apac

Association of Performing Arts Collections

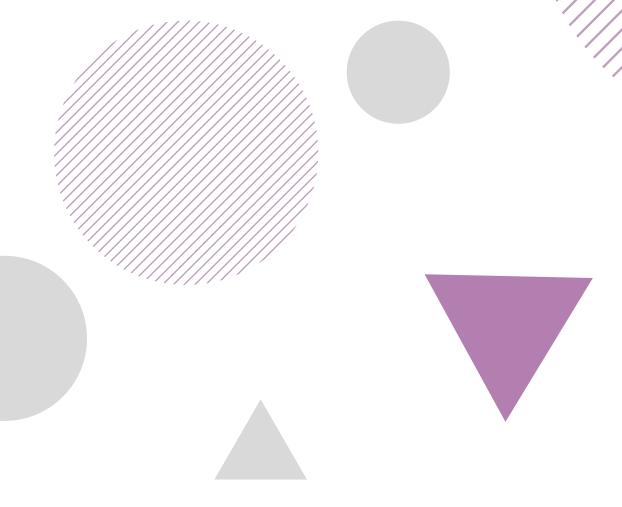# Digital Preservation Series

PART 1: MAKING THE CASE

Prepared by APAC Digital Preservation Working Group

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WHO DO YOU NEED TO SPEAK TO IN YOUR ORGANISATION?

Digital preservation relies on a wide range of skills and services, thus it requires organisational support and commitment in order to be effective and sustainable. Digital preservation can be a time and resource consuming activity. With growing amounts of digital assets entering archive collections, the time and effort required to manage them is going to increase exponentially in the future. Many of the digital-born records received in archives already present challenges that put them at high risk including technological obsolescence, inaccessibility and data corruption. Digital preservation systems have to be implemented, networked to existing systems, controlled and maintained. In order to implement a successful digital preservation strategy it is essential that digital preservation is high on the agenda of your organisation's senior management team and your IT department as a minimum.

SENIOR MANAGEMENT TEAM

It is essential to obtain higher management buy-in to ensure digital preservation is part of the overall organisation's strategic planning and the investment of human and financial resources. Your organisation needs to understand that digital preservation is a long term investment that needs to be embedded into its policies and procedures, with long term financial and strategic support. Higher level management should adopt an advocacy role to ensure they implement a support structure and communicate efficiently with key stakeholders.

Try To:
- Identify and communicate what you hope to achieve through your digital preservation activities.
- Identify the groups and individuals that can inhibit or enable digital preservation activities.
- Ensure that your line manager understands and can articulate the need for digital preservation to their management/peers as needed.

IT DEPARTMENT

IT Department: Colleagues in IT need to understand the preservation requirements of archival assets and your specifications for storage space, the need to run checks on those assets, to install databases that can manage those assets , which may not comply with the overall organisation's IT procedures or standards (i.e. security profiles, access requirements, upgrade requirements, systems compatibility). They also need to accept a certain level of risk and understand the need for backing up your digital assets,to meet Accreditation or sector standards, to deliver assets to your users and to use external tools in order to make your assets accessible.

Try To:
- Create a strong relationship with your IT team
- If your organisation has a large IT team, request a member or team section, to be designated to work with you on digital preservation so they acquire an understanding of your needs overtime
- Include members of the IT team in available training
- Ensure you communicate effectively and that terminology used by both parties is understood or a shared vocabulary is created

'Digital continuity' is a term which could be used in the high level documents to signal to management that digital preservation should be part of a more holistic approach to the management of digital assets within the organisation rather than purely a technical issue.

Advocating across your organisation in order to find digital preservation 'champions' will be key. The greater the number of people who understand the importance of digital preservation then the more likely it is you will be able to achieve your aims or attract funding.

KNOWING WHAT YOU HAVE AND WHERE IT IS

Developing a broad understanding of the types of digital material being created and maintained by your organisation and where that material is stored is an important early step in your digital preservation journey. You need to know what you have in order to adequately preserve it!

