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Research Article

Media Transfer: A Significant Aspect of Digital Transformation and a Crucial Element in the Oversight of Archival Practices

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Abstract.

The conversion of paper-based archives into digital information, especially as a list of media transfer archives and media transfer minutes, serves as a critical evaluation metric in overseeing internal archival processes. Per Government Regulation Number 28 of 2012 pertaining to the enforcement of Law Number 43 of 2009 regarding archives, as well as National Archives Regulation Number 6 of 2019 related to the oversight of archives, the National Archives of the Republic of Indonesia (ANRI) is mandated to oversee archival practices within ministries, institutions, and provincial regional governments. One source of information used in this article is derived from the evaluation criteria outlined in the Internal Archives Audit Form (ASKI). The author conducts a literature study and analysis based on literature pertaining to archival media transfer. This paper is written to fulfill one of the requirements for the completion of the Applied Masters Study Program in State Development Administration, specifically focusing on Public Policy Management at the STIA LAN JAKARTA Polytechnic. This paper aims to offer insights and input for processing units tasked with the transfer of archival media, thereby improving their assessment scores of internal archival oversight.

Keywords: digital transformation, media transfer, audit, oversight

1. INTRODUCTION

Based on the mandate of Law Number 43 of 2009 (3) concerning Archives in Article 5 paragraph (1), it states that the scope of archival management includes the entire establishment of policies, archival development, and archive management within a national archival system supported by human resources, infrastructure, facilities, and other resources following the provisions of the legislation. Furthermore, Article 40 (3) states that the management of dynamic archives is carried out to ensure the availability of archives in the implementation of activities as a basis for performance accountability and legitimate evidence based on a system that meets reliable, systematic, complete, comprehensive, and under norms, standards, procedures, and criteria. In the implementation of the duties and functions of the National Archives of the Republic of Indonesia (ANRI), archival management is carried out, one of which is in the field of supervision.

It is an effort to save archives and encourage archive creators and archival institutions to implement archival management in accordance with principles, rules, archival standards, and regulations. Archives created from the activities of state institutions, regional governments, and activities using state funds serve as memory, reference, and accountability materials in the administration of state governance. Therefore, efforts for preservation must be carried out in an integrated, systemic, and comprehensive manner. (2)

The management of dynamic archives within the National Archives of the Republic of Indonesia is a process of controlling dynamic archives efficiently, effectively, and systematically, encompassing the activities of creation, use, maintenance, and reduction of archives. As records of activities and events, the archives created by the National Archives of the Republic of Indonesia must be managed properly and correctly for the interests of government and public services, followed by the administration and media transfer of archives.

1.1. Media transfer plays an important role in digital transformation, as in the following case:

 1) The Central Role in Digital Transformation

Media migration is one of the key components in the digital transformation of an organization.

Through media transfer, organizations can convert and digitize archives, documents, and information from physical formats to digital formats. This allows organizations to integrate information into digital systems, technological infrastructure, and automated workflows.

2) Improvement of Efficiency and Productivity

Media transfer allows organizations to digitize archives and documents in masse. This improves efficiency in management, search, and use of information. The digitalization process can also automate various administrative and operational tasks, increasing staff productivity.

3) Improvement of Accessibility and Collaboration

With media conversion, information and archives can be accessed digitally by users who need them, anytime and anywhere. This supports remote collaboration, information sharing, and effective decision-making. Media conversion also facilitates integration with other applications, platforms, and information systems.

4) Data Preservation and Security

Media transfer can preserve archives and documents in a durable digital format. Digital data can be better protected through backups, encryption, and more advanced security systems. This reduces the risk of damage or loss of important information.

5) Archival Assessment and Supervision

Media transfer has become an integral part of the digitized archival supervision system. The media transfer process supports the assessment, inventory, and comprehensive supervision of Archives. Well-managed digital information can enhance the effectiveness and accountability of an organization.

Thus, media conversion becomes very important in the context of organizational digital transformation, as it serves as the main driver for organizations to optimally utilize digital technology and integrate it into information management and archiving systems.

2. Theoretical Study

2.1. Definition of media transfer, digital transformation, and archival supervision

Media Transfer (Digitization) is the process of converting/transferring media from analog forms (text, images, audio, video) into digital forms so that it can be stored, easily searched, and distributed electronically.

