

ELECTRONIC RECORDS MANAGEMENT

# framework for strategic planning and implementation

VERSION 1.0

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# Introduction

This document is compiled from contributions of a working group composed of participants representing a wide range of government departments, agencies and other organisations. It is intended as a framework for thinking about strategic planning for the introduction of electronic records management to a UK government organisation.

The document sets out a structured set of elements or points, from broader to more specific, which can act as a checklist and support for developing detailed strategic plans. The document is intended to be supportive rather than prescriptive; each element will not be of equal relevance or weight to every government organisation. A suggested use of the document is to:

- assess each element for relevance to your own organisational needs for ERM
- determine how this element is handled in your strategic thinking
- incorporate into, and expand upon, the element in the relevant documentation
- ensure co-ordination and consistency between documentation products and within strands of strategic thinking.

The document may also be useful as a benchmark for periodic review of progress and developments, and for contributions to detailed programme planning. Although elements are arranged in a broad logical structure, there is no implication that sections and elements follow a strict chronological order. This will vary according to the approach taken to programme planning.

The strategic framework covers:

- A Developing an outline business case
- B Developing a pre-implementation strategy
- C Developing a change management strategy
- D Developing an ERM system implementation strategy.

Participating organisations in the Invest to Save funded project work from which this document emerged are:

- Crown Prosecution Service
- Court Service
- Ministry of Defence

## INTRODUCTION

- Department for Education and Skills
- Department of Health
- Highways Agency
- HM Treasury
- Board of Inland Revenue
- Medical Research Council
- National Archives of Scotland
- National Assembly for Wales
- Northern Ireland Office
- Public Record Office, NI
- Scottish Executive
- Scottish Parliament
- Department of Trade and Industry
- Treasury Solicitors Department

# A Develop an Outline Business Case

## Develop a Strategic Case

- **Relate ERM to the strategic context**
  - Organisational strategy and objectives
  - Government policy imperatives
  - Emphasise ERM as aspect of IM/KM
- **Identify drivers for change**
  - Modernised government  
*e-government, e-business and e-records*  
*Knowledge management strategies*
  - Legislative requirements
    - *Freedom of Information, Data Protection, Human Rights Act, European Commission Directives, Public Records Acts*
    - *Government accounting rules, Audit requirements, Finance Act, PAC*
    - *Devolved areas legislation*
- **Identify business benefits**
  - Cross-government services and administration
  - Departmental business processes
  - Corporate information management
  - Informational and knowledge-based benefits
- **Identify key stakeholders**
  - Business process improvement
  - IT infrastructure
  - Change management
  - Records management
- **Identify objectives and boundaries**
  - Scope
  - Outcomes
  - Constraints

### **Develop an Economic Case**

- **Identify appropriate options**
  - Adapt current systems
  - Procure/develop new systems
- **Identify assessment criteria**
- **Carry out a SWOT analysis**
- **Carry out a risk analysis**
  - Strategic risks
  - Operational risks
- **Cost/benefit appraisal**
- **Benefits realisation**
  - Citizen benefits
  - Business benefits
  - Records and information management benefits
  - End user benefits

### **Develop a Project Management case**

- **Identify critical success factors**
- **Develop a risk management strategy**
- **Determine a business analysis and planning process**
- **Plan an implementation approach**
  - Pilot systems for early learning and avoidance of pitfalls
  - Enterprise-wide but phased rollout
  - Modular rollout (one business process at a time)
  - Incremental rollout (levels of functionality implemented in stages)
- **Business continuity planning**
- **Describe project management processes**
  - Roles and responsibilities

## **Develop a Commercial/Financial Case**

### **Options for procurement strategy**

- Relationship to PPP/IT outsourcing
- Commercial market products

### **Affordability**

- Stakeholder buy-in

### **Procurement**

- Office of Government Commerce support
- Procurement regulations and best practice





## **B Develop a pre-implementation strategy**

### **Formalise a corporate policy on ERM**

- Define what constitutes a record
- Identify points when an electronic document becomes an electronic record
- Define and identify ownership/custody of records
- Define roles and responsibilities across the organisation

### **Develop internal agreements between records management unit and organisational units**

- Identify benefits for the organisational unit
- Identify responsibilities for the organisational unit

### **Carry out an information audit**

- Define objectives of audit
  - Information and record objectives
  - Organisational objectives
- Produce and maintain a records inventory
  - Electronic
  - Paper
- Develop links to appraisal strategy and file structure development

### **Develop an appraisal strategy**

- Build on information audit
- Develop links to filing structures, business objectives
- Link review dates to review schedules for paper records
- Consider whether review dates need to change
- Consider impact of larger volume of records – e.g. e-mail
- Impact of legislation on retention/review

## Prepare an electronic fileplan/filing structure

- **Determine how far can existing filing structures be used**
  - Consider how well they work now
  - Consider need to move to smaller file grouping units
  - Consider scope for rationalisation
    - *Eliminate duplication*
  - Develop strategy for hybrid filing systems
    - *Linking paper records to electronic copies prior to ERM introduction*
    - *Linking electronic records to earlier related legacy paper files*
    - *Linking post-ERM paper records to electronic records (e.g. incoming correspondence, non-standard documents such as large plans)*
  - Develop strategy for dealing with cross-cutting issues
- **Decide on naming strategies**
  - Functional, structural, subject
  - Thesaurus/controlled vocabulary
    - *Consider use for naming for File folders*
    - *Consider use for naming for documents*
    - *Conformance with Pan Government Category Lists*
    - *Use of departmental thesaurus*
- **Determine metadata requirements**
  - Conformance with cross government metadata framework
  - Records management metadata requirements
  - Departmental requirements
  - Method of implementation
- **Determine interoperability requirements**
  - Conformance with e-GIF standards
  - Technical and informational interfaces
  - User interface standards
  - Departmental system needs
- **Determine corporate fileplan structuring principles**
  - Corporate structure not individual structures
  - Subject-based model
  - Service/Business Process-based model
  - Functional-based model
  - User models for storage and retrieval

- **Develop retention and disposal schedules**
  - Investigate extent to which schedules for existing physical records can be applied
  - Determine relevant business needs
  - Determine relevant public record needs
  - Consider other legislation (e.g. FoI)
  - Minimise review where possible

### Develop a migration strategy

- **Evaluation and preservation plans**
  - Existing electronic documents for business continuity
- **Technical issues**
  - Current platforms and plans for change
- **Legal and legislative requirements**
- **Continuing business needs**

### Develop a set of fundamental procedures

- **Recommend document naming conventions**
- **Recommend document formats**
- **Develop E-mail policies**
  - Which e-mails are to be kept
  - What format they should be kept in
  - How messages should be composed
  - How dialogues should be managed
- **Manage use of shared network drives**

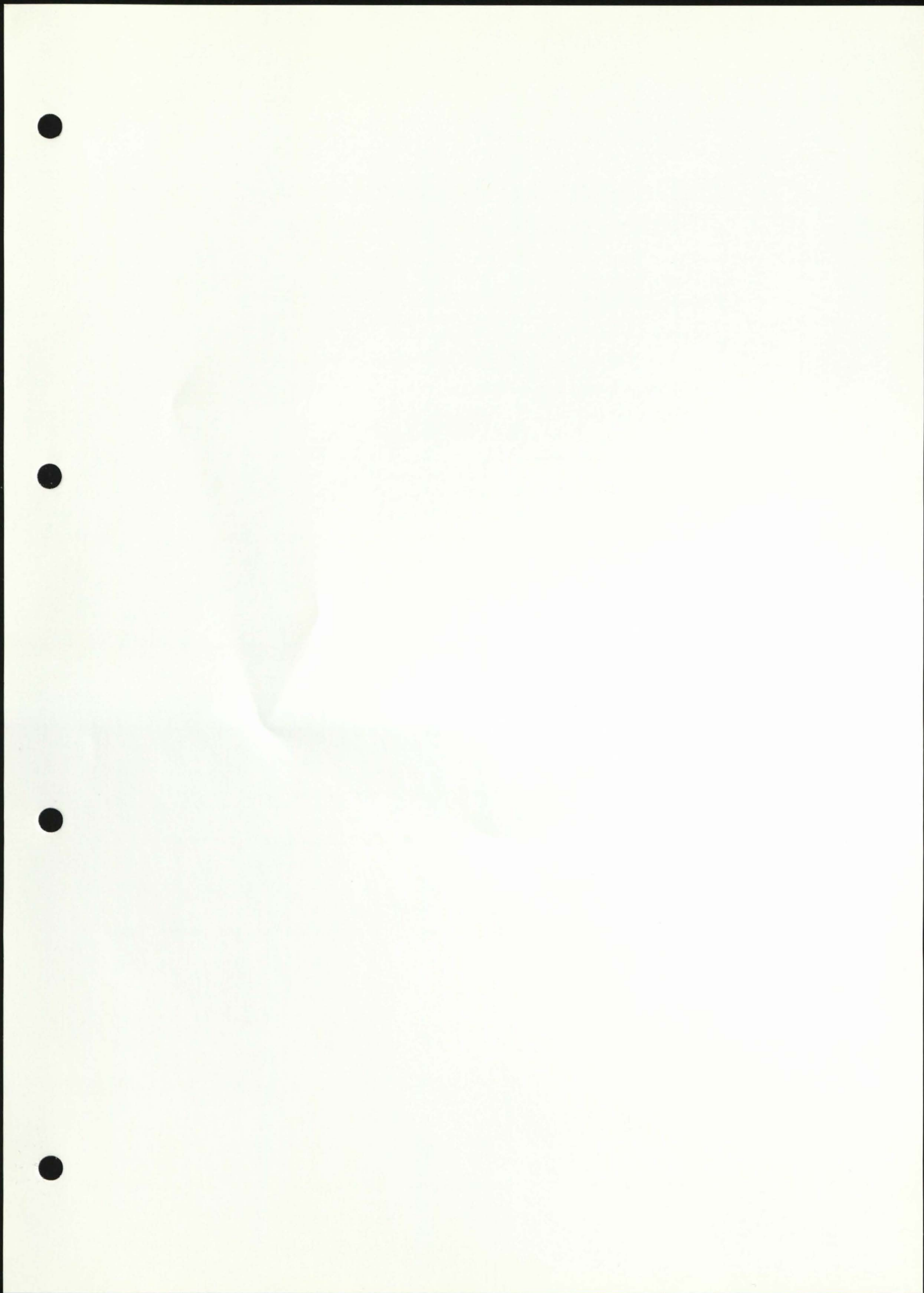
### Develop a pre-implementation training and awareness strategy

- **Build information literacy competency for all staff**
  - Make all staff aware of their responsibilities and contribution
- **Devise methods and stratagems**
  - Induction programmes
  - In-house publications
  - Best practice cards, Mouse mats