You should create a basic File List containing information about the files in your care. This could include file names, locations and sizes, format types and checksums. This could be expanded into a more detailed 'Digital Asset Register' as you progress (see template). If your collection is small then this could be created manually. If you already have a large number of digital files then there are free tools such as DROID which can generate this information for you automatically.

If you work in a large organisation where digital documents are being generated by different departments then you may wish to make contact with the staff member responsible for administration in each department as they are likely to have the best oversight of the digital documents their department is creating.

One important thing to note - you may never gain a complete understanding of all the types of documents being created and used within your organisation and that's ok! What is important is that all parts of the organisation are aware of the Archive's remit to preserve digital records as well as paper and which material they should be depositing. Speaking to administrators and implementing set retention schedules will make this more straightforward. These discussions will also aid you in gaining a greater understanding of the different types of work being undertaken across your organisation. One important point - You don't need to hold content on your servers before you start digital preservation planning. Intellectual control is enough.

These are ongoing conversations. Digital preservation is a fast-moving area of archival practice and new guidance is being regularly published by organisations such as the Digital Preservation Coalition (DPC) and The National Archives. This, combined with staff turnover within your own organisation, means that you should be prepared to have the same conversations several times as staff members are replaced and be ready to adapt your workflows as new guidance is published.

UNDERSTANDING THE BENEFITS OF DIGITAL PRESERVATION

There are clear general benefits to organisations implementing Digital Preservation as a way of managing and being responsible for the digital records in their organisation.

Benefits of Implementing a Digital Preservation workflow:

- Ensures heritage is preserved
- Allows digital records to remain continuously accessible and provides proof of authenticity, protecting against things such as redundant technology, corruption, tampering and loss.
- Increases efficiency of storing and managing digital assets which can allow staff to better do their jobs
- Sets a standard of transparency for managing digital records
- Ensures the security of sensitive data
- Offers legal protection and promotes legal and regulatory compliance
- Facilitates exploitation of access
- Encourages data reuse

As a result, this:

- Improves business continuity and value as well as the health of the organisation.

The benefits of Digital Preservation will, however, vary according to your organisation and the levels at which you are able to implement it. Benefits are closely associated with cost and risks so when measuring the benefits for your organisation it is also important to understand and analyse these elements too.

Remember, benefits can be both quantitative and qualitative.

Elevator Pitch

An elevator pitch is just that. If you get in an elevator at the ground floor with your most senior manager, for example your Chief Executive, what do you want to say to them about your digital preservation needs in the few minutes' ride to your floor? It is worth being ready for this sort of occasion and this text can also be used for quickly explaining to senior staff why they should be considering digital preservation and what you propose your organisation does about it. There are a few areas to cover:

What is the value of the digital materials that you want to preserve
- Financial, legal and compliance value
- Business continuity and reputation management
- Commercially valuable

What problems do you face with the digital materials
- Range of formats
- Unknown location of assets and/or lack of intellectual control over assets
- Ever increasing content

What work needs to happen
- Digital asset register to be created
- More holistic approach to file naming etc. – good records management
- Decide ownership of Digital Preservation project
- Implement Digital Preservation policy and plan

How long will it take
- Years – incorporate into forward plans
- Incremental work so easier to achieve

What benefits will flow from this work
- Able to find records that will help staff do their jobs
- Transparency and business continuity
- Access
- Ensure heritage is preserved
- Maintain aim of archive

How does it relate to strategic objectives
- Align this with your organisational mission and vision statements

What will success look like
- Confidence in security of assets
- Easy access to content
- Transparency about where assets are

Draft a version of your elevator pitch that you can learn and reel off whenever you get those unexpected moments with senior management. It is also worth highlighting for yourself the core areas of this text in case you have less time than you'd like to get your points across.

