2025 EASTICA Seminar

10- 13 November 2025, Busan, Korea

Theme: Great Transformation on Archives Management: From Papyrus to AI Technology

Report from the Government Records Service, the Government of the Hong Kong Special Administrative Region of the People's Republic of China

Laying the Foundation for AI: Hong Kong's Government Records Service Prepares for Transformation

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I. Introduction

Artificial Intelligence, or AI, represents one of the most transformative forces of our time. It enables machines to learn, reason, and solve problems — tasks once thought to require exclusively human intelligence. In recent years, the rapid advancement and widespread adoption of AI technologies have redefined how organisations operate, offering both opportunities and challenges to our profession.

2. Recognising the immense potential of AI, the Government of the

Hong Kong Special Administrative Region of the People's Republic of China (the Government) has made its development one of the key priorities. In 2022, the Innovation, Technology and Industry Bureau introduced the *Hong Kong Innovation and Technology Development Blueprint*, which outlined strategic directions and a detailed action plan for advancing AI development in Hong Kong. This commitment was further reinforced in 2023 with the establishment of the Hong Kong Generative AI Research and Development Centre, which focuses on researching and developing open-source foundation models, including Hong Kong's own large language models and a generative AI document processing copilot applications. Since mid-2024, HKPilot, as an AI assistant for government personnel, has been employed to handle document-related tasks such as drafting, translation, and summarisation of documents. In July 2024, the Digital Policy Office (DPO) was established by merging the Office of the Government Chief Information Officer and the Efficiency Office, reflecting the Government's emphasis on digital development. In 2025, the Government took another significant step by announcing HK$1 billion in funding for the creation of the Hong Kong Artificial Intelligence Research and Development Institute to drive research and development, and industrial applications of AI. Most recently, the Chief Executive's 2025 Policy Address introduced the AI Efficacy Enhancement Team to co-ordinate and guide government departments in effectively applying AI technologies to their operations. These efforts reflect the Government's determination to promote digital transformation across public administration. In parallel, the newly

established DPO plays a key role in coordinating AI applications in data analysis, customer service and document processing to enhance operational efficiency and service quality.

3. Within this broader context, the Government Records Service (GRS) is preparing to embrace the opportunities offered by AI technologies to enhance archives management. To prepare for this new transformation, we have built digital infrastructures and initiated some pilot projects aimed at exploring how AI can enhance our operations. These efforts lay down a solid foundation for a new chapter in archives management, where AI has a potential role to empower us to safeguard archival records more effectively, improve accessibility for future generations, and contribute to a brighter, more innovative archival future.

II. Building Digital Foundations for AI Readiness

4. Paper-based archival records, while historically significant, are limited in terms of accessibility, searchability, and scalability. They are not only limited by their physical storage media, but also by their unstructured formats that require labour-intensive manual efforts to handle. With these limitations, they are not machine-readable and could not support the data-intensive demands of AI, making them less compatible with AI-driven processes. The transition from paper-

based to digital recordkeeping environment, therefore, is a necessary prerequisite for AI readiness. To prepare for this, GRS has prioritised the development of essential digital infrastructures, including an electronic recordkeeping system and a digital repository, as the backbone for AI adoption. Meanwhile, other preparatory and enhancement initiatives related to the paper-to-digital shift, such as policy and guideline formulation, metadata management enhancement, and large-scale digitisation of physical records, are equally important.

GRS' digital infrastructure (1): Electronic Recordkeeping System

5. The Electronic Recordkeeping System (ERKS) lies at the heart of this transition. The Government has targeted its rollout across all bureaux/departments (B/Ds) by the end of 2025 to enhance efficiency in preserving and managing government records, especially those born-digital. By the end of September 2025, all B/Ds have implemented their ERKS. It is expected that some electronic records will be transferred to GRS for further processing via the ERKS platform in the near future. This milestone will mark a significant step towards the creation of a digital working environment, facilitating more efficient management, transfer, and preservation of government records, while favouring AI adoption in the future.

6. Moreover, B/Ds are engaged in collecting enhancement suggestions from ERKS users to improve the system's user-

friendliness. Suggestions from B/Ds' ERKS users on AI adoption in ERKS are particularly welcomed and will be examined by the Electronic Information Management (EIM) Programme Management Office (PMO), comprising representatives from DPO and GRS.

GRS' digital infrastructure (2): Digital Repository

7. Digital records, by their nature, support AI-driven tools but are fragile due to their dependence on specific hardware and software, which can become obsolete, and their susceptibility to corruption, loss, and media decay. GRS' solution to this issue is the establishment of a digital repository using a commercial off-the-shelf digital preservation repository software package in 2020, which ensures that the digital records can be read and accessed by both humans and machines in the future. GRS is also exploring ways to unleash the potential of digital records for AI adoption.