- **Educating e-Champions and senior management**
  - Briefing sessions
  - Internal contact networks
  - External networks

## C Develop a change management strategy

- **Identify alternatives and select approaches**
  - Champions/volunteers, early adopters
  - Programme Office
  - Corporate wide rollout
- **Develop awareness of benefits**
  - Benefits for the organisation as a whole (*'why it's good for us all'*)
  - Benefits for the individual user (*'why it's good for you in particular'*)
- **Define/describe impact on working practices**
  - Roles and responsibilities
    - *Who files records and documents?*
    - *Who maintains the folder structure?*
  - Describe benefits realisation
    - *Identify how benefits will be recognised*
- **Define an implementation training strategy**
  - Identify groups requiring different forms of training
  - Link technical training and corporate information management policy
  - Identify delivery approach
    - *In-house (slower, more awareness of job requirements, better future support)*
    - *External IT trainers (faster, limited awareness of job requirements)*
- **Develop a communications strategy**
  - Awareness development and management of expectations
  - Support for local planning/preparation
- **Develop a user implementation package**
  - Training options
  - Implementation/training scheduling
  - Delivery scheduling for consequential upgrades
  - Acceptance and signoff arrangements



## D Develop an ERM system implementation strategy

### Pre-procurement

- **Develop a comprehensive scoping document**
  - Identify outcomes, constraints, opportunities, synergies
- **Identify and initiate pilot project(s)**
  - Evaluate software
  - Identify appropriate consultants if necessary
  - Implement and review
- **Review ERM policy**
  - Conformance with PRO requirements
  - Incorporate capture policy for different document and record types
  - Incorporate conclusions from information audit
  - Learn from others
- **Standards conformance**
  - PRO conformance
  - PD0008, PD 5000 (BSI)
  - BS7799
- **Develop Terms Of Reference for full implementation strategy**

### Systems design

- **Determine relationship and interfaces with other systems**
  - Departmental information systems strategy
    - *Records established as key consideration in systems development procedures*
  - New e-business systems
  - Websites, Intranets
  - Briefing systems, Knowledge Network
  - Existing operational and standard administrative systems (personnel, finance, estates)



- **Determine arrangements for managing structured data**
  - Databases and datasets, existing and newly created
  - Information mapping between services, data sharing arrangements
  - Maintaining historical data; database snapshots
- **Determine metadata elements for ERMS**
  - Determine metadata to be captured for each folder and document
  - Determine metadata that should/could be captured automatically
- **Design and implement fileplan on selected product**
  - Does previous fileplan require modification?
  - Does new system allow a desired simplification?
- **Implement retention rules**
  - Standard retention and disposal rules
  - Departmental-specific retention and disposal rules
  - Agreement with PRO
- **Implement access, retrieval and storage strategy**
  - Build detailed access models for security and business needs
  - Electronic storage locations: centralised, distributed
- **Implement appraisal/migration policy**
  - Plan take-on of migrated data
    - *Paper file management*
    - *Existing electronic material*
    - *Hybrid files*
- **Agree usage policy for ERMS and alternatives**
  - Policies and procedures for non-ERMS storage
    - *E-mail systems*
    - *Shared network drives*
    - *Intranets*
    - *Collaborative and groupware systems*
  - Determine any constraints on storage
    - *Measure use*
    - *Set limits on use*
    - *Remove availability*

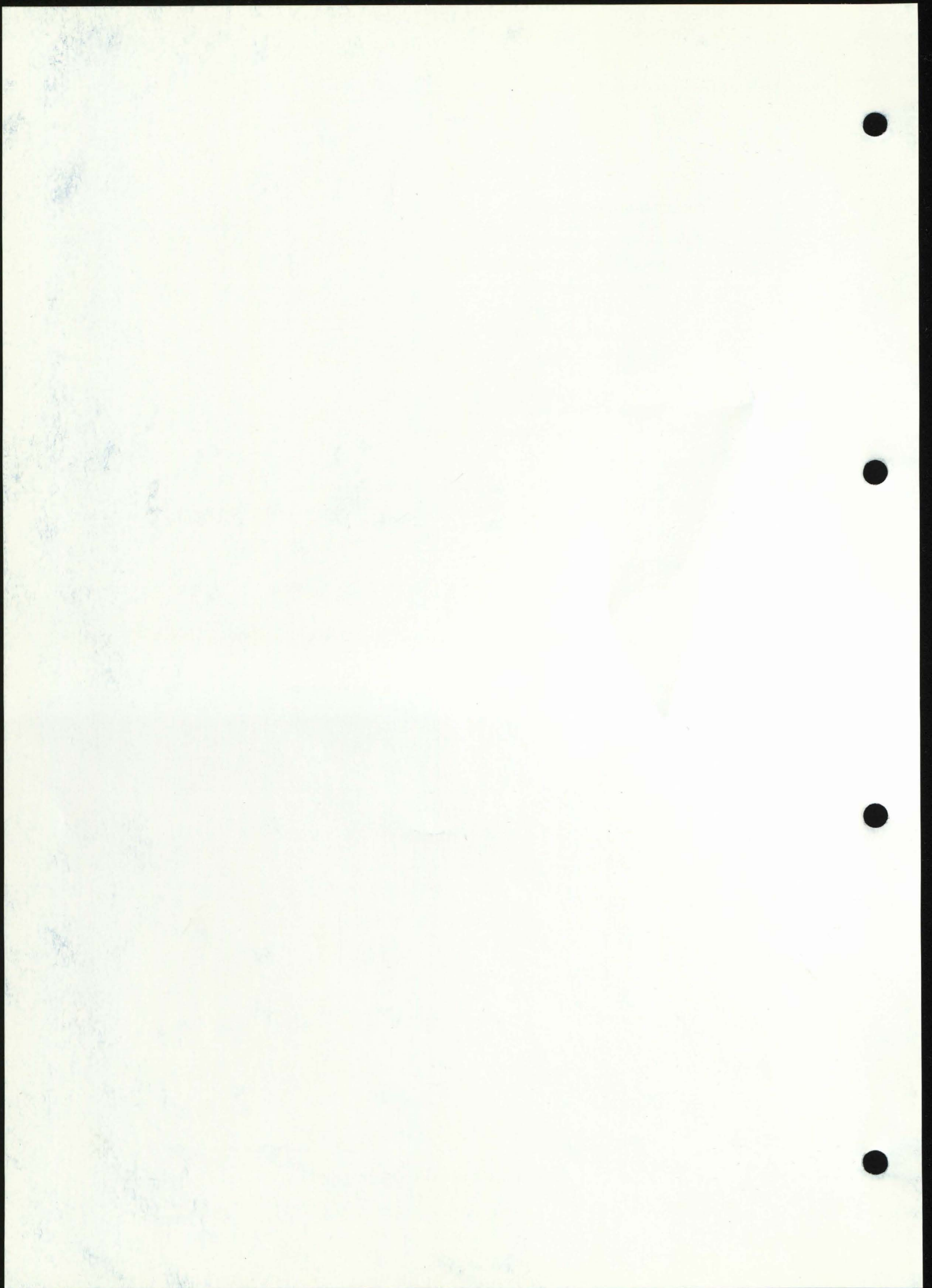
- **Determine scanning policy**
  - Determine document types that will be created and remain in paper (*incoming correspondence, necessary legal documents, highly sensitive material*)
  - Determine document types that will be routinely scanned
  - Determine how scanning will be organised
    - *Centrally or locally; specialised function or general access*
- **Build consideration of sustainability issues into long-term planning**
  - Maintaining business access over time
  - Managing technology upgrades: hardware and software
  - Managing storage growth and structured disposal
  - Develop XML capabilities
- **Build up procedures for review and transfer of historical record**
  - Compliant procedures
  - Approved formats

### IT technical issues

- **Test integration and configuration**
- **Confirm final configuration**
- **Test network impact**
- **Determine consequential hardware upgrades (e.g. monitors, RAM)**
- **Run a technical pilot**
- **Plan technical implementation for reliability, resilience, security and disaster recovery**
- **Plan detailed capture mechanisms for different document and record types**
- **Desktop rollout**
  - Desktop clients and standard office software
  - Browser interfaces
- **Develop a technical implementation package**
- **Plan to manage and monitor infrastructure impacts**

## Project management issues

- **Roles and responsibilities**
  - Overall programme management
    - *Business-led or IT/RM-led*
  - ERM system management
  - Implementation project
  - Record management
- **Pilot system**
  - Ensure participation by end users
  - Review and learn from user experience
- **Formal reviews**
  - Plan for necessary OGC Gateway and other peer reviews
  - Ensure reviews from pilot and early implementation fed back to planning process
- **Project monitoring and control**
  - Develop measurements, reporting structures, accountability
  - Develop change control processes
  - Ensure stakeholder involvement
- **Post-implementation review**
  - Develop continuing improvement and change processes



*evaluations*



# Evaluating information assets

## Appraising the inventory of electronic records

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## Summary

This toolkit is provided to help departments make an initial evaluation of the content of their inventories of electronic record collections developed as part of the Information Age Government strategy which requires all newly created public records to be electronically stored and retrieved by 2004. The strategy requires departments to undertake appropriate action to meet specific milestones at designated dates.

An earlier milestone required departments to develop an up-to-date and comprehensive inventory of records collections by December 2000 covering any electronic records or potential electronic records. Departments should now be planning to meet the strategic milestone to evaluate the electronic record collections listed in their inventories by September 2001. This toolkit has been produced to explain what now needs to be done to meet the target.

In order to comply with the milestone departments need to evaluate the contents of their inventories of electronic records to determine value and correct disposal<sup>1</sup>, in order to:

- bring those electronic records that are valuable and still required for business and other reasons, into a managed environment
- apply a departmental digital preservation strategy to them as a part of that managed environment.

Electronic records which are evaluated as no longer having departmental value should be submitted for formal appraisal, in conjunction with the relevant PRO Client Manager, to determine whether they fall within the PRO selection criteria. This should be done before any action (or lack of action) is taken on records so identified. Records which are brought into a managed environment at this stage will be submitted for appraisal later, at the appropriate point in their lifecycle. No records should be destroyed without first consulting the relevant PRO Client Manager.

This toolkit will help departments develop three main products which will facilitate the actions listed above:

- guidance for records managers on best practice in evaluating electronic record collections recorded in departmental inventories
- a schedule of electronic records listed in the inventory which should be preserved in their current location, or migrated to a formal electronic records management system
- a schedule of electronic records to which a departmental preservation strategy must be applied.

Successful evaluation will identify those record collections which need to be both managed and sustained over time in order to fulfil the business and operational needs of the organisation. If the content of a record collection falls within the Public Record Office (PRO) selection policy, this will override all other considerations in determining fitness for permanent preservation. Departments should contact the PRO to confirm the status of the collection and jointly determine an appropriate timetable for transfer.

