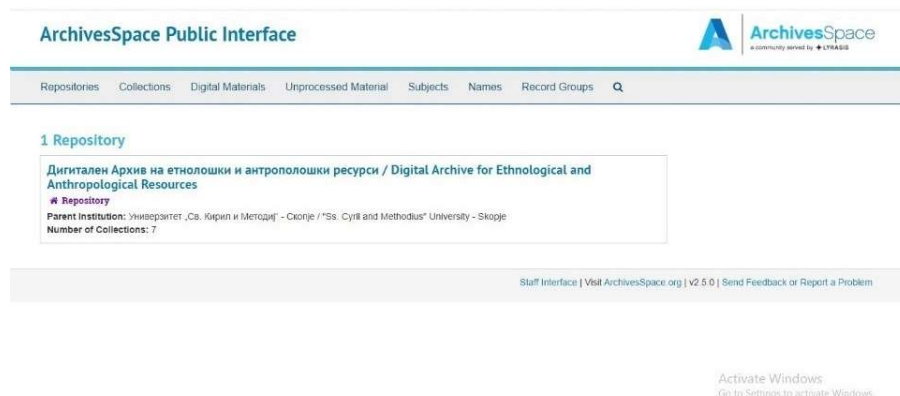
In 2015, the archive suffered a significant setback when a server and software crash rendered the system temporarily unusable, halting data entry. Although the search functionality for previously entered materials remained intact, the inability to add new materials necessitated the creation of a new version of the repository in 2016. Despite these challenges, the ongoing use of *ArchivesSpace* demonstrated the software's potential to manage archival data, although it also underscored the importance of technical support and community engagement for troubleshooting and system upgrades.³⁰

²⁷ Tallman 2019: 55.

²⁸ ArchivesSpace 2023: n.p.

²⁹ Tibbo 2017: 145.

³⁰ Mehta 2019: 119.



Pic. Nr. 3. Public user interface of the ArchivesSpace application, based on the repository model of the Digital Archive for Ethnological and Anthropological Resources (DAEAR), in use since 2015.

Thematic Structure and Scope of the Digital Archive of Ethnological and Anthropological Resources

The Digital Archive of Ethnological and Anthropological Resources at the Institute of Ethnology and Anthropology is systematically organized into several thematic collections that encompass a broad spectrum of ethnological and anthropological research conducted in North Macedonia. Each collection has been carefully curated to support scholarly inquiry, pedagogical engagement, and the long-term preservation of cultural knowledge.

- *Ethnological Collections with Material Subjects*

Comprising a total of 506 archival objects, this collection documents aspects of traditional material culture, with particular emphasis on folk costumes, tools, domestic artifacts, and agricultural implements.

- *Educative Ethnographic Collection of the IEA*

This collection includes 180 archival entries curated specifically to support educational and public outreach activities. It offers selected examples of ethnographic materials for use in academic and museum settings.

- *Ethnological Atlas of the Socialist Republic of Macedonia*

Holding 250 archival objects, this collection contributes to a visual and descriptive cartography of traditional cultural life, including religious practices, ritual customs, and social structures.

- *Manuscripts*

Comprising 258 archival units, this collection preserves original ethnographic field notes, unpublished research studies, and other textual materials produced by several Macedonian ethnologists and anthropologists over the course of long-term fieldwork.

- *Transcribed Field Materials*

With 295 archival records, this collection consists of transcriptions of oral histories, interviews, and ethnographic observations collected during field research across various regions of the country.

- *Photographs*

As the largest collection in the archive, encompassing 2,713 items, the photographic holdings document diverse aspects of both traditional and contemporary cultural life in North Macedonia. Notable sub-collections include the *Photo Collection of Prof. Joel Martin Halpern* (1954–1978) and the *Photo Collection of Prof. Krste Bogoeski*.

- *Video Materials*

This collection comprises 874 archival units and includes ethnographic recordings, interviews, and documentary or educational video materials capturing cultural practices and everyday life.

- *Printed Materials*

This segment of the archive contains digital copies of periodicals and monographs relevant to cultural history, ethnology, anthropology, and heritage studies, offering a significant textual resource for researchers.

