



Digital Archives Policy

February 2017

Our Mission

The West Yorkshire Archive Service exists to preserve the past, serve the present and protect the future. We do this by collecting and looking after the unique documentary heritage of the region and by helping members of the public use and enjoy these records.

Preserving the past, serving the present, protecting the future

Our Vision

To provide a welcoming and engaging service that will inspire people to use the archives of West Yorkshire, enabling them to celebrate their identity and understand their past, present and future.

Policy Purpose

Digital preservation refers to the actions required to ensure continued and reliable access to authentic digital records. This document affirms West Yorkshire Archive Service's (WYAS) formal commitment to address the challenges surrounding the indefinite preservation of the unique digital archives of West Yorkshire.

The bulk of WYAS's existing archive collections are in traditional, physical formats, such as paper and parchment. Increasingly, however, digital records are being offered for archival preservation, and WYAS also produces digital copies of traditional records for access reasons.

WYAS recognises that there is a great risk of losing this digital heritage due to the continual development of computing hardware and software. Other threats include the physical deterioration of digital storage media, rapid technological obsolescence, uncertainty about resources and strategies for the curation and preservation of digital records, and legal barriers to digital preservation activity.

WYAS appreciates the need to build sustainable but flexible strategies for managing digital archives in order to fulfil its mission to seek and preserve all records, regardless of physical format, which document the histories of West Yorkshire, its communities and its people, and to improve and extend access to this information for all. In developing its capacity to handle digital archives, WYAS seeks to follow emerging national and international standards and best practice in the digital preservation field. In particular, WYAS aims to work within the framework of the Open Archival Information System (OAIS) reference model (ISO 14721:2012).

Audience

- West Yorkshire Joint Service Committee members
- WYAS staff responsible for collections development and collections management
- Data creators and curators within the five Metropolitan Councils of Bradford, Calderdale, Kirklees, Leeds and Wakefield
- Other organisations and individuals depositing archives with WYAS for preservation
- Users of WYAS collections
- Communities and individuals from the five Metropolitan Councils of Bradford, Calderdale, Kirklees, Leeds and Wakefield

Relationship with other Policies and Guidelines

This Digital Archives Policy should be read in conjunction with the WYAS Collection Policy, Cataloguing Policy and Digital Archives Policy.

Policy Context

The use of computers has changed forever the way information is created, managed and accessed. The ease with which digital materials can be generated, amended and copied, cross-searched, and transmitted rapidly via worldwide networks, has led to an exponential growth in the application of digital technologies in all walks of life.

Digital resources which might be selected for indefinite archival preservation come in a multitude of forms. Examples range from very simple text documents which reflect paper equivalents, to complex web-based resources combining text, sound, digital photographs or even moving images. Digital archives may be either static, like PDF documents, or dynamic, such as databases and web pages.

The content of digital archives is just as unique as any traditional document. But unlike paper and parchment records, which will survive extended periods provided basic environmental conditions are met, active management throughout the record lifecycle is required to ensure digital materials remain accessible and authentic.

Digital preservation Management (Producer-Archive Interface)

WYAS recognises that digital preservation is a shared problem requiring a collaborative solution: WYAS records managers and archivists will work together with record creators, policy makers, information managers, ICT professionals and record users to better understand and define roles and responsibilities for the management and security of digital records at the different stages of their use, and for the associated costs. These relationships are explored in detail in the Producer-Archive Interface Methodology Abstract Standard (PAIMAS) (ISO 20652:2006).

WYAS expects to be involved in developing digital preservation strategies in conjunction with:

- Local authority and other statutory bodies operating within the former West Yorkshire Metropolitan County area, including the five Metropolitan Councils of Bradford, Calderdale, Kirklees, Leeds and Wakefield, West Yorkshire Joint Services and the West Yorkshire Police.
- Organisations which deposit archives with West Yorkshire Archive Service as an appointed Place of Deposit under the Public Records Acts of 1958 and 1967. These include West Yorkshire based National Health Service organisations,

West Yorkshire Magistrates Courts and the Coroners Service.

- Private organisations, community groups and individuals.

Creators of digital records will require guidance on the creation and management of sustainable digital resources, including the need to use open (as opposed to proprietary) and standard file formats wherever possible. WYAS will encourage good records management practice and provide advice to the owners of digital records in order to assist potential depositors of digital archives to create and curate records in a form which meets requirements for long-term preservation.