<sup>1</sup> Disposal refers to the action that may be undertaken once the records are no longer required for operational purposes. They can then be disposed of by deletion/destruction after an appropriate retention period to ensure the wider business interest is supported. They may also merit permanent preservation and transfer to the PRO and will require appraisal once disposal is deemed appropriate. The decision to preserve permanently will need to take account of the PRO Acquisition and Disposition policies and any existing Operational Selection Policy (OSP).

The *Route map and milestones to achieve electronic record management by 2004* gives further information on the Information Age Government strategy and the milestones towards 2004. It can be accessed on the PRO web-site at:

[http://www.pro.gov.uk/recordsmanagement/eros/ROUTE\\_MAP\\_7.pdf](http://www.pro.gov.uk/recordsmanagement/eros/ROUTE_MAP_7.pdf)

## 2

## Introduction

### 2.1

### Aims and intended use

This toolkit is one of a set that offers practical guidance for public record bodies so that they are better placed to meet the 2004 target for electronic records within the Information Age Government strategy. This states that by 2004 all newly created public records will be electronically stored and retrieved. The toolkits support the work needed to meet the interim milestones, which central government departments are being asked to adhere to en route to this target. These milestones are the dates by which actions must to be completed to achieve the 2004 target.

Departments were required to develop an up-to-date and comprehensive inventory of records collections covering any electronic records or potential electronic records by the end of December 2000. Departments now need to evaluate the contents of these inventories to determine value and correct disposal, in order to prioritise action on:

- bringing those electronic records that are valuable and still required for business and other reasons, into a managed environment;
- applying a departmental digital preservation strategy to them as a part of that managed environment.

The toolkit is intended as practical advice for departments who must - as part of their route to 2004 - begin to manage their currently unstructured and unmanaged electronic records. Evaluation of existing electronic records will help departments identify information flows and eliminate unnecessary duplication. If existing electronic records are not evaluated, material in inventories will remain unmanaged and unsustainable. The toolkit will help departments make an initial assessment of the value of the electronic records to plan future action; it is not intended to be a comprehensive guide to appraising electronic records for lasting historical value. Criteria for selecting records for historical purposes can be found in the PRO's acquisition and disposition policies and in the more detailed operational selection policies. No records should be destroyed without reference to these documents and all records no longer required for business purposes are subject to the formal appraisal process to determine whether they fall within the PRO selection criteria.

As well as helping departments evaluate existing information assets, the results of the evaluation will be valuable for building an electronic file plan - developing structure and allocating disposal schedules - which will be necessary in implementing full electronic records management.

The toolkit is intended to provide guidance on best practice but not to be completely prescriptive. Departments should determine an approach which is most appropriate for their own circumstances. Electronic record collections listed in the inventory are unlikely to be held by electronic record and document management systems (ERDM) - records held in such systems will be actively managed by the software application already. A separate toolkit will be developed covering the development of filing structures for electronic record and document management systems.

This toolkit should be used in conjunction with the guidance in two other related publications *Guidance for an inventory of electronic record collections* and *Strategies for maintenance and preservation of electronic records in government departments* (forthcoming).

## 2.2 Relationship with the 2004 target

In order to ensure full and reliable electronic records management departments need to plan for informed and consistent evaluation and decision-making to determine how long electronic records should be kept and how they should ultimately be disposed of. The route-map and milestones towards electronic records management by 2004 requires departments to bring existing records under control. The relevant milestone concerning appraisal is:

- To evaluate electronic records that should be kept and bring them into a managed environment for maintenance, access and preservation by September 2001.

An inventory of records collections together with an evaluation strategy will enable an organisation to understand what electronic records exist, of what types and of what value, and to determine the actions and resource implications needed to maintain those with continuing value. Inevitably, many collections will be of a hybrid type, constituted of both paper and electronic records. It is essential that organising structures cover both, and that there are cross-references between the paper files and the electronic groupings of records on the same topics.

## 2.3 Toolkit products

There are three main products which can be produced from this toolkit:

- guidance for records managers on best practice in evaluating electronic record collections recorded in departmental inventories
- a schedule of electronic records listed in the inventory which should be preserved in their current location, or migrated to a formal electronic records management system
- a schedule of electronic records to which a departmental preservation strategy must be applied.

## 2.4 Records no longer required by the department for business

Electronic record collections which are no longer required should, in all cases, be:

- brought to the attention of the relevant PRO Client Manager
- submitted for appraisal by the normal mechanisms
- retained until a confirmed decision is taken on disposal

## Audience

This toolkit is designed to help Departmental Record Officers and others charged with record management responsibilities to meet the 2004 target. There will be other stakeholders in the organisation who will participate in the assessment of electronic record collections, from an operational, business or IT perspective. All concerned should ensure consistency with the organisation's corporate policy and procedures, and general working practices.

The guidance is intended primarily for those working in central government; the principles will also be relevant in local government and throughout the public sector. Throughout this document the term 'department' should be taken to apply to any public sector organisation, including all departments, agencies and other organisations across government. Familiarity with the concepts of records as used in central government is assumed.

## Benefits

### Purpose of evaluation mechanisms

A systematic and planned approach to the management of records within an organisation, from the moment they are created to their ultimate disposal, ensures that an organisation can:

- control both the quality and quantity of the information that it generates
- maintain that information in a manner that effectively serves its needs, those of Government and of the citizen
- dispose of the information efficiently when it is no longer required.

The evaluation methods described in this toolkit are restricted to considering records for continuing business value. This does not replace full appraisal, which should always be applied to those records no longer required for departmental needs. Additionally, it does not preclude the need to design mechanisms for structured retention and disposal into new systems.

Effective evaluation mechanisms ensure that information is held for as long as it is required for business or other needs, and support informed disposal. This in turn will help departments meet their obligation under the Data Protection Act 1998 s4(4) *to comply with the data protection principles in relation to all personal data under their control* and the requirement of the Lord Chancellor's Code of Practice on the Management of Records under Freedom of Information, (currently in draft version 21a, 21 June 2000) *to have in place systems for managing appraisal and for recording the disposal decisions made.*

### 3.2 Departmental business needs

Effective management of unstructured and poorly organised material listed in the electronic records inventory will:

- help to ensure that the organisation retains the operational business information which it needs
- develop an effective corporate memory base of past decisions, actions and outcomes
- help support requirements for legal admissibility and accountability.

### 3.3 Freedom of information (FOI)

Evaluation of electronic record collections will (partially but not completely) help departments meet their obligations under FoI legislation. The Lord Chancellor's Code of Practice on the Management of Records under Freedom of Information, (version 21a, 21 June 2000) states that:

- *It is particularly important under FOI that the disposal of records - which is here defined as the point in their lifecycle when they are either transferred to an archives or destroyed - is undertaken in accordance with clearly established policies which have been formally adopted by authorities and which are enforced by properly authorised staff.*
- *In order to make their disposal policies work effectively and for those to which the FOI Act applies to provide the information required under FOI legislation, organisations need to have in place systems for managing appraisal and for recording the disposal decisions made.*

### 3.4 Data Protection

Data protection is subject to the overriding principle that personal data processed for any purpose or purposes should not be kept for longer than is necessary for that purpose or those purposes. This principle does not preclude long-term retention of personal data for continuing operational purposes or permanent retention for archival purposes. However, in order to meet this requirement, the issue of appropriate retention periods has to be addressed. Identifying and applying retention periods forms part of the evaluation process and will help departments to comply with the Data Protection Act.

### 3.5 Advantages of early evaluation

The timeframe in which effective action to evaluate and preserve access to electronic records can be taken is shorter than with conventional records, due to:

- the pace of technological change in the systems which create, store and access records
- the instability of the media on which records are held
- the danger of technological obsolescence.

Early evaluation avoids the risk of records becoming incomplete or unreliable, or changes in information technology systems causing the loss or degradation of records, which have not been migrated to a new system with sufficient forethought. This

evaluation should be done at the most within five years of creation of the earliest records within a system; and ideally, an initial assessment of the records likely to be created within a new system can be conducted at the time of system design and installation.

As with conventional records, electronic records will fall into broad categories:

- many electronic records will only have an ephemeral value and will not need to be kept in the long term
- others will need to be kept for legal and business reasons
- some will be needed for operational reasons and the administration of the department in the longer term
- a proportion will need to be safeguarded for eventual transfer to the Public Record Office.

While ensuring that records of longer-term value are safeguarded by migration into replacement systems, early assessment will also enable the identification of records with only short-term value. It is desirable to avoid migrating such records to a new system unnecessarily, offering cost savings as a return. The criteria set out in PRO selection policies will need to be applied to any such records before irreversible decisions are taken.

Consistent assessment of records listed in the inventory will provide a basis for a longer-term approach to the development of retention and disposal schedules that will apply following implementation of an electronic records management system.

Where a recommendation to dispose of or destroy a record collection has been made, this should still be formally confirmed at the appointed disposal date to ensure that the original recommendation is still valid and also to determine whether they fall within the PRO selection criteria. This will avoid destroying material where the value of the information to the organisation has changed and where a longer retention period or even permanent preservation would now be merited.

## 4

### 4.1

## Preparing for the evaluation process

### Strategies

An evaluation strategy aims to:

- identify and evaluate records which are organisational information assets
- bring into managed control - by migrating into an EDRMS, or by subjecting to a preservation regime under the current arrangements - those records which have continuing or permanent value.

The first priority is to prepare a strategy. In order to develop this it is necessary to:

- identify which record categories should be evaluated first, and why
- develop a strategic plan which covers:
  - a mechanism for conducting evaluation appropriate to the circumstances in which records are kept
  - a mechanism for recording and prioritising actions to be taken on the records.

The strategy should address evaluation of records from the following perspectives:

- an organisational, or process-oriented perspective, primarily concerned with the business context and operational needs of the department
- a functional perspective, identifying the main business functions, activities, and transactions which produce records
- a subject, or documentation-oriented perspective, related to the thematic content of records.

Any records, which are not required following the above evaluation will need to be appraised against:

- the Public Record Office acquisition and selection policies, on which decisions for permanent preservation should be based.

This process is not described in this toolkit; further guidance is available from the PRO.

The metadata elements in departmental inventories of electronic record collections, which describe the provenance, subject, thematic, or documentation role of the record collections, should be used to help assess the degree to which records meet these criteria.

## 4.2

### **Prioritising the work - use of timetables**

An evaluation plan will include a timetable that clearly assigns responsibility for all activities, and estimates the schedule for undertaking the actual assessment of each electronic record collection. The scope and complexity of this plan will vary from one organisation to another. Each task should be clearly explained with an estimate of the effort required and the completion deadline. The plan should also include a schedule of which departments and units will be consulted, by whom, and when.