- *Web Materials*

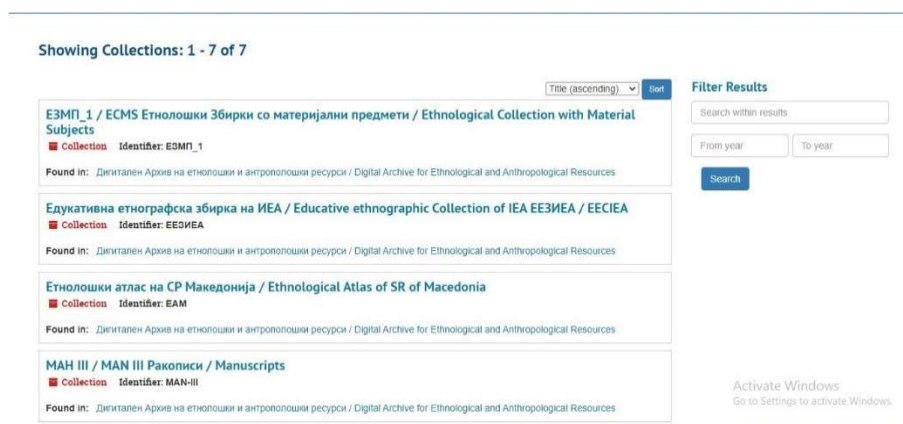
Archived on a weekly basis, this collection includes 15 online newspapers (daily, weekly, and monthly) published in North Macedonia, as well as the websites of cultural institutions and organizations.

Taken together, these thematic collections constitute a vital institutional repository for the preservation, documentation, and dissemination of ethnological and anthropological knowledge. The implementation of the *ArchivesSpace* software platform ensures a robust and standardized framework for archival description, discovery, and access. It supports professional archival practices, fosters transparency, and promotes the digital conservation of cultural heritage. This infrastructure significantly enhances the accessibility and scholarly value of the archive for researchers, students, and the broader public.

Fundamental Steps for Implementing the ArchivesSpace Web-Based Platform

In order to facilitate the operation of the *ArchivesSpace* web-based platform, it is essential to install the application on an appropriate server within an existing or rented hosting environment. The *ArchivesSpace* hosting service, provided by LYRISIS (<https://www.lyrasis.org/services/Pages/ArchivesSpace-Hosting.aspx>), offers a comprehensive technical and professional support system for the use of the software, with a service fee determined by the size of the repository to be managed.

The *ArchivesSpace* platform allows for the creation of multiple repositories, each of which operates independently from the others, meaning that different institutions can manage their own repositories within the same database and website. This capability provides significant flexibility, enabling multiple users to utilize a shared infrastructure while maintaining autonomy in their data management practices. The system offers two distinct user interfaces: a staff user interface, which is designed for personnel responsible for data entry, and a public user interface, which is intended for general users and is presented as a publicly accessible website.



Pic. Nr. 4. View of the resources section in the public user interface of the *ArchivesSpace* application, based on the repository model of the *Digital Archive for Ethnological and Anthropological Resources* (DAEAR), in use since 2015.

Data entry is typically carried out by a designated professional within the institution, whose responsibility is to ensure the accuracy and integrity of the information entered into the system. Access to the *ArchivesSpace* platform is

secured through a user authentication process, requiring a username and password to ensure that only authorized personnel can perform data entry.

The data entry process usually begins with the creation of a new accession or archival object within an existing resource. Resources, or „archives,” can be organized in a variety of ways, depending on the nature and characteristics of the material being archived. Each archival object or entry created within the system can be entirely independent, yet may also be interlinked with other objects or entries in a multitude of ways, allowing for complex relationships and multi-layered connections between different pieces of archival material. This structure provides a robust framework for the management, organization, and retrieval of archival data in a digital environment.

The Role of ArchivesSpace in the Digital Preservation Landscape

ArchivesSpace is an integral tool in the broader context of digital preservation, as it facilitates the preservation of both physical and digital cultural heritage. The global shift toward digital heritage preservation, as articulated in UNESCO's Charter on the Preservation of Digital Heritage (2003), underscores the importance of ensuring that digital content is sustainably managed and remains accessible for future generations.³¹ *ArchivesSpace* contributes to this goal by offering a platform that allows for systematic management of both analog and born-digital materials, a critical step in the preservation of intangible cultural heritage.

Given its open-source nature and robust community, *ArchivesSpace* provides an accessible and scalable solution for institutions with limited resources, particularly in regions such as the Republic of North Macedonia, where there is a lack of systemic solutions for cultural heritage management. As a tool that fosters collaboration and knowledge-sharing within the archival community, *ArchivesSpace* aligns with broader international efforts to ensure the long-term preservation and accessibility of digital heritage.³²