ISO/TR 13028:2010(E)

Introduction

With the shift to managing records in digital systems, many organizations are digitizing paper and/or other non-digital records. To manage themselves effectively, organizations need to create full and accurate records of their activities and maintain these records over time for subsequent reference. These considerations are valid regardless of the records' storage media.

Digitization is the process of converting hard-copy, or other non-digital, records into a digital format, such as taking digital photographs of non-digital source records or imaging non-digital source records (also known as scanning).

When converting records into digital objects, they are commonly:

a) captured as static pictures (raster image) represented by pixels;

b) processed by optical character recognition technology which converts the pixels into digital representations which are searchable, editable and manipulable; or

c) captured into both formats.

Source: ISO-TR-13028.

Minimum quality standards and format for digitization results based on PERANRI Number 2 of 2021(4)

	Kebutuhan Preservasi	Kebutuhan Akses
- Tekstual	300dpi, 24 bit color TIFF uncompressed	300dpi, 24 bit color JPG/PDF
- Foto	600dpi, 24 bit color TIFF uncompressed	600dpi, 24 bit color JPG/PDF
- Kartorektur	400dpi, 24 bit color TIFF uncompressed	400dpi, 24 bit color JPG/PDF
- Rekaman suara	WAV, 192kbps, 44,1Hz	MP3, 192kbps, 44,1Hz
- Citra Bergerak (Film reel)	AVI / MXF, 25fps 1080 FullHD ,color [RAW file - (File Video terpisah dengan File Audio)]	MP4, 25fps, 1080 FullHD [Video – Audio tersinkronisasi]
- Video Cassette	AVI, 25fps	MP4, 25fps
- Lukisan Pamflet, Poster	600dpi, 24 bit color TIFF uncompressed	600dpi, 24 bit color JPG/PDF

Definition of Digital Transformation;

According to Naveen Kumar (2023) (5), digital transformation is the process of using technology to better engage customers, improve processes, and leverage people for better outcomes.

According to (Vial, 2019) (5), digital transformation is a process aimed at enhancing entities by triggering significant changes in their properties through a combination of information technology, computing, communication, and connectivity.

According to (Barry Libert, 2016) (5), digital transformation is a change built on the foundation of digital technology, bringing unique changes in business operations, business processes, and value creation.

Definition of Archival Supervision

According to ANRI Regulation Number 6 of 2019 on Archival Supervision (2), Archival Supervision is the process of assessing the conformity between archival principles, rules, and standards with the implementation of archiving.

According to ANRI Regulation Number 2 of 2023 (6) on Internal Supervision Guidelines within ANRI, Internal Supervision is the entire process of audit activities, reviews, evaluations, monitoring, and other supervisory activities on the implementation of organizational tasks and functions in order to provide adequate assurance that activities have been carried out in accordance with the established benchmarks effectively and efficiently for the benefit of the leadership in realizing good governance.

2.2. Purpose and Scope of the Article

Purpose of Article Writing:

1) Explaining the role of media transfer as an integral part of digital transformation within organizations.

2) Analyzing the importance of media transfer integration into the archival supervision system.

3) Identifying the challenges in integrating media transfer into the archival supervision system.

4) Offering solutions to overcome those challenges.

5) Providing recommendations for organizations to achieve effective digital transformation by utilizing media transfer in the archival supervision system.

Scope of the Article;

1) Definition of media transfer, digital transformation, and archival supervision

2) Analysis of the role of media transfer in the digital transformation of organizations

3) The importance of media transfer in the evaluation and supervision of archiving

4) Identification of challenges in integrating media transfer into archival supervision systems includes Resources, Standardization and Interoperability, Data Security and Integrity, Cultural Resistance, Ongoing Operational Costs, Policies, and Regulations.

5) Solutions to overcome those challenges

6) Recommendations for organizations to optimize the use of media transfer in archival supervision systems.

This article will focus on the organizational context, both public and private sectors, that are undergoing digital transformation and striving to integrate media migration into their archival supervision systems.

3. METHODS

The author's method in this article is a literature review and analysis based on articles related to the media transfer of archives.

3.1. Digital Transformation and Media

Explanation of digital transformation and the role of media transition in supervision

Digital Transformation:

Digital transformation is the change and adaptation of organizations to utilize digital technology to enhance efficiency, productivity, and competitiveness.