WRITING A BUSINESS CASE

There are a few hurdles to overcome in writing a business case. Firstly, it's more than likely that you will be writing for senior staff who will not have any knowledge of digital preservation so you will both need to explain what it is and give evidence of its significance by referencing authorities, such as the Digital Preservation Coalition etc. Secondly, the main case for digital preservation is based on mitigation against risk; the future risk of a loss of digital assets, which is an unseen activity that occurs within storage whether that is on premise or in the Cloud or happens within programmes and databases where records can be altered as they are updated and formats become obsolete. This simply makes it a very difficult case to argue, as you are not advocating for a shiny new building or an amazing acquisition but a set of complex ethereal digital processes that are difficult to show or manifest. You are making a case for something that's intangible. Therefore don't get into the trap of describing digital preservation in overly technical terms - keep it simple and explain in layman's language. A really clear analogy can be that digital assets are like a car; if you don't do the Service and MOT and regularly maintain them they become rusty, rot, unroadworthy and stop working.

The approach you take needs to show how digital preservation can actively support the mission of your organisation. Therefore, it's important to approach writing a business case by communicating the impact of the loss of the digital assets you need to preserve. This can be legal or historical but it's far preferable if it's commercial or reputational as executives will respond more positively if you can demonstrate, for example: 'if we don't digitally preserve X and Y assets we will not be able to perform Z activity and that will result in the loss of the income stream for Z activity'. Making a case premised on the risk of future, potential loss is far less likely to have the decision makers approving the funds to invest in digital preservation than if you can show how not having digital preservation will curtail activity and income.

There are many guides that you can find online for structuring a Business Case. Preservica have one which has some good elements.

Your case will have to be customised for your organisation; its size, budget and current position. An example is Andrew Brown's Practical Digital Preservation: A How-to Guide for Organizations of Any Size, (Facet Publishing, 2019). This clearly defines all the stages of Digital Preservation and how you present that in a report. The book is very expensive but you can access large chunks on Google Books or get it from a library.

You will need to do quite a bit of research before you start the report and have run through the sections above. Write a report with a 1-2 page Executive Summary at the start then consider including the following areas as suits your organisation:

EXECUTIVE SUMMARY
A concise explanation of the case for digital preservation, reasons why it is needed, current context (refer to the Digital Preservation Coalition's Maturity Model and NDSA Levels) and proposed solution.

INTRODUCTION
Objectives - This will be contingent on your organisation but could include things like:
- To take urgent action to safeguard [X Organisation's] most vulnerable digital information to protect our commercial interests
- To ensure that access to digital resources is maintained and preserve business information and information of permanent historical value for future users
- To safeguard [X Organisation's] investment in the creation and maintenance of digital resources, enabling full benefits realisation and avoiding wasted expenditure in the future (e.g. on expensive digital archeology)
- To use the most efficient archival storage technologies to contribute to the reduction of data storage costs

DELIVERABLES
As with the Objectives, these will be contingent on your priorities but could include:
- Establish a trustworthy digital repository to recognised standards with integrated digital preservation for content identified for long-term preservation, including ingest of content from a range of environments and user access to archived content
- Introduce technology standards and policies to support the sustainability of future information
- Develop and deliver a range of training and guidance for stakeholders

WHAT IS DIGITAL PRESERVATION?

What you need to aim for is something that's concise with evidence from authoritative sources. Quotable sources include:

- BS ISO 14721:2012. Space data and information transfer systems. Open archival information system (OAIS). Reference model.
- Digital Preservation Coalition's 'Preservation issues'.
- BS ISO 16363:2012. Space data and information transfer systems. Audit and certification of trustworthy digital repositories.
- Forrester Report 'Digital Fragility: The Ticking Time Bomb Within Enterprise's: Protect Your Corporate Memory and Future-Proof your Brand', 16 December 2019.

STRATEGIC INTENT

This is where you can make a list of points outlining the deplorable state of your current conditions and how the long term preservation of your digital assets can contribute to your Mission.

BENEFITS

A good model for outlining the benefits of digital preservation is the 'Keeping Research Data Safe Model'. This is obviously aimed at research institutions but many of the benefits can be applied to any organisation.

RISKS

Rather than reinvent the wheel, the DPC have made a list of all the major risks of not doing digital preservation, which can be found at Digital Preservation Coalition.