Accessioning and Ingest

'Ingest' is a term coined by the OAIS reference model to cover the processes by which data are submitted to and prepared for inclusion in a digital archives store. With regard to digital archives offered to WYAS this will include:

- Appraisal and evaluation of the digital records against the WYAS Collection Policy and the potential resource implications of accepting the deposit
- Licensing, copyright and other legal issues, such as legal admissibility
- Obtaining details on provenance, technical details of media and file formats, and other contextual information
- Secure transfer of digital records to the digital archives store
- Checking using checksums to detect signs of deterioration, or corruption during copying, and as a security measure to demonstrate the integrity of the digital record, and to ensure the data does not contain malicious executable code.

WYAS has developed, and will continue to improve, guidelines and training for staff in the handling and care of digital archives offered to WYAS, together with deposit forms which record the information necessary for the preservation of digital material. WYAS has also conducted a survey of digital materials already held.

Digital Preservation Strategies

Maintaining access to digital resources over the long-term involves a continuing cycle of actions to safeguard storage media, actual content and contextual information ('metadata') from the threats of software and hardware obsolescence, malfunction and deterioration.

Various theoretical approaches to the preservation of digital content can be identified, including:

- Do nothing – print to paper or take no action beyond providing shelf space for the original storage media
- Technology preservation – keep all out-dated software and computer

equipment

Doing nothing and technology preservation are generally seen as impractical and unacceptable approaches to digital preservation. As more and more records are 'born-digital', it is cheaper and more practical to preserve and store them electronically than any other way.

- Refresh – copy data to a new tape or disk of the same type
- Transfer – copy data to a more stable type of tape or disk

Refreshing and transfer will be an important part of the WYAS digital storage system. However, whilst backup and media refreshment may enable the preservation of the bit stream (sequences of 0s and 1s) that ultimately make up the information stored in any digital record, this does not ensure that the actual content represented by these bits can still be displayed and used in the future.

- Emulation – using software that can pretend to be a different software or operating system or hardware configuration.
- Migration – converting the data into a newer or different file format, so that the information content remains accessible with each new generation of hardware and software. The costs of migration may be minimized by using standard formats which promote the interoperability of data.

WYAS will continue to undertake further research to understand better the processes and costs involved in the sustainable management of digital archives, and to assess whether to manage digital archives in-house or to out-source WYAS's digital preservation management requirements to a specialist digital repository. WYAS's technical strategy for the handling of digital archives will be developed in conjunction with other organisations working in the field of digital preservation.

Storage and Handling

WYAS recognises that good storage practice and handling all play an important role as a preventive preservation strategy for digital material, as they do for conventional documents.

Digital records may be stored on a variety of different media and each type has its own storage and handling needs. But all digital media should be stored in a cool, dry and stable environment away from direct sunlight and atmospheric pollutants such as dust and dirt. Magnetic media need additionally to be kept away from strong magnetic fields.

West Yorkshire Archive Service will work to establish a system to store digital archives for the long term, to include:

- Backup and media refreshment (periodic transfer of data from an existing tape or disk to a new tape or disk).
- Several copies of each digital resource being made available on different storage media in different locations, including off-site backup.
- Environmental conditions in storage for at least one of these copies which conform to the recommendations in BS 4783 and PD 5454:2012 for data storage media.
- Regular checks for physical signs of damage or degradation, and random checks for readability.
- Review of the West Yorkshire Archive Service disaster plan, in conjunction with ICT professionals, in relation to digital archives. Emergency backup provision should not be dependent on the existence of current West Yorkshire Joint Services ICT network provision.

WYAS traditionally preserves physical objects which carry information. Digital preservation differs from the preservation of traditional materials in that it is largely concerned with preserving information regardless of the object on which that information is stored. WYAS will need to assess the archival ramifications of preserving only the digital bit stream, and consider potential scenarios in which it may also be desirable to retain the 'original' deposited media.

Access and Use

Once digital archives have been deposited with WYAS, a mechanism is required in order to make these resources accessible to users.

Here again, WYAS will seek to undertake further research to understand better the options and costs involved in providing access to digital archives. This will enable a more realistic assessment on whether to manage access to digital archives in-house or to out-source WYAS's requirements to a specialist digital repository.

Issues for consideration as regards access to digital archives will include:

- Information access legislation (see Access to Records Policy) and user authentication
- Access to intellectual content *versus* physical 'look and feel'
- Cataloguing and indexing – including the integration of finding aids for digital archives with the service's existing CALM collections management database
- Technical support (how to read the digital record on the user's computer system)
- Archival content support (how to use and interpret the digital record)

WYAS's strategy for dissemination and access for digital archives will be developed in conjunction with other organisations working in the field of digital preservation, and other users of the CALM database system.

Review

Digital preservation is a new and rapidly evolving discipline. This policy is issued in February 2017 and will be reviewed and updated as necessary every three years in the light of new research and expertise from other digital archives programmes.