In the context of archiving, digital transformation includes the digitization or media transfer of archives from physical format to digital.

The goal is to facilitate access, storage, and management of archives electronically.

The digital transformation process requires changes in work culture, processes, and technology infrastructure within the organization.

The Role of Media Transfer in Archival Oversight:

Media transfer has become one of the important components of archival supervision in the digital era for the purpose of preserving and securing archives. In the implementation of archival supervision, the value of supervision by processing units can decrease in internal archival supervision due to the point of media transfer of archives not being carried out, which leads to a reduction in the value of the assessment points for archival maintenance activities in internal archival supervision. This can be seen in the following Internal Archiving System Audit (ASKI) form.

FORMULIR AUDIT SISTEM KEARSIPAN INTERNAL
KEMENTERIAN/LEMBAGA
PADA UNIT PENGOLAH

ASPEK PENGELOLAAN ARSIP DINAMIS
SUB ASPEK PEMELIHARAAN ARSIP

Nama Instansi : ANRI

Unit Pengolah

Alamat

*Jika Kementerian/Lembaga **telah mengelola arsip elektronik/digital,** maka berikan tanda √ pada kolom checklist/kotak di samping ini! Pernyataan pada poin 2.4 tidak menjadi pembagi.*

YA/ TIDAK/
ADA BELUM

1. Pemberkasan Arsip Aktif

*Jika Kementerian/Lembaga **belum menetapkan Klasifikasi Arsip** di lingkungannya, berikan tanda √ pada kolom checklist di samping! **Seluruh pertanyaan di bawah ini dinyatakan "Tidak/Belum" dan menjadi pembagi.***

1.1. Unit pengolah melaksanakan pemberkasan arsip aktif

3. Alih Media Arsip Aktif

> *Diprioritaskan arsip berpotensi permanen. Jika di suatu Unit Pengolah tidak terdapat arsip berpotensi permanen berdasarkan JRA, maka berikan tanda centang dan tidak menjadi pembagi.* ☐

Unit Pengolah melaksanakan alih media arsip aktif. ☐ ☐

> *Jika Unit Pengolah melaksanakan alih media arsip aktif, maka berikan tanda √ pada kolom di atas dan berikan tanda √ pada poin informasi di bawah ini sesuai kondisi faktual. Namun, jika Unit Pengolah tidak melaksanakan alih media arsip aktif maka kosongkan dan jangan memberikan tanda apapun pada seluruh kolom informasi yang terkait dengan sub aspek alih media pada formulir ini.*

3.1. Arsip aktif yang dialihmediakan tetap disimpan oleh Unit Pengolah. ☐ ☐

3.2. Alih media arsip aktif diautentikasi oleh pimpinan di lingkungan pencipta arsip dengan memberikan tanda tertentu yang dilekatkan, terasosiasi atau terkait dengan arsip hasil alih media. ☐ ☐

3.3. Pelaksanaan alih media arsip aktif disertai dengan pembuatan berita acara alih media arsip. ☐ ☐

3.4. Berita acara alih media arsip aktif telah disusun sesuai ketentuan peraturan perundang-undangan. ☐ ☐

> *'Berikan tanda √ pada kolom informasi di bawah ini sesuai kondisi faktual pada berita acara alih media arsip aktif yang telah disusun, jika seluruh kolom di bawah ini dinyatakan "Ada" maka kolom informasi pada poin 3.4 harus dinyatakan "Ya" dan berikan tanda √, namun jika terdapat kolom di bawah ini yang dinyatakan "Tidak Ada/Kosong" maka jangan memberikan tanda apapun di dalam kolom/kosongkan informasi pada poin 3.4*

Berita acara alih media arsip aktif memuat informasi:

a. waktu pelaksanaan ☐

b. tempat pelaksanaan ☐

c. jenis media ☐

d. jumlah arsip ☐

e. keterangan proses alih media yang dilakukan ☐

f. pelaksana ☐

g. penandatangan oleh pimpinan unit pengolah. ☐

3.5. Pelaksanaan alih media arsip aktif disertai dengan pembuatan daftar arsip aktif yang dialihmediakan. ☐ ☐

3.6. Daftar arsip aktif yang dialihmediakan telah disusun sesuai ketentuan peraturan perundang-undangan. ☐ ☐

Berikan tanda √ pada kolom informasi di bawah ini sesuai kondisi faktual pada daftar arsip aktif yang dialihmediakan yang telah disusun, jika seluruh kolom di bawah ini dinyatakan "Ada" maka kolom informasi pada poin 3.6 harus dinyatakan "Ya" dan berikan tanda √, namun jika terdapat kolom di bawah ini yang dinyatakan "Tidak Ada/Kosong" maka jangan memberikan tanda apapun di dalam kolom/kosongkan informasi pada poin 3.6 di atas.