CRITICAL SUCCESS FACTORS

These will be specific to your organisation but could include:

- An affordable and scalable digital preservation solution is implemented to enable persistent access to the [X organisation's] current and future digital resources.
- Organisational change is managed and staff are supported as they develop new skills in creating, managing and accessing digital resources.

CONTEXT

This is where you should list the size and types of data, which you should have if you have done a Digital Asset Register. A summary of the Register will be enough to indicate the amount of data you are dealing with. If you have moving image assets this will mean you have a lot more data.

DIGITAL PRESERVATION SOLUTIONS

Here you can propose the different solutions you have investigated, including third-party solutions or in-house ones and go into detail in the next section.

OPTIONS ASSESSMENT

Here you can go through each of the options, right from doing nothing to the ideal solution and everything in between, including hybrid solutions. Indicate the pros, cons and approximate costing for each option. It's clearer if you put this in a table format. It's here that you can demonstrate doing nothing has a high cost in itself. You might have to maintain or buy new on-premises servers for your data. Or if you already store in the Cloud, you can add those costs with the risks associated with not doing digital preservation. This section should also include staffing requirements and commitments for each solution.

APPENDIX A DIGITAL PRESERVATION POLICY

If you already have an approved Policy, it's worth including it here or you could include a Proposed Policy. See section - Writing a Digital Preservation Policy and plan.

APPENDIX B DIGITAL PRESERVATION COALITION RAPID ASSESSMENT MODEL (DPC RAM)

This will outline the current state of your Digital Preservation efforts and you can refer to this in the main body of your report. You can download the Digital Preservation Coalition RAM so you can easily incorporate it.

The next stage is to share with internal stakeholders to get approval before going through the various committees to make your Business Case.

WRITING A DIGITAL PRESERVATION POLICY AND PLAN

A digital preservation policy aims to demonstrate to internal and external stakeholders that the archive is committed to the preservation of digital records. A digital preservation policy has two key purposes: to explain why an archive is doing digital preservation and to act as a guide to those responsible for carrying out digital preservation. A digital strategy is often referred to as the overarching approach adopted by an organisation to ensure digital records are in a usable format over time. The digital strategy sets out the organisation's commitment towards ensuring digital preservation is carried out. An example would be: a university would have a digital strategy pledging their commitment to the preservation of digital material produced within their organisation, whereas the archive a part of that university would have their own digital preservation policy and plan outlining, in detail, how they will ensure their digital records will be preserved. Therefore, it is essential that the digital preservation policy and the digital preservation strategy of the organisation/archive work in tandem. It would be ideal to be able to find out what your organisation's digital strategy is before developing a digital preservation policy and plan.

The digital preservation policy should outline:

THE PURPOSE AND SCOPE
This should reinstate the archive's commitment towards digital preservation, how digital preservation enables the archive to achieve its wider objectives and outline if the digital preservation aligns with broader stakeholder goals.

RESPONSIBILITIES:
This should outline all those who are involved in the digital preservation process and what they are responsible for. This includes, but is not limited to, archivists, contractors to depositors or donors of records.

DIGITAL STORAGE:
This should outline how the digital records will be stored and maintained over a long period of time. This should outline where digital records will be stored, structured, how they can be accessed, if any disaster recovery strategies are being implemented and how often the digital records will be checked for deterioration or obsolescence.

DIGITAL REPOSITORY
This should outline where the digital repository will be located either onsite or offsite, outsourced or in-house. The brief outline of the process of how the raw digital record will be prepared and ingested into the digital repository. It is important to outline who is responsible for carrying out this process within the organisation/archive.

DATA FILE FORMATS
This may be useful to outline what digital material the archive has or is collecting for donors/depositors to be aware of. It is also helpful for you to note what type of file formats can be collected and preserved over time. A full list of file formats could be listed within an appendices within your digital preservation policy.