A checklist of the required actions together with time-scales and the identity of the person responsible is a useful planning tool and it will also help in the monitoring of progress against the overall target.

## 4.3

### **Communication strategy**

Where a need for additional information is identified it will be necessary to communicate to all the data owners and users of these electronic record collections that their help will be needed. Where necessary, senior management support should be sought to ensure compliance, in the context of progress towards the 2004 target.

The potential benefits for ordinary users should also be identified and promulgated. This will help make the process a valued and meaningful exercise to the staff and managers consulted during the process, by emphasising that internal benefits will accrue. These include:

- higher quality information
- better information management
- more efficient and effective use of the available storage capacity
- sustained accessibility to corporate information.

## Sources of information

### Inventory of electronic record collections

The toolkit *Guidance for an inventory of electronic record collections* provides guidance on how to develop an inventory. It includes a table of the metadata elements required together with a description and an explanation of their purpose. These elements should have been captured for all listed electronic record collections and should be used to source the information required to make an initial evaluation (see section 5).

### Information Asset Register and Year 2000 Register

Where an inventory is not sufficiently complete it may be possible to capture some of the information required from the organisation's Information Asset Register (IAR). This register is unlikely to provide full coverage of all electronic record collections in an organisation, and may not necessarily be up-to-date, but it will indicate which branch of the organisation is the system owner. The data owners should be able to provide most of the information.

Alternatively departments may be able to use their Year 2000 register to capture a base level of information and use that to undertake the necessary research.

### Information from data owners

A further resource is the data owners and users who will often possess valid information and insights, which may not be formally documented within the electronic record collection.

### Existing paper records

In many instances evaluation of electronic record collections will need to take account of related collections of paper records. These records may document the reason and purpose behind the establishment of a system and may include key interpretative information. Management of paper in preference to electronic records should be the exception not the default. A view will need to be taken about the future disposal of related collections, to ensure consistency and to avoid continued preservation of duplicates.

## Evaluation options

For electronic records, a document-by-document review is very time-consuming and resource-intensive and is unlikely to be cost effective. While the contents of a paper folder can easily be scanned through physical examination, opening and scrolling through electronic documents is far more cumbersome, unless some specific support for browsing has been built into the system. Evaluation of this kind of material can be undertaken:

- by the DRO working at the collection level, and with information given in the inventory
- by document originators or desk officers
- with some form of software support.



The first option will be able to take advantage of information listed in the inventory of record collections, and will be most likely to integrate well with existing records management practices. The second option is both onerous and time consuming and it is unlikely to be cost effective. The third option is possible but at present, most commonly available software support is limited to simple keyword searching and retrieval, and is unlikely to be effective beyond grouping similar titled documents together (in which circumstances, naming conventions will clearly be useful). Free text searching for specific terms is also a possibility but can lead to a disproportionate and misleading number of hits if the search criteria are too broad. While more sophisticated forms of software support - concept agents, analytical search engines, textual visualisation tools - that may help with this area are emerging they are unlikely to be widely available.

In evaluating electronic records collections reference should be made to the following documents (where these exist):

- documentation on the purpose of the original system
- the original business case
- project initiation documents.

Evaluation decisions should be confirmed by the PRO Client Manager.

#### 4.6

### **Evaluation of poorly structured collections**

Many electronic records listed in departmental inventories may exist with little organisation or structure linking them together in meaningful collections or groupings. Evaluation will therefore be difficult. This will be the case where, for instance:

- electronic documents are held on a shared local network drive with little or no systematic organisation or structure in the filing or folder hierarchy
- files and folders are created directly by end users with no established naming conventions, resulting in names that are ambiguous, mysterious or misleading
- electronic documents are held in a document management system that relies upon search technology alone to bring together sets of related records.

Poor structuring prevents the development of collections of records which can be managed as a group, and the easy allocation of individual documents to such collections on creation by the end user. In such circumstances much of the context of an electronic record will be lost. If individual documents are considered in isolation from their original context, consistent evaluation will not be possible.

Some techniques that can help evaluation at the file/directory level are:

- using standard file manipulation tools to provide a basic analysis of document characteristics
- pre-sorting documents within the disk directory according to various characteristics
- sorting documents by date order to help assess patterns of activity within a relevant date range

- sorting by creator application (such as text document, spreadsheet, etc) to indicate activity that has generated particular presentational patterns
- further information concerning the identity of the creator and subject matter can also be found by examining the properties of individual documents.

## 5 Methodology for evaluation

Plan to conduct an evaluation of inventory contents by:

- identifying the business functions that have generated the records and the IT systems which have physically produced the records
- assessing the characteristics of storage and structure
- assessing the technical environment of the record collection
- assessing content and use
- mapping value and resource implications
- determining an appropriate outcome for each electronic record collection
- submitting those not required for departmental needs to formal appraisal

First, identify a core business function or other area of primary interest. Second, identify collections of records listed in the inventory which fall within this area, and for each collection of records:

- map any record flows into and out of this collection, and to or from other collections, using information in the inventory
- identify any duplicated or related records or any subsets of the records in both electronic and non-electronic format, and link these to decisions made on the record collection under consideration
- apply departmental business needs to assess continuing value
- record the results in the inventory
- where possible, apply retention and disposal scheduling to these and any duplicates/subsets
- consider requirements for permanent preservation, and conduct a sampling exercise if necessary
- record any future actions which need to be taken, including future migration needs.

### 5.1 Assessing storage and structure

Assessment requires:

- knowledge of the business and user needs
- awareness of the legal and security requirements
- understanding of the context in which the records reside and the contribution they make to the corporate memory.

A well-developed inventory of electronic record collections should provide information for this but you should also draw upon other information where available and approach users for knowledge where documentation is insufficient.

Characteristics of the way that records have been generated and stored which can help to assess of the value of the records are:

- authenticity - are the documents as stored the ones used in the first place?
- version control - has any mechanism been used to manage the different versions of a document and can this be preserved with the documents as a record?

- audit trails - can the history of documents from creation through to archiving be traced?
- can the documents held in computer file store be mapped onto a corporate records structure, possibly as represented by paper based registered files?
- has only one copy of a document been preserved in each case and, if not, can the primary version readily be identified?
- has the designed file structure been adhered to or are files distributed in an idiosyncratic fashion?
- have features been used such as dynamic dates that might undermine the value of the documents as records?

## 5.2

### Determining the status of a record collection

The matrix below can be used to identify the status of each record collection; it will give an initial indication of the degree to which the records can be said to be actively managed and to what extent the records possess a logical or formal information structure.

	Little or no records management	High degree of records management
Highly structured records	Structured records with low degree of formal records management	Records collections demonstrating centrally approved structures and naming conventions
Little or no structure to record collection	Unmanaged and unstructured collections	Unstructured collections with corporate thesaurus of indexing processes

Fig. 1: Mapping records structure against records management

Record collections that fall into the bottom left hand box of the matrix above will comprise documents that have very little structure and a low level of records management. An example of this would be:

- a shared drive where documents are saved without any order or folder structure.

Such collections may be unlikely to merit retention by the organisation beyond 1 to 2 years but the business roles they service require clarification before a recommendation is made for retention or disposal.

The bottom right hand box of the matrix should list collections with little structure but a marked degree of record management. An example of this would be:

- electronic documents or e-mails held in a structure, which need not necessarily be in a hierarchical arrangement but could use a thesaurus of concepts or functional terms. They may demonstrate a consistent indexing structure, which allows for consistency in information access and retrieval: for example, by removing the need to anticipate and search on all keywords, which may have been used by the record creators.

Such collections will need careful consideration as although there may be little structure the content may be of greater significance to the organisation than might appear to be the case if the assessment was based solely on the presence of a hierarchical structure. The business purposes served by these records will need careful examination before the retention period is determined.

The top left hand box will indicate collections with a high degree of structure but little formal records management in terms of nomenclature or retention schedules. Examples of these include:

- databases with a high degree of structure and documentation or where they exist electronic documents held in a proprietary electronic document management system (EDM).

Such collections may well merit retention for a longer period as they represent a corporate resource and some of the databases may merit permanent preservation.

Records which fall into the top right hand box will show a high degree of structure and a clear degree of formal records management in terms of the naming conventions, types of document saved and access permissions. An example of this would be:

- a shared drive dedicated to a particular group of users, where the folder names may reflect corporate filing systems or an alternative system agreed with the DRO. Such drives will often have centrally agreed filing policies and access permissions such as the use of read only attributes to prevent casual deletion. They may also demonstrate centrally approved naming conventions for documents and e-mails.

Such collections have a high probable need for continued retention and maintenance by the organisation as they represent a corporate resource.

### 5.3

#### **Assessing the technical environment**

The technical environment of the record collections will need to be assessed, as a decision to maintain the records within a preservation regime, migrate them into a managed EDRMS, or to defer disposal for a scheduled period will have technical and procedural consequences. Valuable records need to be safeguarded and reliably accessible until they are no longer required or transferred to an archive such as the PRO.

The questions that need to be asked at this point are

- what hardware platform is required to access the record?
- what software application is required to access the record?
- what are the software formats?
- what are the technical consequences of continued retention?
- what options exist for migration to a standard format?

### 5.4

#### **Assessing content and use**

Mapping the position of each record collection on the matrix on page 13 will determine which record collections are considered to be both managed and to possess some degree of internal structure. The following questions should be asked relating to content and use:

- what is the provenance of these records - who created them and for what purpose?
- which parts of the organisation, in addition to the creator, have used them subsequently and why?
- what are the legal and operational requirements, which must be satisfied by record keeping for the business activity to which these records relate?
- are there any other electronic records that should be kept for accountability or other specific reasons, which are related to these records?

- are there any related paper records, in hybrid electronic/paper collections, which should be treated alongside these electronic records?
- are the records in this collection created (in whole or part) by information flows from another source?
- do the records in this collection contribute (in whole or part) to the information contained in records in another collection?
- what are the relationships within and between these records and other record series?
- what are the perceived purposes of the creator/data owner, which would be served by long-term preservation of the records?
- what security classifications, caveats and other constraints on access apply?

For each department, the appropriate balance between these (and other more specialised) aspects will vary according to the local situation. Much can be gained, working within the resources available, by drawing on systems portfolios, business information systems charts and procedure manuals to develop an understanding of the roles and relationships of electronic record collections.

## 5.5

### Mapping value and resource implications

One way of making an initial assessment of a record collection is to identify both its current value to the business and the related resource requirements needed to sustain it. Sections 5.6 and 5.7 provide a method to evaluate both the value of the collection and the resource implications of maintaining it. This process produces a pattern or information profile, which can help provide an indicative assessment of the status of a record collection.

The tables on pages 17 to 18 and 20 provide a step by step mapping process for each electronic record collection based on a valuation of each record collection and attributable resource requirements. The tables are intended as a framework to identify assessment factors which are relevant to an individual set of electronic records; they do not provide a simple answer, but will help to make evident the choices in balancing conflicting aspects in any particular case.

