

"The first line of defense against loss of valuable digital information rests with the creators, providers and owners of digital information." ([Waters and Garrett 1996](#))

The Task Force on Archiving of Digital Information articulated one of the earliest acknowledgements of the crucial role of the creator in helping to ensure long-term access to the digital resources they create. This view has been reiterated in many other documents since the Final Report of the Task Force was published. Clearly, most individual creators cannot be expected to take on long-term commitment to preserving the digital content they create ([DLM Forum 1997](#)

). Every digital resource has a life cycle and different stakeholders and interests within this. However, it is both achievable and highly desirable that a dialogue is established between them when issues of long-term preservation are involved. Given the crucial role of the creator in undertaking short to medium-term preservation and at least facilitating medium to long-term preservation, this section will focus on encouraging good practice in creation of digital materials which will assist in their future management.

A major source of current activity and investment is in the digitisation of analogue materials, in particular digital imaging. There are many useful tools which provide assistance with various stages of digitisation projects. This section of the handbook will not attempt to duplicate work done by others by producing a detailed decision tree for digitisation but will act as a means of flagging issues relevant to the management of digital objects and provide links to more detailed sources of advice and guidance.

There is also a wide range of digitisation methods and this section is not intended as a digitisation guide or manual for different methods of capturing information. Our focus remains the implications for digital preservation in the creation process. Two areas have been selected, creating digital surrogates and creating electronic records as being of most widespread interest and illustrating general preservation principles for other data creation methods.

The emphasis on digitisation in this section reflects its current importance as increasing numbers of institutions embark on digitising parts of their collections. It is important to reinforce that this handbook is not considering the potential of digitisation as a preservation reformatting tool. The emphasis throughout the handbook is on the preservation of "born digital" materials, or the products of digitisation (the digital surrogates themselves), not the preservation of the analogue originals.

Many digitisation projects cite enhanced access as the major objective, a perfectly legitimate objective but unless due care and attention is given to how that access can be maintained over time, it may well be short-lived. This section of the handbook makes the assumption that it is highly unlikely that all current digitisation initiatives are being undertaken with due regard to the long-term viability of the digital surrogates they are creating. A related assumption is that it would be useful to encourage good practice in creating digital materials and to point to existing sources of guidance.

A second major source of current activity is in the creation of electronic records. This section is divided into two, the first focusing on the creation of digital surrogates through digitisation and the second on the creation of electronic records. Both have excellent sources of advice and guidance and key references are provided in an annotated reading list following the section.

Creating Digital Surrogates

The following diagram ([Figure 3](#)) illustrates how the relationships between the various elements should ideally flow within an institution. For the sake of simplicity, the diagram looks at the broad issues as they apply to long-term preservation, referring to more detailed guidance documents, as appropriate. It suggests that a strong corporate presence, in the form of policies and associated strategies, is required in order to provide the necessary guidance and authority to staff involved in institutional digitisation projects. Consideration of how the digital surrogates will be maintained needs to be made as early as possible, preferably at the design stage. It is also important to note that the broad model applies to all activities, not just digitisation, and the Further Reading section reflects this wider perspective.

Figure 3

Creating Digital Surrogates - Management Context and Checklist

Corporate Policies

Outlining broad policy towards selection for digitisation, purposes of digitisation; management of digital s

See Further Reading for models and frameworks and checklist for elements which may need to be addre



Corporate Strategies

Strategies to put into practice the principles articulated in corporate policy statements. See Further Reac



Corporate Procedures

Guidelines for operational activities which are clearly linked to corporate strategies. See checklist below

Checklist (see note) Issues in Preserving Digital Surrogates

- 1 Assess whether the material for digitisation has been digitised?
If so, is it to an appropriate standard and readily accessible?
 - 2 Finding funds for the project exist, both from the funding agency (if externally funded) and the institution.
 - 3 Planning the project and assigning resources. Need to consider the maintenance of the digital copies as well as one-off funding.
- Ensure all relevant stakeholders are aware of the project (for example, if another part of the organisation is involved).
- 4 Selecting appropriate standards and protocols to digitise the original and to make copies. Copyright issues and Rights Management.
- Condition and completeness of original. Is it capable of being re-scanned at a later date if the digital copy is lost?
- 5 Decide on the appropriate file format and storage (for example, searchable copies or not).
 - 6 Decide on the digitisation approach to be used (e.g. analogue original or digital original) and the metadata recording.
 - 7 Prepare original (e.g. PDF or TIFF) for digitisation (e.g. scanning) and the digital copy (e.g. PDF or TIFF).
 - 8 Convert original to digital format. Compression algorithm (if used); bit depth requirements.
 - 9 Quality assurance checks. Needs to be of an acceptable preservation quality.
- If using third party services, need to ensure documentation clarifies responsibility for quality assurance.
- 10 Final metadata recording and discovery and for managing and preservation of digital copy.
 - 11 Loading data into storage systems for access and preservation copies (if different). Make backup.
 - 12 Implementing archiving and preservation strategies or transferring to a preservation agency.

Required standards for formats, storage media, documentation, and transfer procedures. Storage of master copies for media refreshment and changes in technological environment.