8. Digital records enable AI adoption due to their compatibility with advanced technologies and automated processes. Digital records managed through a digital repository are supported by cloud computing platforms like Government Cloud Infrastructure Services (GCIS), offering scalable storage and computing power essential for training and deploying AI models. This scalability, coupled with high-speed, low-latency networks, supports real-time AI applications, enabling efficient data processing and analysis.

9. Furthermore, a digital repository facilitates conversion of unstructured data—such as letters, minutes, or photos—into standardised formats like text and image files by offering a well-managed storage space. This structuring is critical for AI development, as it facilitates data analysis, modeling, and automation. Digital workflows also enhance AI adoption by automating routine processes like searching and sorting, reducing errors and delays common in manual operations. Built-in Application Programming Interfaces (APIs) and metadata-driven workflows in a digital repository further streamline data retrieval and intelligent processing, providing a robust backbone for AI applications. Therefore, with the shift from paper-based to digital records, supported by the innovative tools of the digital repository, the use of AI by GRS has become increasingly feasible.

Developing policies and guidelines for long-term preservation of electronic records

10. The development of policies and guidelines for the long-term preservation of electronic records is indispensable for the paper-to-digital shift, which is conducive to AI readiness, especially against the background of growing AI adoption in government services and the Government's determination to digitalise public services in recent years. This paper-to-digital shift has made the proper management

and preservation of electronic records, particularly those with long-term value, an increasingly urgent priority. In response, the Task Force on Long-term Preservation of Electronic Records, established by GRS in 2023, has been developing two policy frameworks — one governing archival electronic records within GRS, and the other covering electronic records with long-term value across the Government's B/Ds. These policies aim to articulate the key principles and approaches for preserving GRS' archival electronic records and B/Ds' electronic records with long-term value, including those appraised with long-term value but not yet transferred to GRS. They provide a foundation for consistent actions throughout the records' lifecycle, from creation in B/Ds to transfer to GRS for permanent retention and other uses under GRS' custody. The goal is to safeguard GRS' archival electronic records and B/Ds' electronic records from risks as much as possible, maintaining their authenticity, integrity, reliability, accessibility, and usability for as long as necessary by complying with related legal requirements, international standards, and best practices. Upon the endorsement of these two policies, the next step will involve developing more detailed guidelines and procedures to further support both GRS and B/Ds in long-term preservation of their respective electronic records.

Enhancement of metadata management to support archiving, digital preservation and AI-driven Search

11. Metadata management forms another critical foundation. As mentioned before, GRS has successfully established a digital repository. With some aforementioned existing elements of it, such as its scalable storage and computing power, efficient and reliable network in GCIS, ability to convert unstructured records into standardized formats, as well as provision of built-in APIs and metadata-driven workflows, the feasibility for GRS' archiving and digital preservation enhanced through AI application is demonstrated.

12. As GRS digital repository is equipped with built-in functions as well as bundled APIs that support metadata extraction and manipulation, it is expected that metadata capabilities can be enhanced through automated metadata collection from digital records. This, in turn, makes AI-enhanced search more feasible through automated tagging and record classification, allowing users to obtain more precise and context-aware results.

Conducting large-scale digitisation of physical records

13. The large-scale digitisation of physical records not only facilitates broader and more convenient access via electronic platforms but also accelerates the shift from paper-based to digital records, which is essential for AI readiness. In view of this, GRS launched a ten-year Mass Digitisation Project in 2018 with the goal of converting the wealth of archival information in analogue format into digital data,

targeting a total of 6 million images. For the current year, the production target is approximately 400,000 digital images. As of September 2025, the cumulative number of digitised images has reached 4.8 million, bringing the project closer to its ultimate objective.

III. Pilot Projects on Applying AI Technologies

14. To further explore the potentials of AI usage, GRS has also collaborated with a local university and an IT company on pilot projects. It is hoped that these projects would offer us an opportunity to gain first-hand experiences in applying AI technologies.

University collaboration

15. GRS recognises the importance of collaboration in successfully carrying out complex Digital Humanities (DH) and AI projects, given their multidisciplinary skill requirements, specialised knowledge, and resource intensity. To assess institutional readiness, GRS has collaborated with a local university on DH/AI initiatives since 2024. These projects encompass diverse tasks and technologies, including: preparation workshops on the use of archival records in DH; digitisation of selected Second World War land records; and the application of AI for Optical Character Recognition, text extraction from scanned images, and the generation of structured datasets from

archival materials. Through these efforts, GRS aims to create enhanced access points, establish robust indexes and finding aids, and ultimately improve archival workflows and the discoverability of archival records.