The valuation of a record collection is based on its content and business use and the relationships it may possess with other records. Resource implications are attributed according to prevailing access and technical constraints.

The guidance in sections 5.6 and 5.7 can only provide an indication of the likely status of each record collection. Clearly if a collection is critical to the business of the organisation but the resource implications are very high this collection will need further review and may be a candidate for urgent migration to a more appropriate software and hardware platform.

In using this process DROs will need to take account of the operational and legal context within which their organisation operates. Before determining the disposal decision they should first consult with the PRO Client Manager.

## Assessing the value of records

Departments need to establish whether they have a continuing operational need for the records. In doing this they need to consider not only immediate, short-term need, but also longer-term accountability and legal issues, for example the need to explain why the department took a particular decision.

A record collection's relationship with other records is also a factor which can increase or decrease the value of the records to the department. When used in combination with other records the value of a collection may increase. The collection might also duplicate or overlap with another collection of records in such a way that the department only needs to keep one of the collections e.g. an electronic and a paper set of committee minutes and papers, or a collection of raw data and a report generated from it.

When considering the value of a record collection, departments should draw on the information identified above. *Table 1* and *2* which follow are intended to assist department in identifying the value of the records by giving a focus to these considerations. *Table 1* looks at:

- *Content and business use* which identifies the value of the material based on the record collection alone

and *Table 2* looks at:

- *Relationship with other records* which assesses the material in the context of other, related records

Annex A sets out how the metadata elements in the inventory of electronic records relate to the questions asked in *Tables 1* and *2*.

To establish the value of a collection of electronic records, the department should look at the pattern of responses to the questions asked in *Tables 1* and *2*. A medium or a high response to any of questions 1-5 constitutes strong grounds for preserving the records for the duration of that need provided that the resource implications are not excessive (see section 5.7). Records consistently rated as low/very low are either not required for continuing business purposes or are likely to merit preservation for a short period of time e.g. 1-2 years.

All electronic record collections not required for continuing business purposes must be appraised by the DRO to determine if the records should be selected for permanent preservation and transfer to the PRO in accordance with the PRO's Acquisition and Disposition Policies.

**Table 1**

**Name of electronic record collection:**

Evaluation of the records	Tick in the appropriate box below			
	Very Low	Low	Medium	High
<b>Content and Business use</b>				
1. <i>To what extent is there a continuing operational requirement for this information for current business processes?</i>				
2. <i>To what extent are these records needed to document the business process/decisions taken/actions carried out for future operational use?</i>				
3. <i>How important is the user/creators continuing need for this information in the future?</i>				
4. <i>To what extent are these documents needed as records to fulfil legislative requirements?</i>				
5. <i>What implications for accountability arise from a decision to dispose of these documents?</i>				

Table 2

Name of electronic record collection:

Evaluation of the records	Tick in the appropriate box below			
	Very Low	Low	Medium	High
<b>Relationship to other records</b>				
1. <i>To what extent do the electronic documents in this collection support the interpretation and use of other records?</i>				
2. <i>What is the likelihood that keeping these documents would enable duplicate paper records to be destroyed?</i>				
3. <i>To what extent do these documents differ from paper records that will be kept for business purposes?</i>				
4. <i>What value do these documents add to a wider set of information?</i>				
5. <i>To what extent do these documents have a logical relationship to other record series that are being kept for business purposes?</i>				
6. <i>If these records are derived from a wider body of information, how much value do they add to the original information?</i>				
7. <i>If these records contain personal data, to what extent does use of it comply with the Data Protection Act?</i>				



## Assessing resource implications

Departments need to identify and quantify the resource implications required to maintain an existing record collection. Table 3 below is designed to help departments undertake this process by clarifying the overall resource requirement of continuing to maintain an individual record collection.

By completing Table 3 departments will be able to compare the value of the records to the business, established at section 5.6, with the resources required to maintain them. *Extended or indefinite storage of electronic records does incur significant overheads and recommendations either to dispose of or retain an individual collection will be informed by this cost.*

The table provides for a Yes/No answer. There is also scope to add comment where necessary. However if Yes is an appropriate answer there is provision to add a percentage figure in the column alongside to help quantify the resource requirement.

Records collections of low value to the business but with high resource implications *will normally be marked for early disposal. However if the resource implications for continued retention are significant, and the value of the records to the business are also high, knowledge of the continuing overhead will help focus decisions to migrate the information to more accessible and less onerous technical solutions. Such decisions will ensure the continued survival of the records. Caution is advised when evaluating record collections with high resource implications as such requirements should not of themselves determine a recommendation to dispose of a collection.*

The results of this process will subsequently inform the development of appropriate preservation strategies, which are the subject of a companion toolkit *Strategies for maintenance and preservation of electronic records* (forthcoming).

Departmental inventories of electronic records should provide relevant information to answer these questions. Guidance on the information to be captured within an inventory was given in another companion toolkit *Guidance for an inventory of electronic record collections*.

Annex A in this publication will help focus responses to these questions by linking the relevant metadata elements within an inventory to the questions given in *Table 3* below, and indicating the nature of the information that should be provided to help answer each question.

Departments are reminded that all electronic record collections subject to disposal recommendations must be appraised by the DRO in accordance with the PRO Acquisition and Disposition policies to determine whether they should be permanently preserved and transferred to the PRO. The DRO should consult with the PRO Client Manager when taking such decisions.

**Table 3**

**Assessing Resource Implications**

**Name of electronic record collection:**

**Required information**

	No	Yes	%?	Comment
1. Are these documents subject to security classification and/or protective markings?				
2. Are these documents subject to other operational access controls?				
3. Should the documents be reviewed for sensitivity?				
4. Are these records accessible via the current hardware / software platform?				
5. If accessed via their current platform, will the records continue to be accessible on this platform for the short term? (1 to 2 years)				
6. If accessed via their current platform, will the records continue to be accessible on this platform for the medium term? (3 to 5 years)				
7. What percentage of the records require migration in the short terms (1 to 2 years) to a different physical format to retain access?				
8. What percentage of the records require migration in the medium terms (3 to 5 years) to a different physical format to retain access?				
9. Are there specific difficulties in migration due to e.g. proprietary formats, non-standard design structures?				
10. Should the records be sampled to verify technical decisions?				

## 6

### Outcomes of assessment

#### 6.1

#### Categories of outcome

During the records evaluation process the DRO should identify those categories of records whose value to the organisation can be reasonably predicted. This will include:

- those that require retention for a specified period for business needs, or on legal grounds
- all other records not required to be retained for business purposes.

Final disposal should always be subject to confirmation by the DRO in order to validate the original recommendation in case the retention period either requires lengthening or changing to permanent preservation.

The evaluation process described here is more limited in scope, aiming to identify those records which should be brought under managed control. A more formal records appraisal may need to be applied within this managed environment at a later date.

Having obtained an indicative valuation by using the table in section 5 the recommendation, where any action other than sustained maintenance is indicated, should be confirmed with the PRO Client Manager. The users should also be advised in case other considerations need to be taken into account before the decision is confirmed.

Two possible outcomes may flow from the first category: records required for continuing business needs. These are:

- maintain in the current location for a defined period
- plan to migrate into a formal EDRM system

#### 6.2

#### Maintain in current location

Include outcomes in the inventory information and take planned measures to ensure preservation and continued access for the period required. Establish a retention period and disposal action at the end of this period. These will comprise one of the following actions:

- Destroy at end of period
- Review. Review will result in one of:
  - retain for xx period, then review/destroy
  - destroy now
  - retain for permanent preservation

This decision may be subject to further appraisal in due course.

#### 6.3

#### Migrate to future EDRMS

Include outcomes in the inventory information and take planned measures to ensure preservation and continued access in the interim period before migration. Plan to map records in this category from the inventory to future electronic file plan categories as these are developed (including allocation of retention schedules).

## 6.4

### Records no longer required for business use

Assess all material which falls into this category for permanent preservation and transfer to the PRO

## 6.5

### Assessing requirements of the Public Record Office

If the contents of a record collection fall within the PRO selection policy, this will override all other considerations in determining fitness for permanent preservation

- are these electronic records likely to have long-term evidential value?
- are these electronic records likely to have future research value, bearing in mind the collection themes of the PRO selection policies?
- does an operational selection policy (OSP) exist which applies to this category of records?

The Public Record Office Acquisition and Disposition Policies provide a strategic framework on which to base decisions to select records for permanent preservation. Further information on the application of these policies and the role of the DRO is given in Section 7.

Where they exist, departments will also have recourse to Operational Selection Policies (OSP). These describe how the overall acquisitions policy relates to the records of departments and agencies in detail, and they apply equally to electronic records as well as to conventional paper records.

In certain circumstances, appraisal of legacy systems may lead to an early transfer of electronic records into the Public Record Office for managed preservation, to avoid subsequent problems typically associated with old computer systems - that is, records in obsolete formats and lacking in documentation. Material, which falls into this category, will be difficult and expensive to migrate - if they remain readable at all - and may be lost to the public record. An early physical transfer to the PRO will not, in itself, affect the timescales controlling release of records to the public.

If retention prior to permanent preservation by the PRO or another archive is recommended establish a period for which the records will need to be retained in the department. If immediate destruction is recommended, identify and establish an appropriate destruction procedure.

## 6.6

### Maintenance and continued accessibility

Where retention is recommended it will be necessary to determine the appropriate preservation strategy to ensure the continued accessibility of the records. For guidance on appropriate preservation regimes see the forthcoming companion toolkit *Strategies for maintenance and preservation of electronic records*.

Electronic records of continuing value will need to be migrated through successive upgrades of hardware and software retaining the full content and context. The appropriate approach will depend on the preservation options available within the department. Whichever approach is chosen it must provide for the continued accessibility of the record in a reliable form. The migration should include the records themselves together with record metadata, and any other contextual information, which affects the meaningfulness of the records and their relationship to each other.

The actual migration will be subject to a department's preservation strategy and it should be carried out in such a way as to maintain and demonstrate the authenticity and integrity of the electronic records themselves. Planning of such migration activities will provide the DRO with an opportunity to re-appraise the decisions on retention in those categories where only an initial disposal has been possible. This will reduce the likelihood of an unnecessary migration of records, which will later be destroyed.

It is recommended that the dates for the migration cycle proposed in the department's preservation plan are also additional check points for the future re-appraisal of the retained record collections.

As in best practice with paper records the users of such an electronic record-keeping system need to be aware that electronic records should not be kept longer than the official approved retention period; and that once allocated to an appropriate category, they will inherit the scheduling characteristics of that category. If users determine that the recommended retention period is inappropriate because, for example, the material is cited as a record of a precedent this should be communicated to the DRO and the original recommendation can then be reviewed.