Daftar arsip aktif yang dialihmediakan memuat informasi:

a. unit pengolah ☐

b. nomor urut ☐

c. jenis arsip ☐

d. jumlah arsip ☐

e. kurun waktu ☐

f. Keterangan ☐

Source: Form ASKI, 2023, ANRI (6)

- Supervision is necessary to ensure that the media transfer process runs smoothly and produces valid, complete, and reliable digital archives.

- Some aspects of media transfer supervision include:

  - Clear media transfer procedures and standards

  - Monitoring the quality of media transfer results

  - Data security control and access to digital archives

  - Long-term preservation of digital archives

  - Compliance with archival regulations and standards

- Effective supervision will ensure the integrity of digital archives and support good archive management.

Thus, digital transformation through media migration has become an inseparable part of modern archiving practices. Strict oversight of the media migration process is a key element in Achieving reliable and regulation-compliant digital archive management.

3.2. The benefits and impacts of media transfer in various aspects, such as efficiency, accessibility, and preservation (7)

a) Efficiency Aspect

- Media conversion increases the efficiency of archive management by reducing the use of physical storage space.

- The process of searching for and accessing archives becomes faster and easier with digital archives.

- Media transfer enables the integration of archival data into information systems, increasing productivity.

- The cost of maintaining and managing physical archives can be reduced through media conversion.

b) Accessibility Aspect

- Digital archives resulting from media transfer can be accessed widely and quickly by authorized users.

- The use of search and navigation technology facilities the discovery and use of archives.

- Media transfer enables collaboration and sharing of archives digitally.

- The distance and physical location of the archives are no longer an obstacle to access.

c) Preservation Aspect

- Digital archives are more durable and easier to back up and maintain compared to physical archives.

- The media transfer process ensures the integrity and accuracy of the transferred archival information.

- Digital storage technology enables the long-term preservation of archives.

- The prevention of disturbances, losses, and physical disasters can be more effectively carried out on digital archives.

Overall, media transfer has a positive impact on the efficiency of management, accessibility, and preservation of archives in the digital era. This supports the transformation of organizations in managing information effectively and modernly. However, strict supervision is still necessary to ensure the integrity and security of digital archives.

4. RESULT AND DISCUSSION

Archival Supervision and Media Conversion

4.1. The importance of media transfer in the assessment of archival supervision can be seen from the following key points:

Digital Transformation.

- Media transfer is the process of converting archives from physical format to digital, facilitating data access and storage.
- Digital transformation encourages organizations to adapt to new technologies, enhancing efficiency and productivity.

Archival Supervion Assessment;

- Media transfer has become one of the important criteria in the assessment of archival supervision.
- Monitoring of the media transfer process is necessary to ensure the accuracy, integrity, and security of digital archive data.
- This supports good archive management in accordance with applicable regulations.

Benefits of Media Transfer:

- Easing access and search for archives
- Improving the security of storage and preservation of archives
- Enables collaboration and data sharing digitally
- Supporting a paperless strategy and efficient use of space

4.2. Standards and best practices in the media transfer process into the archival supervision system

Archival media transfer is carried out with the infrastructure and facilities that are in line with the advancements in information and communication technology. In textual dynamics archives, media transfer is carried out through the physical scanning of archives. The stage of the media transfer process for textual dynamics archives must adhere to the standard operating procedure (SOP) Number 67 of 2021 regarding the media transfer of textual dynamic archives within the National Archives of the Republic

of Indonesia. Thus, it can be ensured that the archives that have been converted to other media have primary value in the management of dynamic archives.