STANDARDS, MODELS AND GUIDES (OPTIONAL)
Some organisations feel obligated to outline the standards, models and guides to digital preservation that will inform their plan for digital preservation. For example London Metropolitan Archive outline they will follow: the Dublin Core Metadata Element Set (ISO Standard 15836) and the OAIS (Open Archival Information System) Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically. They also mention that they will consult with the following organisations along the journey of digital preservation: the Digital Preservation Coalition, the Digital Curation Centre, The National Archives and the National Preservation Office. This allows the digital preservation policy reader to understand choices made by the organisation when developing a digital preservation policy.

A digital preservation plan on the other hand goes one step further than the policy. The digital preservation plan is for internal stakeholders to understand how digital preservation of records will be carried out. It should demonstrate a detailed understanding of the steps to achieving the archive commitment to digitally preserving records.

The digital preservation plan should include but is not limited to the following:

RATIONALE FOR DIGITAL PRESERVATION
This may not be dissimilar to the rationale or purpose outlined in the digital preservation policy and strategy of the archive. In some cases this is a simple statement which the archive reel off in regards to their commitment to digital preservation.

STATEMENT OF ORGANISATIONAL COMMITMENT
This is the point you will reinstate the organisation/archives digital preservation strategy. The commitment the organisation/archive has towards achieving digital preservation.

STATEMENT OF FINANCIAL COMMITMENT
This may outline a commitment to how financially sustainable the organisation or archive digital preservation plan is. This can be tricky for those of us where the organisation dictates the funding budgets for archive departments. Alternatively, it can be useful as it can help the archive to advocate and make the organisation commit a budget for the archive and more importantly the digital preservation of records. It may be that the organisation has to review it's financial commitment and this may be reviewed on a yearly basis. However, it is helpful to have the organisation/archive commit to this type of review and financial commitment in writing. Components of the financial commitment may include institutional commitment, legislative mandate (if there is financial support), and membership structure (if the digital preservation program is a collaborative or based on a subscription program), fundraising and grant programs, and fees and other revenue sources. You should consider any collaborative initiatives which may take place with digital repositories, data producers, digital preservation programs, standard-setting bodies, and commercial organizations working in the area of digital programs which may have a financial bearing on the archive/organisation.

METADATA CREATION
You should acknowledge the importance of the creation and development of the metadata within a simple statement. For example, you could outline: 'Metadata is fundamental to preserving [archive name] digital resources. Preservation metadata includes a number of different types of metadata including: [list the type of metadata created]. Particular attention is paid to the documentation of digital provenance of records'.

ROLES AND RESPONSIBILITIES

Similar to the digital preservation policy this section outlines who is responsible for what in the process of digital preservation. However, the roles and responsibilities section of the digital preservation plan provides you with more time to carve out expectations of each role and outline in depth who is responsible for each step in the process.

TRAINING AND EDUCATION (OPTIONAL)

If following the OAIS model of digital preservation. The OAIS requires that continuing development of staff be addressed in the digital preservation program, however few organizations provide sufficient support for staff development. This might be something to consider and discuss with your organisation before committing to following the OAIS model.

MONITORING AND REVIEW

The digital environment changes all the time. Therefore, it is important to have a strategy in place in which you monitor and review your digital preservation plan. This may be in line with the organisation/archive's own monitoring and review process of policies.

Glossary

ACCREDITATION
Archive Service Accreditation is the UK standard for archive services.

CHECKSUMS
A checksum is a string of numbers and letters that act as a fingerprint for a file against which later comparisons can be made to detect errors in the data. Checksums can be generated using a range of readily available and open source tools
(Source: Archives New Zealand)

DIGITAL ASSET REGISTER
A digital assets register is a document or database where collections managers or those responsible for digital preservation systematically record all digital content
(Source: Digital Preservation Coalition)

DIGITAL PRESERVATION
The series of managed activities necessary to ensure continued access to digital materials for as long as necessary (Source: Digital Preservation Coalition)

DIGITISATION
Copying a physical item and turning it into a digital image or photograph. The image can then be stored and used to create further copies for different purposes, including public access (Source: Norfolk County Council)

DROID
A free software tool developed by The National Archives to perform automated batch identification of file formats (Source: The National Archives UK)

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Stay tuned for
Part 2: Options for Digital Preservation
to be published early in 2022.

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