## 6.7

### Documenting the process

Documenting the appraisal process should conform to the guidance given at section 4.4 of the Records Management standard *Documentation of Records Work*.

The management of all corporate records should be subject to corporate rules and procedures, and electronic records are no exception to this; they should be organised, maintained, stored and protected according to this discipline. They may only be disposed of in accordance with established procedures and time-scales identified in departmental record management manuals and disposal schedules. It is impractical in most cases to adopt a document level approach and normally decisions would be made on groups of records (folders) or even on groups of folders. The decisions, once made, must be documented and preserved with the records themselves.

## 7

### Resources, Roles and Responsibilities

#### 7.1

#### Role of PRO

The Public Record Office (PRO), operating under the Public Records Acts 1958 and 1967, is responsible for safeguarding the public records and ensuring the selection of those worthy of preservation; for acquiring and preserving the records which ought to be kept; and for providing access to, and for encouraging and promoting the use of, the records.

## 7.2

### Role of Acquisition and Disposition Policies

This toolkit will help departments make an initial assessment of the value of the electronic records to plan future action; it is not intended to be a comprehensive guide to appraising electronic records for lasting historical value. Criteria for selecting records for historical purposes can be found in the PRO's acquisition and disposition policies and in the more detailed operational selection policies. No records should be destroyed without reference to these documents and all records no longer required for business purposes are subject to the formal appraisal process to determine whether they fall within the PRO selection criteria.

The PRO provides advice and guidance to government departments and other public records bodies on its preferred approach to the selection of public records for permanent preservation. This guidance is set out in its acquisition and disposition policies. The acquisition policy sets out the values guiding the selection of public records for preservation by the Public Record Office. The disposition policy is a statement of principles for making decisions to offer public records to an archival institution other than the PRO. Together the two documents provide a comprehensive framework for the long-term distribution of selected and presented public records. The acquisition policy is available on the PRO's web-site at:

<http://www.pro.gov.uk/recordsmanagement/acquisition/intro.htm>

the disposition policy is available at

<http://www.pro.gov.uk/recordsmanagement/dispositionpolicy/dispositionintro.htm>

The application of these policies, together with any existing operational selection policies (OSP), extends to all public records irrespective of the physical medium. The appraisal of electronic records is subject to these policies as are any related records held on paper. Evaluation of electronic records has to be measured against these policies.

## 7.3

### Role of Operational Selection Policies (OSPs)

The acquisition and disposition policies are implemented through the development of operational selection policies, which are detailed statements of appraisal plans as they apply to certain departments or to categories of records which are to be found in more than one department. Operational selection policies are developed by the PRO, working with departments and, where appropriate, in consultation with places of deposit and other archival institutions.

These policies articulate how the overall acquisitions policy bears on the records of departments and agencies in detail, and apply equally to electronic records as to conventional paper records. These should be taken account of when linking disposition schedules to a category of electronic record, or an element of the corporate filing plan. In cases of doubt, the DRO should consult their PRO Client Manager.

Where an OSP has been approved departments should refer to this document before determining the appraisal of their electronic record collections.

## 7.4

### **Role of the Departmental Record Officer**

Selection and disposal of departmental records is the responsibility of the departments themselves. The PRO is responsible for coordinating the arrangements and for supervising the way in which they are carried out by departments. This principle is given statutory force by sections 3(1) and 3(2) of the Public Records Act 1958.

DROs must devise, promulgate, monitor and keep under review procedures intended to:

- secure the destruction of electronic records no longer required and the preservation of such records to be selected without review by means of retention and destruction lists.
- subject other electronic records to review to establish whether it has continuing value for administrative, legal or research purposes.

Subject to the guidance and supervision of the PRO, the evaluation and appraisal of departmental records remains the responsibility of the DROs and their staff. The PRO sets the standards for the selection or rejection of records for permanent preservation. Appraisal recommendations are then submitted to the PRO Client Manager for approval. In order to discharge this function for electronic record collections the role of the operational managers and “data owners” is especially important as they are best placed to explain the context in which these records are held and their relationship to the business of the organisation. They should also be best equipped to advise on the technical requirements that continued maintenance of the records will require.

## 7.5

### **Role of the PRO Client Managers**

The PRO Client Managers should be consulted both during the planning and the implementation of the evaluation exercise. Electronic records which are evaluated as no longer having departmental value should then be submitted for formal appraisal, in conjunction with the relevant PRO Client Manager, to determine whether they fall within the PRO selection criteria. This should be done before any action (or lack of action) is taken on records so identified. Records which are brought into a managed environment at this stage will be submitted for appraisal later, at the appropriate point in their lifecycle. No records should be destroyed without first consulting the relevant PRO Client Manager.

The PRO client managers are responsible for guiding, supervising and coordinating the appraisal process in government departments in accordance with the Public Records Acts and the record management standards published by the Public Record Office.

Their role in the appraisal of electronic records is to ensure all relevant information was available before appraisal decisions were made and that they conform with the relevant statutes and standards. They will guide DROs through the process and confirm the validity of the appraisal recommendations before formally approving the disposition of the records.

## 7.6

### **Role of the PRO Records Review Panel**

The Records Review Panel is an internal PRO body, which ensures there is consistency across government in the decisions taken to select public records for permanent preservation. Records selection issues are brought to the panel by PRO client managers.

## Annex A Using the inventory to evaluate the records

Name & ID No of electronic record collection:

Content and Business Use (see Table1)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
<p>1. <i>To what extent is there a continuing operational requirement for this information for current business processes?</i></p>	<p>8 Close Date</p>	<p>Systematically to determine parts of a record collection segmented for management and processing.</p>
	<p>17 Business Functions</p>	<p>To determine the function, which requires the records for its own business purposes, and to determine the length of time they need to be retained for accountability, legal or operational reasons.</p>
<p>2. <i>To what extent are these records needed to document the business process/decisions taken/actions carried out for future operational use?</i></p>	<p>5 Subject Terms</p>	<p>To locate the record collections within a subject classification or other scheme to identify other relevant material.</p>
	<p>6 Description</p>	<p>To show role and purpose of the record collection. This field may include background and uses of the information.</p>
	<p>17 Business Functions</p>	<p>To assist mapping of the record collection onto the functional structure of the organisation, and identify responsibilities for determining business requirements for the records.</p>



Name & ID No of electronic record collection:

Content and Business Use (see Table1)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
<p>3. <i>How important is the user/creators continuing need for this information in the future?</i></p>	<p>6 Description</p>	<p>To show role and purpose of the record collection. This field may include background and uses of the information.</p>
	<p>12 Owner</p>	<p>To identify responsibilities for the maintenance and preservation of the record collection.</p>
	<p>17 Business Functions</p>	<p>To determine the function, which requires the records for its own business purposes, and to determine the length of time they need to be retained for accountability, legal or operational reasons.</p>
<p>4. <i>To what extent are these documents needed as records to fulfill legislative requirements?</i></p>	<p>17 Business Functions</p>	<p>To determine the function, which requires the records for its own business purposes, and to determine the length of time they need to be retained for accountability, legal or operational reasons.</p>
<p>5. <i>What implications for accountability arise from a decision to dispose of these documents?</i></p>	<p>17 Business Functions</p>	<p>To determine the function, which requires the records for its own business purposes, and to determine the length of time they need to be retained for accountability, legal or operational reasons.</p>
	<p>18 Disposition</p>	<p>To provide scheduling information on time periods and event conditions of retention for this record collection.</p>

Name & ID No of electronic record collection:

Relationship to Other Records (see Table 2)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
1. <i>To what extent do the electronic documents in this collection support the interpretation and use of other records?</i>	10 Relations	To identify links to parts of the record collection which are held in paper form, for record collections which are partially held in both forms.
2. <i>What is the likelihood that keeping these documents would enable duplicate paper records to be destroyed?</i>	10 Relations	To identify paper material which constitutes part of this record; and to enable identification of duplicated and/or missing material.
3. <i>To what extent do these documents differ from paper records that will be kept for business purposes?</i>	3 Alternative Title	To assist mapping of the record collection onto the organised filing structure of the organisation, in relation to other record collections.
	11 Source	To identify other record collections from which records in this collection are copied or moved - the larger collections of which this is a subset.

Name & ID No of electronic record collection:

Relationship to Other Records (see Table 2)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
<p>4. <i>What value do these documents add to a wider set of information?</i></p>	<p>4 Originator</p>	<p>To assist mapping of the record collection onto the functional and organisational structure of the organisation.</p>
	<p>5 Subject Terms</p>	<p>To locate the record collections within a subject classification or other scheme to identify other relevant material.</p>
	<p>6 Description</p>	<p>To show role and purpose of the record collection This field may include background and uses of the information.</p>
	<p>10 Relations</p>	<p>To identify paper material which constitutes part of this record; and to enable identification of duplicated and/or missing material.</p>
	<p>11 Source</p>	<p>To identify other record collections from which records in this collection are copied or moved the larger collections of which this is a subset.</p>
<p>5. <i>To what extent do these documents have a logical relationship to other record series that are being kept for business purposes?</i></p>	<p>10 Relations</p>	<p>To identify paper material which constitutes part of this record; and to enable identification of duplicated and/or missing material.</p>

Name & ID No of electronic record collection:

Relationship to Other Records (see Table 2)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
<p>6. <i>If these records are derived from a wider body of information, how much value do they add to the original information</i></p>	4 Originator	To assist mapping of the record collection onto the functional and organisational structure of the organisation.
	5 Subject Terms	To locate the record collections within a subject classification or other scheme to identify other relevant material.
	6 Description	To show role and purpose of the record collection This field may include background and uses of the information.
	11 Source	To identify other record collections from which records in this collection are copied or moved the larger collections of which this is a subset.
<p>7. If these records contain personal data, to what extent does use of it comply with the Data Protection Act&gt;</p>	7 Open Date	To determine the date range of the record collection.
	8 Close Date	To determine the date range of the record collection.
	9 Cut-off Date	Systematically to determine parts of a record collection segmented for management and processing.
	17 Business Functions	To determine the function, which requires the records for its own business purposes, and to determine the length of time they need to be retained for accountability, legal or operational reasons.

Name & ID No of electronic record collection:

Assessing Resource Implications (see Table 3)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
1. <i>Are these documents subject to security classification and/or protective markings</i>	16 Protective Markings	To determine which protective markings which apply.
2. <i>Are these documents subject to other operational access controls</i>	12 Owner	To identify responsibilities for the maintenance and preservation of the record collection.
	15 Access Constraints	To determine access rules which apply.
3. <i>Should these documents be reviewed for sensitivity?</i>	18 Disposition	To provide scheduling information on time periods and event conditions of retention for this record collection.
4. <i>Are these records accessible via the current hardware/software platform?</i>	13 Physical Location	To identify the current physical location of the record collection, e.g. computer system on which held, data archive storage, network location.
	14 Physical Format(s)	To enable system audit and support migration and longer-term preservation.