Flow of Media Transfer Activities in Dynamic Textual Archives

Media transfer is carried out on official documents, active archives, inactive (permanent) archives, vital archives, and preserved archives for the purpose of ensuring accessibility to archival information or restoring archives that are fragile/vulnerable to physical damage.
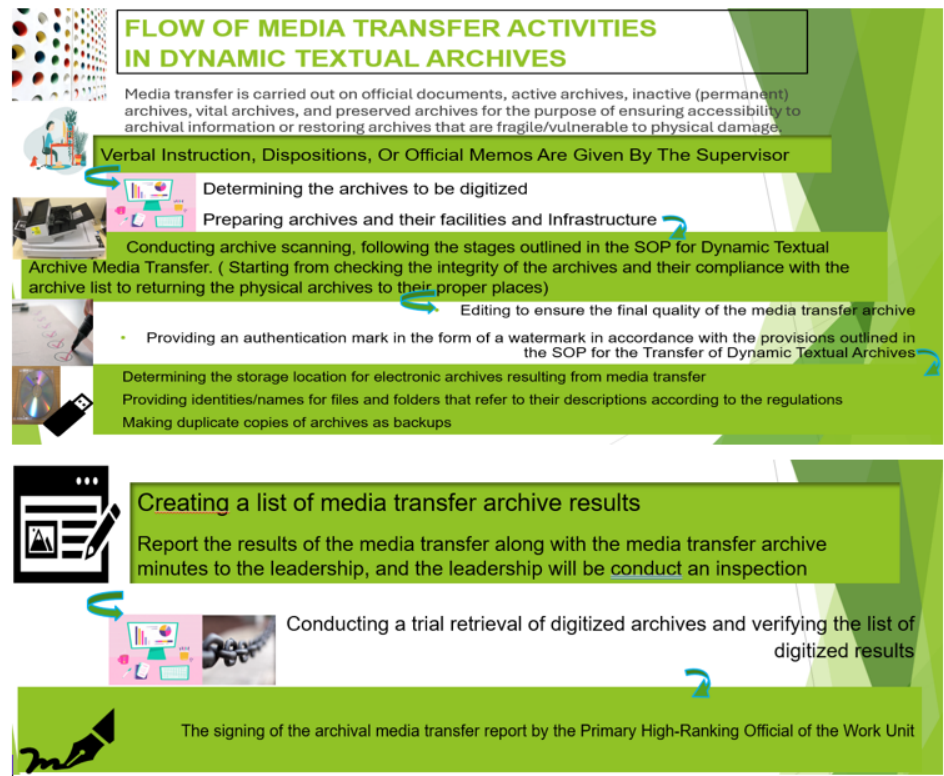
Source: Pusat Jasa Kearsipan, ANRI (8)

Penyimpanan (Pemilihan Media)

Media	CD-R	DVD-R	Hard Disk	Flash Memory Stick and Card	Linear Tape Open (LTO)
Longevity	3	3	2	1	3
Capacity	1	3	3	2	3
Viability	2	2	2	1	3
Obsolescence	1	2	2	2	2
Cost	3	3	1	3	3
Susceptibility	1	1	3	1	3
Total	11	14	13	10	17

6 Faktor utama yang harus diperhatikan dalam memilih media penyimpanan

Longevity = umur panjang
Capacity = kapasitas
Viability = kelangsungan hidup
Obsolescence = keusangan
Cost = Biaya
Susceptibility = kerentanan

Figure 1: Media Selection Scorecard

Source: Jatniko, PAE, 2021

4.3. Challenges and solutions in integrating media transfer into the archival supervision system.

- Limited Resources; Lack of adequate equipment, software, and human resources to perform media transfer.

  Solutions; Allocating sufficient budget for media conversion infrastructure investment, as well as staff competency development.

- Standardization; Inconsistency in format and metadata in the media transfer process.

  Solution; Adopting international standards for file formats, metadata, and media transfer process.

- Security and data integrity

  Risk of damage, loss or unauthorized access to data resulting from media transfer.

  Solution; Implementing strict security protocols, backups, and audits to maintain data integrity.

- Cultural Resistance

  The unpreparedness or resistance of staff in adopting media transfer and digital monitoring systems.

  Solution; Providing training, mentoring, and effective communication to improve staff acceptance and capabilities.

- Sustainable Operational Costs

  High operational costs in maintaining media transfer systems and archival supervision.

