

# Mind the Gap (2006) - Needs and Recommendations

The following table brings together the needs that have been brought out in this report. For each need, the current state of progress in meeting this need is summarised and a recommendation for further action is made (where appropriate).

No.	Need	Current State of progress	Recommendations
<b>Growing Awareness</b>			
1	Awareness of the impact of digital preservation needs to be more commonplace and spread beyond the current core of informed individuals and organisations. In particular, awareness needs to be greater amongst data creators.	This work is currently well supported by organisations such as the DPC and DCC. They are planning to extend their influence, especially within the commercial sectors.	Given the results of the survey, this will be an ongoing need for the foreseeable future.
<b>Translating awareness into action</b>			
2	Organisations need to go beyond awareness of the problem and create a proactive plan for dealing with the issues. This should include appointing clear responsibilities for each part of the plan.	Most organisations have no plan and responsibility for dealing with digital preservation issues is usually very unclear.	Organisations should create a long-term proactive information/knowledge management plan. This should start with an information audit and then, once the problem has been appropriately sized, the task of creating a solution should be properly resourced. This should include the assignment of clear responsibilities.
3	Organisations need to take stock of the digital materials they hold and are currently creating along with the time periods over which they should be preserved.	Most organisations do not know the extent of the problem they face.	Organisations should perform regular information audits to measure (and continue to measure) their digital preservation needs, and to ensure that these are being met.
<b>Funding Justification</b>			
4	Project based funding needs to take into account the long-term value of the information produced by the project and the cost of its retention.	Very few projects take a long-term view of the information.	Organisations should include long-term data retention as a criterion in the cost-benefit analysis of any project that will lead to the creation of a substantial amount of digital information.

5	It needs to be easier to build a business case for the long-term preservation of digital material, e.g., a cost-benefit analysis. In particular, there needs to be the ability to measure digital asset value taking into account any long-term commercial value (e.g., by enabling future decision-making) and the risks of losing information (e.g., risks to public safety or health).	Reasonable estimates of costs can be obtained through standard estimation methods and via some examples from previous archiving projects. However, there is very little information on value as most current repositories have been created by organisations that are mandated to retain information.	Funding bodies should support research into the long-term value of digital information and models of how that value may change with time.
			Organisations should consider the long-term value of digital material when putting together plans and budgets.
Repositories for all			
6	Internationally-agreed standards are needed to help guide digital preservation projects and thus reduce the risks involved.	OAIS and PREMIS are major steps but still leave organisations with issues of interpretation and/or a concern of how much of this needs to apply to them. Standards can create a barrier to implementation if it is perceived as requiring an organisation to make large up-front commitments before getting started.	The UK Government and funding bodies should promote further development of collaborative standards and methodologies in digital preservation for all parts of the digital preservation lifecycle. In particular, a roadmap of how to scale up a system while meeting standards is needed.
7	Organisations need to be able to place digital material into a repository (whether in-house or provided by another party) with measurable confidence.	RLG/NARA have established an Audit Checklist for the Certification of Trusted Digital Repositories. Additional funding has been provided to test this checklist on four existing repositories.	This important work needs to be closely monitored and mechanisms for certification need to be developed by the digital preservation community.
8	All public organisations need to have an identified repository where their material can be sent to be preserved at all times in the lifetime of that information. This needs to include those organisations that are unable to justify the capital expenditure involved in performing digital preservation (e.g., because they have only a small volume of digital material to store).	Some information from some public organisations is covered such as records of long-term value within government departments (will be retained by TNA) and some records created through academic scientific research. However, there are currently a lot of gaps.	The UK Government and funding bodies should promote, through seed funding, the creation of more digital archives across relevant sectors and organisations. Promote collaborative regional or national repositories to meet the needs of small and medium size organisations. These can then be promoted as exemplars for other organisations to follow. The overall aim should be to set up a network of trusted repositories.

New discipline			
9	The new discipline of digital preservation needs to be supported. This should include the provision of continual professional development for existing individuals with relevant skills sets, e.g., archivists, librarians and IT staff.	The JISC-funded Digital Preservation Training Programme (DPTP) has now been piloted and additional programmes are planned for 2006.	Organisations should set aside a budget for training staff. Options for subsidising intensive programmes such as DPTP should also be explored in order to help smaller organisations with a limited training budget.
10	Digital preservation training should form part of the professional training for conservators, archivists and librarians	Professional conservators, archivists and librarians have to pick up digital preservation skills when these are needed.	Higher education courses for conservators, archivists and librarians should include digital preservation training.
11	There needs to be cross-disciplinary forums to allow both experienced individuals and organisations to exchange digital preservation best practice and others to turn to for advice.	There is an active digital preservation community in the UK with regular conferences etc. There is increasing take-up of existing services supported by the DPC and others.	Promote wider awareness and use of relevant resources available from the DPC, the DCC and others.
Government Policy			
12	The impact of new legislation (e.g., the Freedom of Information Act 2000) and government initiatives (e.g., the Modernising Government agenda) on digital preservation requirements needs to be fully considered both before and after implementation.	The digital preservation impact of new policies are usually only considered as an afterthought.	In formulating policies, the UK Government should take into account their impact on the digital information lifecycle. In particular, the sooner digital preservation activities can be carried out, the more effective and economical they can be.
13	Policies and programmes need to be co-ordinated at regional, national, European and global levels.	Some communities, e.g., the bioinformatics community, do have co-ordinated, global policies and programmes but this is unusual rather than the norm.	The UK Government should ensure that programmes and policies are co-ordinated nationally and on a wider scale (especially within the EU).
Legal and regulatory Frameworks			
14	There needs to be a greater understanding of the steps organisations can perform to ensure that digital information remains legally admissible.	Organisations are not confident that they can take actions that will guarantee legal admissibility of information.	The UK Government needs to work with the digital preservation community and the legal profession to establish clearer guidelines for ensuring that digital information is legally admissible.
15	Organisations that hold digital information need to be able to cope with the access restrictions imposed by copyright legislation.	Copyright is a barrier to wider access which (since this is one of the main benefits from the preservation of information) provides a barrier to investment in long-term information retention.	The UK Government needs to ensure that an appropriate balance is struck between the legitimate rights of information creators and the desires of others to gain enhanced benefits from that information.

16	Organisations working within regulated industries need the ability to perform digital preservation activities (e.g., following a given migration pathway) that can be certified as acceptable by regulatory authorities.	Current regulations can be seen as a barrier to using digital systems and leads to a reliance of 'print and file'.	Regulatory bodies need to work within their sectors and the digital preservation community to map out a framework, which will allow organisations to store information in an exploitable form while retaining the ability to satisfy regulatory concerns.
<b>Reducing Risks</b>			
17	There needs to be more technical tools to help organisations perform digital preservation activities such as performing format migrations, format validation and automated metadata extraction.	A few tools have been created.	All organisations need to encourage an international 'market' for digital preservation tools by linking up with other projects around the world and engaging with software vendors. This would deliver economies of scale and reduce risk for individual institutions.
18	The formats used by data creators need to be influenced by the long-term preservation needs of the information they will create.	Data creators usually use formats that suit their immediate needs without worrying about their long-term preservation characteristics.	Organisations should consider the long-term preservation characteristics of the formats they use.
			Organisations should work together and with software vendors to encourage the development of open file format standards.

Table 3: Needs and Recommendations