Name & ID No of electronic record collection:

Assessing Resource Implications (see Table 3)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
5. <i>If accessed via the current platform, will the records continue to be accessible on this platform for the short term? (1 to 2 years)</i>	12 Owner	To identify responsibilities for the maintenance and preservation of the record collection.
6. <i>If accessed via the current platform, will the records continue to be accessible on this platform for the medium term? (3 to 5 years)</i>	12 Owner	To identify responsibilities for the maintenance and preservation of the record collection.
7. <i>What percentage of the records require migration in the short term (1 to 2 years) to a different physical format to retain access</i>	14 Physical Format	To identify the hardware and software in which records are created and held in this collection to determine migration and longer-term preservation requirements.

Name & ID No of electronic record collection:

Assessing Resource Implications (see Table 3)

Evaluating the records and identifying the resource implications	Inventory Metadata element	Purpose
8. <i>What percentage of the records require migration in the medium term (3 to 5 years) to a different physical format to retain access</i>	14 Physical Format	To identify the hardware and software in which records are created and held in this collection to determine migration and longer-term preservation requirements.
9. <i>Are there specific difficulties in migration due to e.g. proprietary formats, non -standard design structures?</i>	14 Physical Format	To identify the hardware and software in which records are created and held in this collection to determine migration and longer-term preservation requirements.
10. <i>Should the records be sampled to verify technical decisions?</i>	12 Owner	To identify responsibilities for the maintenance and preservation of the record collection.
	18 Disposition	To provide scheduling information on time periods and event conditions of retention for this record collection.

Corporate Policy



*Good practice*



**Good practice in  
Managing electronic documents**

using Office 97 on a local area network

PUBLIC  
RECORD  
OFFICE



*The National Archives*

Records Management Department  
Public Record Office  
Ruskin Avenue  
Kew, Richmond, TW9 4DU

Tel: 020 8876 3444

[www.pro.gov.uk/recordsmanagement](http://www.pro.gov.uk/recordsmanagement)

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## Section One:

### What is the purpose of this toolkit?

1

#### Summary introduction

This toolkit describes good practice for the management of electronic documents in an operating environment typical of many government departments and agencies – using the MS Office 95/97 application suite and MS Exchange/Outlook on a Local Area Network – with organisation-wide e-mail and shared network drives, but without the assistance of any more specialised document or records management software.

It is not a substitute for full electronic and document records management (EDRM). It should be used to prepare for full EDRM by introducing guidance, rules and procedures for the creation, organisation and sharing of electronic documents which may or may not be printed and filed as formal records. The toolkit asks the question: “*What can we start doing now to improve current practice?*” and proposes some answers as a good first step in the transition.

1.1

#### The problem

- Staff are using office software and e-mail to create and exchange electronic documents; but the organisation is attempting to manage these documents as corporate records in a paper format, with a general ‘print to paper’ policy for any document or e-mail which relates to departmental business.
- Unfortunately, on the one hand, documents are often not actually printed and placed on a paper file, because this is seen as increasingly burdensome by the end user at the desktop.
- On the other hand, the electronic version of the document is not consistently managed either; documents may be stored unpredictably in a variety of locations and under varying names, and with no guarantee of lasting access or accuracy.

1.2

#### Best practice

The toolkit suggests some areas where good practice can be developed, but it is not completely prescriptive in defining what these should be. A particular operating environment, established ways of working, and other factors, will influence decisions on those areas that are the most important to address, and those where practical outcomes can actually be achieved, in any specific department or agency. The toolkit is intended for the records or information manager to use in developing a statement of best practice for their own organisation; it is not in itself a statement of best practice that can be passed directly on to end users.

1.3

#### Summary of contents

##### Section 1 covers:

- the nature and purpose of this toolkit
- the reasons why action is worthwhile
- the audience, scope and outcomes
- the relationship to the 2004 target.

### Section 2 covers:

- practical steps that can be taken in influencing the creation and filing of electronic documents
- basic methods for managing e-mail messages
- shared network drives
- organised filing structures for electronic material.

### Section 3 covers:

- stakeholders that will need to be consulted in taking this approach forward
- prioritising the parts of the organisation to tackle first
- developing commitment and expertise at the local level.

## 1.4

### Relation to 2004

This toolkit supports achievement of those milestones given in the 2004 route map which deal with issues of bringing existing electronic documents and records under managed control. It aims to:

- provide mechanisms for the better management of existing material identified as important by the inventory and appraisal strategy
- help feed information into the strategic plan and detailed requirements for corporate electronic records management
- map out links with paper records that will be needed in constructing an electronic fileplan
- help determine appropriate policy and guidance for electronic document and records management (EDRM)
- support and encourage changes in end users habits, practices, and understanding that any successful EDRM implementation will require.

## 1.5

### Is it worth the effort to do this now?

The move towards fully integrated electronic working methods, and the consequent need for fully integrated electronic records management, will inevitably involve many changes in approach, practices, attitudes and behaviour – for both end users and for records and information managers – that will be vital for success. One simple answer to the question “*Why is it worth bothering with all this now?*” is that these changes will have to take place in any case, in the longer term; and it is better to start the process early and in a controlled manner than to be forced by circumstance.

### The case For

- Practical developments can be achieved now to deliver rapid improvements in the quality and reliability of documents and records, for both current business and long-term corporate memory.
- A business case for electronic records management can be developed from a practical base, and within the context of document and information management.
- The profile of records managers within the organisation as the responsible role for delivering those benefits can be made explicit.
- Other legislative drivers, such as Freedom of Information, will require all kinds of information to be recognised and managed, including both paper and electronic copies of records even where paper files are kept conscientiously; as well as documents that may not have been classified as corporate records.

These will only be achieved in the longer term by promoting good habits and practices in the end user community.

## The case Against

- Improving local conditions for information and record access may be detrimental to the achievement of organisation-wide records management in the long term by making the move from local to corporate control appear to offer less 'value for money' once there is an evident improvement at the local level.
- A direct move from little or no control to corporate level electronic records management may seem more attractive.
- The introduction of intermediate stages that are not carefully thought out may introduce extra complexities for migration of records and procedures, and confuse the end user in the long term.

The extent to which an individual organisation will draw on the proposals in this toolkit will depend on its own situation, relationships with other electronic initiatives, and its strategy for achieving 2004, for example where good practices are being introduced:

- in preparation for an already identified solution
- where a longer-term solution is not yet identified

In general, the current recommended good practice for major projects in a government IT environment is to take a modular and/or incremental approach wherever possible, to improve control and lower project risk.

The key point is to recognise that the transition to full electronic document and records management is a wider programme which must start from the situation the organisation is currently in, and is more than the implementation of a piece of software. This toolkit describes one approach which can be taken in the early part of that transition.

## 2

### Purpose and scope

This toolkit supports the achievement of the 2004 target by focusing on actions and activities that can be initiated now – prior to the implementation of full EDRM systems, software and procedures.

The toolkit aims to support two general purposes:

- developing good habits and user practices in the creation and organisation of documents, as a platform for the introduction of more formal document and record management software in the medium term
- taking initial steps in the development of electronic records management control, working from a base within the current information architecture.

### 2.1

#### Aims and intended use

The toolkit identifies common ground between records management and information management – areas where relatively minor developments in practice and procedures can benefit both. Good practice in managing information, at the personal, workgroup and corporate level, will support good records management, and vice versa. Toolkit users should identify those areas in which smaller changes can be leveraged to greater overall benefit. The toolkit is not intended to be completely prescriptive, and it is certainly possible to put into practice some but not all of the measures described. It is more important to be clear, cogent and consistent in promoting good practice to end users than to be completely comprehensive.

Over time, the toolkit will be supported by examples and case studies of challenges and successes in actual practice, both through the medium of RM Forum (the Community of Practice for government record managers) and by other publications from the Public Record Office. In addition, the toolkit itself will be updated to reflect this growing practical knowledge from time to time.

### 2.1.1 Audience

The toolkit is primarily addressed to records managers in government and to others, such as information managers or IT managers, who have records management responsibilities. It assumes a reasonable level of general IT and information literacy, including a broad familiarity with standard office software and an e-mail client; it does not assume a specialist IT knowledge or familiarity with 'back office' software.

### 2.2 Software environment

The toolkit assumes use of MS Office 95 or MS Office 97 office application suite, and MS Exchange client or MS Outlook 97/98 for e-mail messaging, running under Windows 95/98 or Windows NT4. The specific examples given may not always be transferable to other software environments.

This toolkit does not cover the additional issues stemming from use of MS Office 2000 / Windows 2000 / Exchange 2000 operating environment, in particular those relating to the management of electronic documents and records in Intranets and Websites – this will be addressed in a separate publication.

### Electronic documents and records

Many electronic *documents* are produced in the course of departmental business, with varying degrees of value and longevity. These can be in various versions – working documents, draft documents, finalised documents – and formats: conventional text-based documents, e-mail messages taking the place of memos or phone calls, e-mails commenting on attached text documents; spreadsheets, multi-media documents, linked and embedded documents. In this toolkit, the term 'document' refers to any digital object commonly found in office systems: spreadsheets, word processed files, discrete databases, and presentations are examples.

Not all documents will acquire the status of formal *records*, but it is of course important to ensure those that should do, do so and are managed as such. In practice, there is not always a clear distinction made between *electronic documents* and *electronic records*, because of a growing gap between record-creating and record-keeping technologies. As people become more used to working electronically, the gap between the documents which a user creates and the records which are managed widens: because users do not 'print and file' documents systematically; because of the difficulty of printing some types; because they mean to but forget; because they are inconsistent, and so on.

This toolkit is aimed at those electronic documents which are more formal and that would be expected to be kept as records in one form or another, narrowing the gap by better management of all these documents whether declared as a formal record copy or not. Some may have a paper equivalent, some perhaps should have but do not. In the medium term, we will expect to manage all this material in electronic form in any case.



## 2.3

### Toolkit products

There are three main products which can be produced from this toolkit:

- guidance on best practice in managing electronic documents, for end users
- contribution to plans for moving to full electronic records management across the organisation
- contribution to a strategy for culture change, moving towards thinking and working electronically.

### 2.3.1

#### Guidance on best practice for users

The toolkit is for use in producing guidance for end users. This should be expressed in the terms understandable in a familiar work environment, and provide concise, practical and clear procedures to follow, aiming to help users easily to identify the right actions to be taken in commonly recognised situations. It should set out roles and responsibilities in terms which can be understood by, and are meaningful to, the end user.

All best practice documentation must be consistent with all relevant corporate policy documents, particularly the corporate policy on electronic records. It is particularly important that any 'print to paper' policy is clear and unambiguous; changes to this policy should establish precise conditions for its operation.