  Solution; Optimizing the process of automating routine tasks, and exploring sustainable financing models.

- Policies and Regulations

  The ambiguity or inconsistency of policies and regulations related to media transfer and archival supervision

  Solution: Developing and adjusting policies and legal frameworks that support the integration of media transfer in the surveillance system.

4.4. Case Study or Application Example

1) The author takes a case study example or an example of media transfer application in digital transformation and archival supervision

   a) Model of Media Transformation Through Digitalization: A Case Study of Cartographic Media Transfer at the Central Java Provincial Archives and Library Agency, by Albertus Pramukti Narendra (9):

   ○ This Article discusses the model of transforming cartographic documents through the digitization process at eh Central Java Provincial Archives and Library Agency. This research focuses on the scanning and storage processes of cartographic documents for long-term preservation.

   b) Analysis of Digital Archive Authentication Resulting from Media Transfer at the Archives and Library Service of Central Java Province, by Sutrisno and Lydia Christiani (10):

   ○ This research analyses the process of digital archive authentication at the Central Java Provincial Archives and Library Office. This article uses a descriptive qualitative research method with a case study approach to understand how to maintain the authenticity of digital archives.

   c) The Utilization of Digital Technology in the Process of Transferring Static Archives, by Ridho Laksono (11):

   ○ This study describes the utilization of digital technology in the transfer of static archive media, including the digitization process, supporting facilities, and infrastructure, as well as the challenges that arise in this process.

4.5. Analysing the successes, challenges, and lessons learned.

a) Model of media Transformation Through Digitalization: A Case Study of the Media Transfer of Cartographic Media at the Central Java Provincial Archives and Library Agency, by Albertus Pramukti Narendra (9):

   Success:

   • Process Efficiency: the digitization of cartographic documents enhances efficiency in document management and access.

   • Long-term Preservation: Digitized documents are protected from physical damage and can be stored for an extended period.

   Challenge:

- Technological Limitations: Limitations in scanning and storage technology can affect the quality of digitization.
- Human Resources: The lack of trained experts in the digitalization process can be an obstacle.

  Learning:
- The importance of technology investment: Investment in more advanced technology and staff training is crucial for the success of digitalization.
- Collaboration between institutions: Cooperation with other institutions can help in sharing resources and knowledge.

b) Analysis of Digital Archive Authentication Resulting from Media Transfer at the Archives and Library Office of Central Java Province, by Sutrisno dan Lydia Christiani (10)

   Succes:

- Document Authenticity: A good authentication process ensures the authenticity and integrity of digital documents.
- Data Security: The implementation of effective security measures protects digital archives from unauthorized access.

  Challenge:
- Process Complexity: A complex authentication process can require significant time and resources.
- Security Risk: The ever-evolving cyber threats require continuously updated security strategies.

  Learning:
- The Importance of Security Protocols: Developing and implementing strong security protocols is crucial for protecting digital archives.
- Technology Adaption: Continuously keeping up with the development of security technology to address new threats.

c) Utilization of Digital Technology in the Process of Transferring Static Archives, by Ridho Laksono (11)

   Success:

- Better accessibility: Digital archives can be easily accessed from various locations, enhancing information accessibility.
- Management Efficiency: The digitization process increases efficiency in archive management, reducing time and costs.

  Challenge:

- Infrastructure Limitations: Limitations in technology infrastructure can hinder the process of digitalization.

- Resistance to change: Some staff may show resistance to change and the adoption of new technology.

  Learning:

- The Importance of Adequate Infrastructure: Investment in adequate technology infrastructure is crucial to support the digitalization process.

- Change Management: Managing change effectively, including providing training and support to staff, can help overcome resistance.

Relevance to the Author's Article; This analysis shows that media transfer in digital transformation and archival supervision brings many benefits, but also faces challenges. The lessons from this case study can be used to strengthen the author's article on the importance of media transfer as part of digital transformation and archival supervision. By overcoming challenges and leveraging existing successes, the media transfer process can be more effective and efficient.

5. CONCLUSION

Summary of the main findings and implications from the article

1) Model of Media Transformation Through Digitalization: A Case Study of the Media Transfer of Cartographic Media at the Central Java Provincial Archives and Library, by Albertus Pramukti Narendra (9):

   - Main Finding: The process of digitizing cartographic documents involves scanning and digital storage for long-term preservation.