IT company partnership

16. GRS is currently collaborating with an IT company to leverage AI technology to improve the search accuracy of GRS photo holdings by generating additional search tags. This is to address the existing limitations in the discoverability of holdings, particularly photographs, through the online search catalogue. At present, members of the public primarily rely on pre-defined keywords to search the holdings. However, the searchability of some archived content is constrained. For photographs, the keywords in captions often do not fully encapsulate the content depicted. The project is anticipated to develop an innovative machine learning solution by generating additional search tags using image analysis technology for the automatic identification of locations, iconic landmarks, historical figures, and other significant historical information in digital photographs. This will significantly enhance the public's ability to explore Hong Kong's visual history and open up new ways of engaging with community heritage.

IV. Addressing Challenges in the Age of AI

17. Making use of AI is not without challenges. When exploring AI development, GRS is committed to properly address the challenges through better data security protection, further policies and guidelines planning, compliance to records management requirements, comprehensive consideration and more training and professional development for staff.

Commitment to ensuring data security

18. The digital repository is the critical asset in GRS's journey toward AI-driven records and archives management. Although it offers significant benefits in improving efficiency in maintaining reliable and up-to-date resource, it also presents challenges, particularly in terms of data security consideration in the Government to maintain strict data security protocols and disaster management. While continuing to explore the potentials of AI by integrating emerging technologies, GRS is fully determined to ensuring a high level of security, reliability, and accessibility of records and archives in the digital age.

Policies and guidelines planning

19. While AI offers enormous potential, its adoption must be approached prudently. AI applications in archival work — such as accessioning, description, access review, and data discovery, remains largely experimental. Transforming these experiments into integrated archival systems, practices, and workflows requires substantial resources for research and development. A critical step in this process is addressing key issues such as reliability, trustworthiness, and accountability. Subject to more solid proof of AI's capacity in archival work, GRS has to timely develop new policies and guidelines as well as update the existing ones to explain to the stakeholders our principles in using AI, and provide them with clear directions for responsible AI use.

Compliance with records management requirements

20. Compliance with records management requirements must never be compromised. Suggestions from B/Ds' ERKS users on AI adoption in ERKS are carefully assessed for compliance, feasibility, and user benefit. Collaboration among DPO, GRS and B/Ds will be essential to ensure that implementation of AI tools is maximised to enhance, rather than disrupt, sound records management practices.

Application of AI to preservation activities

21. As an archives, GRS is also tasked to preserve and conserve its archival and library materials with an aim to extending their life expectancy. Although there is significant potential in applying AI to this kind of work, such as environmental monitoring and artefact restoration, challenges lay ahead. GRS will further explore this issue with comprehensive consideration, hoping to come up with new initiatives that will address all the concerns.

Training and professional development

22. Staff capability is a cornerstone of sustainable transformation. AI technologies are ever-evolving, as are the required skills and knowledge for archivists to utilise AI tools effectively. GRS needs to embrace and adapt to the challenges arising from this changing environment and engage in specialised training opportunities. To support our workforce in keeping up with the latest developments, GRS has put in place a comprehensive training and professional development strategy for Archivist-grade officers. This strategy focuses on three key areas of their work: (1) core knowledge of archival and records management; (2) digital capacity; and (3) interdisciplinary knowledge and collaboration. Our staff have participated in training programmes organised by the Government's Civil Service College and/or professional institutions, covering topics such as big data, blockchain technology, digital communication, and

ethics and compliance. Concerning the Curator-grade officers of GRS, they are also encouraged to enrich their knowledge of the AI technologies related to archives preservation. GRS will continue to allocate sufficient resources and encourage staff to engage in training and professional development activities so that they are competent and prepared to address the challenges of the digital and AI age.

Constraints of AI technologies

23. In spite of all the potential benefits and merits that AI would bring about, we must not ignore AI's inherent constraints. AI models are trained on data, and if that data is biased or inaccurate, AI will perpetuate and even amplify those biases or inaccuracies. Although GRS is currently exploring the potential integration of AI in certain areas, it does not intend to apply AI across all operations. Besides, it is important to note that AI should complement — not replace — professional judgement and archival expertise. Human superintendence and stewardship remains indispensable. In other words, collaboration between human expertise and AI efficiency is needed.

V. Conclusion

24. GRS is laying the groundwork for an AI-enabled future in

archives management. By building robust digital infrastructures, developing comprehensive policies and guidelines, and conducting innovative pilot projects, GRS is building the capacity to harness AI in a responsible and sustainable manner. As archivists, our mission remains unchanged: to safeguard the documentary heritage entrusted to us and to ensure its accessibility for future generations. What changes are the tools and opportunities at our disposal. With AI, we have the potential to transform not only how we preserve the past, but also how we connect it to the future.