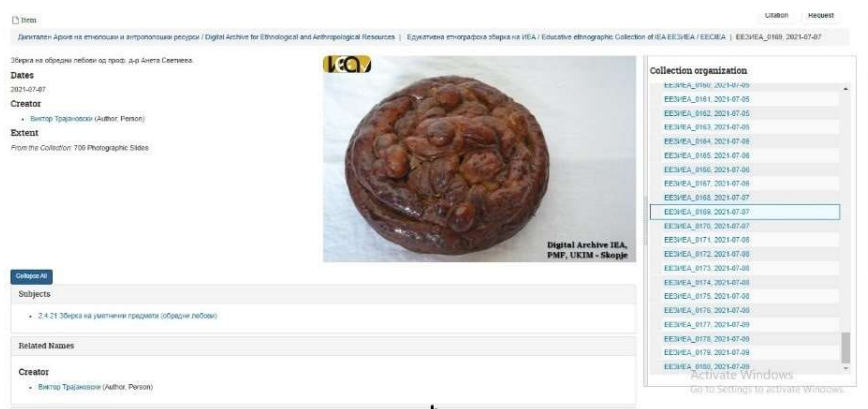
The use of *ArchivesSpace* at the Institute of Ethnology and Anthropology in North Macedonia serves as a case study in the challenges and successes of digitizing cultural heritage in a resource-constrained environment. While the journey to establish a sustainable digital archive has not been without its obstacles, the adoption of *ArchivesSpace* has enabled the institute to overcome many of

³¹ UNESCO 2003: n.p.

³² European Commission 2011: n.p.

the limitations posed by previous software solutions. The software's open-source nature, combined with its community-driven approach, has allowed the archive to continue its work despite financial and technical challenges. Moving forward, the continued development of national strategies for cultural heritage preservation and the adoption of integrated digital solutions such as *ArchivesSpace* will be essential in ensuring the long-term sustainability of heritage preservation efforts in North Macedonia and beyond.³³

Encouragement for Institutions to Use ArchivesSpace: A Call to Action



Pic. Nr. 5. View of an archived item with defined basic contextual and content elements and a link to the digital object (photograph), based on the repository model of the Digital Archive for Ethnological and Anthropological Resources (DAEAR), in use since 2015.

Drawing from our modest yet insightful experience with *ArchivesSpace* within the Digital Archive of the Institute of Ethnology and Anthropology, and observing the successful outcomes of global institutions dedicated to heritage protection and presentation, we urge institutions in the Republic of North Macedonia to seriously consider incorporating this software into their archiving practices. *ArchivesSpace* offers immense potential for enhancing the management, preservation, and accessibility of both analog and digital cultural heritage, an area that is increasingly vital in today's interconnected world.³⁴

Firstly, we strongly recommend that the Ministry of Culture and the institutions directly responsible for the development and implementation of a national

³³ Lusenet 2002: 33.

³⁴ Carroll 2022: 202.

platform for the management, preservation, and presentation of heritage – whether in analog, hybrid, or digital forms – carefully examine the potential of *ArchivesSpace* as a long-term solution. This software platform not only supports the complex needs of cultural heritage institutions but also ensures that heritage materials are preserved in an organized and sustainable manner, ensuring their accessibility for future generations.³⁵

In light of the Republic of North Macedonia's ongoing digital transformation in cultural heritage management, it would be crucial to adapt *ArchivesSpace* to the national context through linguistic and technical customization. While the technical resources required to support *ArchivesSpace* can be hosted within the country, institutions may also consider leveraging the professional services offered by Lyris-hosted *ArchivesSpace*. This service provides a comprehensive and secure solution for hosting, maintaining, and backing up repositories.³⁶ Such an option could reduce the need for significant upfront infrastructure investments while guaranteeing high-quality, professional-grade management of digital archives.³⁷

Furthermore, we encourage the universities in the Republic of North Macedonia – especially „St. Cyril and Methodius University” in Skopje, which has historically been a leading academic institution in the region – to explore the creation of a central repository for archiving, processing, and presenting a wide range of materials. This would not only benefit the preservation of the institution's academic heritage but also promote the responsible curation and dissemination of research outputs.³⁸ Other national and local heritage institutions – whether libraries, museums, or smaller research centers – could also benefit from integrating *ArchivesSpace* into their operations. This collaboration could significantly enhance the visibility of regional heritage materials and allow for more effective preservation practices.³⁹

Adopting *ArchivesSpace* would also foster a more systematic approach to the preservation, processing, systematization, and presentation of cultural heritage. By adopting this software, heritage institutions in North Macedonia could begin to modernize their archival practices, creating a more accessible, transparent, and sustainable model for preserving cultural resources. This approach would ensure

³⁵ Tibbo 2017: 148; Tallman 2019: 60.

³⁶ Sanchez 2020: 87.

³⁷ Mehta 2019: 121.

³⁸ Lynch 2018: 98.

³⁹ Gorman 2021: 75.

that Macedonian cultural heritage is better represented in the global cultural ecosystem, allowing future generations to access and engage with materials that define national identity and cultural history.⁴⁰

In sum, *ArchivesSpace* offers an affordable and scalable solution that addresses the evolving needs of cultural heritage institutions. We believe that by adopting this software, institutions in North Macedonia can significantly enhance their capacity to preserve and present their cultural heritage while contributing to the broader effort of global heritage conservation.

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⁴⁰ Batley 2020: 134.

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