   - Implication: This digitization increases accessibility and protects documents from physical damage, as well as supports efficiency in archive management.

2) Analysis of Digital Archive Authentication Resulting from Media Transfer at the Central Java Provincial Archives and Library Service, by Sutrisno dan Lydia Christiani (10):

   - Main Finding: The authentication process of digital archives is crucial for maintaining the authenticity and integrity of digital documents.

   - Implication: Good authentication increases trust in digital archives and ensures that documents remain reliable in the long term.

3) The Utilization of Digital Technology in the Process of Transferring Static Archives, by Ridho Laksono (11):

- Main Finding: Digital technology facilitates the process of transferring static archive media, including scanning and digital storage.

- Implication: The use of this technology increases the efficiency and accessibility of archives, as well as aids in the preservation of documents.

Relevance to the author's article in the following aspects (7)(12)(13).

a) Efficiency and Accessibility:

The author's article emphasizes the importance of media transfer in enhancing efficiency and accessibility, which is also found in the case study of digitizing cartographic documents and static archives.

b) Preservation and Security:

The authentication and digital storage processes discussed in those articles support the author's argument about the importance of media transfer for document preservation and security.

c) Digital Transformation:

All of these articles demonstrate how media transfer is an integral part of digital transformation, in line with the main points in the author's article.

d) Transparency and Accountability:

- Improved Transparency: The digitization of archives allows for easier and faster access to documents, facilitating the audit and oversight processes. More transparent information helps ensure that all actions and decisions are well-documented.

- Better Accountability: With digital archives, every change or access to documents can be tracked more easily, enhancing the accountability of individuals and organizations in archive management.

e) Data Security and Integrity:

- Enhance security: Digital archives can be protected with various layers of security such as encryption and access control. Which reduces the risk of data loss or theft.

- Document Integrity: The digital authentication process ensures that the accessed ensures that the accessed document is original and has not undergone unauthorized changes, maintaining the integrity of the information.

f) Supervision Efficiency:

- Automation of Monitoring Processes: Digital technology enables the automation of many monitoring processes of many monitoring processes, such as document change tracking and audit trails, which increases efficiency and reduces manual workload.

- Real-Time Access: Supervisors can access archives in real-time from anywhere, enabling faster responses and better decision-making.

It can be concluded that media conversion in the context of digital transformation not only enhances efficiency and accessibility but also strengthens archival oversight through increased transparency, accountability, security, and efficiency.

Prospects and recommendations for further development (7)(13):

Development Prospects

1) Technological Advancement:

- AI and Machine Learning: The implications of AI and machine learning technology can enhance the digitalization process through the automation of text recognition (OCR), document classification, and data analysis.

- Blockchain: The use of blockchain technology can enhance security and transparency in digital archive management by providing immutable records.

2) Collaboration and Integration:

- Inter-agency collaboration: Enhancing collaboration between government, private sector, and academia to share knowledge and resources in the digitalization process.

- System Integration: Developing an integrated system to facilitate access and management of archives from various platforms and devices.

3) Human Resources Development:

- Training and Education: Providing ongoing training and education for archival staff to master the latest digital technologies and best practices in archival management.

- Competency Improvement: Encouraging the development of digital competencies among archival professionals to ensure they are ready to face the challenges of digital transformation.

Development Recommendations

1) Policies and Regulations

- Policy Formulation: Develop policies and regulations that support the digitalization process and ensure the security standards and authenticity of digital documents.
- Process Standardization: Implementing national and international standards in the digitization process to ensure the consistency and quality of digital archives.

2) Technology Infrastructure:

- Infrastructure investment: Increasing investment in technology infrastructure, including the hardware and software necessary for the digitalization process.
- Maintenance and Updates: Ensuring regular maintenance and updates of technology infrastructure to maintain system performance and security.

3) Risk Management

- Security Strategy: Developing a comprehensive security strategy to protect digital archives from cyber threats and data loss.
- Continuity Plan: Developing a business continuity plan to ensure the operational continuity of archive management in emergency situations.

By following these prospects and recommendations, it is hoped that the media transfer and digital transformation processes can run more effectively and efficiently and provide maximum benefits in archival supervision.

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