### 2.3.2

#### Preparation for full ERM system

This toolkit will assist planning the introduction of full electronic records management by 2004 by:

- using the inventory of electronic record collections to identify and prioritise collections that should be brought into a more managed environment using methods from this toolkit
- developing document collections which may be candidates for migration into a managed ERMS, or which at least provide compatible legacy data
- supporting an analysis of the structure and nature of documents that are actually being produced in the electronic environment, rather than those typically produced in a paper environment
- feeding into the strategic planning for EDRM, guiding decisions on implementation such as: which areas to address first, which are most receptive, and which give the best examples to follow?

### 2.3.3

#### Contribution to cultural change

Practical application of the steps set out in Section 2 of this toolkit have potential for enabling the cultural change process by:

- initiating or strengthening change in habits and perceptions in the end user population
- encouraging the sharing of documents, and demonstrating the value-added and business benefits of high quality corporate level information
- demonstrating to the individual the value of better personal organisation in creating and capturing documents and records
- supporting the convergence of electronic records management with information and knowledge management systems.

## Section Two:

### What practical steps can be taken?

#### Section summary

This section deals with some specific steps towards good practice that can be developed within the typical local network / shared drive environment assumed by this toolkit. While the specific practices that are appropriate for any particular organisation will vary, and will themselves develop and extend over time, the general principles are constant. The aim is to establish practices which support a better corporate organisation of electronic documents and records, *and* which the end user will find helpful in organising their own work and their interaction with documents produced by others.

In deciding which methods to introduce to the organisation, identify and consider steps which:

- are consistent with the strategy for introducing electronic records management, and which prepare the ground for this
- will be most successful in achieving rapid results, and which work well together to greater overall effect
- will build commitment from end users and business managers.

A useful model for thinking about the best point to apply good practice is referred to throughout this section:

- corporate workspace, which contains formal corporate documents that are shared across all, or a significant part, of the organisation
- workgroup workspace, which contains operational documents in use by a workteam, and which are shared at least between that team
- personal workspace, which contains documents that are (at present) only of interest to the individual.

A document – for example, a text document or e-mail – will usually move between different workspaces during its lifecycle.

This section covers:

- naming conventions for documents and folders
- document metadata, templates and formats
- managing e-mail
- shared network drives
- building corporate filing structures

### 3 Naming conventions: documents and folders

#### Summary: naming conventions

- at a basic level, use standard forms of names and avoid redundancy
- develop standard ways of ordering elements in more complex titles
- establish standard ways to identify document versions
- apply consistent conventions to both document and folder titles
- keep conventions as simple as possible and easy to use

Naming conventions are standard rules to be applied to documents, and to electronic folders that contain these documents, in order to enforce consistency in the form of name and in the words and phrases used. Essentially, naming conventions have two related functions:

- bringing related items together under a common label – such as for a folder or set of documents
- distinguishing similar items by naming in a consistent, logical and predictable way.

In the context of this document, the term *folder* refers to a Windows operating system folder unless otherwise specified.

Rules for naming documents and folders should be kept simple and clear, so that they can easily be introduced and followed. It is preferable to compromise on a broader approach that can be clearly understood and remembered, than a more detailed and sophisticated structure that is less likely to be used in actual practice.

The value of naming conventions lies in the few simple rules that take away the burden of decision and encourage consistent practice. Naming rules should follow the same logic and consistency across different types of items, following the same pattern for similar situations – so that, once learned, the user can reasonably predict how it will apply in a new situation.

Conventions for naming electronic documents should be co-ordinated with those for naming folders, so that a document title does not contain unnecessary general information already present in the folder in which it is filed: for example the name of a project or organisational division.

### 3.1

## Standard terms

Standard terms and forms of name should be used wherever it is sensible to do so. In particular, this can apply to:

- names of organisations and people
- names of projects and activities
- logical document types.

At this basic level, names should consist of sensible, short phrases. Proper names should always use *either* the full form of the name or the acronym.

### Example of rules for standard name forms

- use GSI not Government Secure Intranet, or
- use Government Secure Intranet not GSI
- use *e-government* not *electronic government*
- use standard common terms across units, such as: *budgets; progress report*

Logical document types should also use standard terms. It is usually not necessary to repeat information in the document title which is already available from the directory display. The physical form of a document is held in the file extension, or displayed as a directory icon, and the date of creation/modification is also available.

### Example of rules for standard terms for document types

- use these standard terms for: agenda; report; letter; project schedule; minutes
- do not use initial terms such as Presentation on ... in a title because physical types such as a PowerPoint presentation are already held as .ppt in the directory display
- do not use the document creator's name in the title – a signed letter, for example, will give this information in the content.

## 3.2 Structured titles

The naming convention approach can be developed into a more detailed structuring system for the individual elements of document titles. The general principle is to identify the logical aspects of a document type, and to list these in the most effective order for access, rather than to use a looser 'narrative' form.

Examples are:

### Examples of structured titles for documents

- consistently structure personal names in surname, *forename* order
- arrange **document** titles which reflect organisational structure in reverse hierarchical order (most specific first) as in *Training Unit: Personnel*, but do not repeat elements already in the **folder** title in which the document will be filed
- where a date is necessary in the document or folder title, order the elements so that they display chronologically, for example in a *YYYYMMDD* pattern; months spelled alphabetically do not file in chronological order
- for standard document types, combine elements of a title to give the most useful information first, bearing in mind the folder structure and titling; for example, for a letter: *topic – recipient – letter type*.

Document titles should contain enough information to identify them if they become detached from the correct folder – a large number of documents entitled *2000-04 Minutes* is not helpful. Naming conventions should aim to strike the right balance between:

- *brevity*: keeping titles short; and *usability*: usefully describing the content
- *specificity*: using very precise terms; and *collocation*: grouping under broad headings that will assist effective management and retrieval.

## 3.3 Document version control

Consistent naming rules can link different versions of the same document, by including a version number as part of the title. This will also help to provide an audit trail for future tracking of document development; but does depend for success on disciplined use and careful tracking of versions. There is a danger of inconsistency if a document version is updated separately by different users without co-ordination, so that varying versions may exist each with different parts, but neither with all, of the full updated content. Well-developed and robust procedures are important for control of document versions in a multi-user environment.

The document name, and not the document extension, should be used to indicate the version number. Use of document extensions for version control will immensely complicate the mapping of document extensions to applications that can read them, creating a complex management overhead and the potential for conflict with later applications which may expect to use already allocated file extensions.

### Example of version control information

Show document versions by structuring the title as:

**<document name> - <version number>- <draft/final>.extension**

as in:

#### **Managing electronic documents - 0.4 - draft.doc**

A common method for version control numbering is to use the ordinal number (1, 2, 3, etc) for major version changes and the decimal number for minor changes, as in:

**ver: 0.5; ver. 1.0; ver. 2.7**

A version 1.0 normally denotes a first document version given wider circulation – a document moving from personal to corporate workspace.

Footer information in documents is also useful for showing version information, and the location of equivalent paper documents.

## 3.4

### Folder titles

Naming principles can be applied to folders. Two ways in which this can be done are:

- using standard terms for themes and activities which recur across the organisation: for example, project organisation structures that are common despite differences in project focus
- using consistent logical labels to describe business activities and functions which are common across an organisation.

Standard folder titling can be applied at:

- the corporate level, applying organisation-wide rules
- the workgroup level, where more specialised rules reflecting local conditions may be appropriate
- the personal level, to assist the individual with organising and developing working documents.

Standard folder titling may be developed into a structure which aims to mirror appropriate parts of the established paper filing structure, where this is desirable. This approach is dealt with in section 6.2 and 6.3.

## 3.5

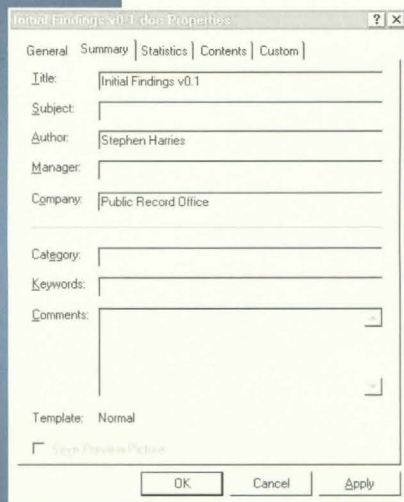
### Use of a thesaurus

A thesaurus is a structured list of preferred terms arranged in a logical relationships with each other, more formal than a simple list of keywords. Many new information management initiatives tend to make use of standard structured terminology. Where a department or agency has established use of a standard or specialist thesaurus, consider using these preferred terms in folder titles. It may be helpful to develop stronger links with other information and knowledge management initiatives, such as the Knowledge Network Research Online system (which is located at <http://www.knowledgenetwork.gsi.gov.uk>).

There are many potential metadata characteristics and template features that can be used in the MS Office application suite. Only a few of these can sensibly be put into practice in most government environments, unsupported by sophisticated EDRM systems. This section deals only with those which may be the most useful.

## 4.1 Document properties

Most standard Windows applications contain some form of Properties area, which contains a set of fields that can be filled in as metadata, either by hand or automatically by the software application.



### Example of Document Properties dialogue box in Word 97

In this example, the *Author* and *Organisation* fields are filled automatically from information accessible to the application; other fields can be filled in for individual documents at the time of creation or further editing. The Document Properties box can be set to appear automatically on first saving the document (and can also simply be dismissed by pressing the *Cancel* button).

Some advantages of using Properties are:

- standard key metadata terms accompany the document at all times
- support for document history tracking (although the level may be quite detailed)
- support for later migration to an EDRMS which is capable of capturing metadata from document properties information (many cannot do this).

Some disadvantages are:

- more work for the end user
- potentially misleading metadata where document production is shared: for example, where the Author field takes the last named editor, but the Organisation field remains the same
- in practice, no-one may bother to use the metadata gathered in this way effectively.

Though attractive at first sight, use of the Properties facility should always be well thought through and carefully justified – ask the question: “why is this metadata necessary and what use will it be put to?”

## 4.2 Standard templates

Templates can be designed as basic standard forms for document types such as: letters, memos, requests, reports. They will:

- ensure a greater level of consistency in document (and record) production
- enable documents which should be kept as corporate records to be more readily identified
- support a closer integration of document production with line-of-business operations.

It is not feasible to attempt to design templates for every identified document type, or to construct variants for different folders. Only those document types which are in common use across the whole organisation should be candidates for a standard template.

### Example of standard template settings

While the design of more specialised templates will depend on the nature of the document type and the business activity which it supports, there are some basic features which can be used for all types of document. Some of these features can be incorporated into the basic template for all documents generated by an application:

- headers can show a title taken from the Title field of the Properties
- header or footer can show organisational unit or workteam
- footers can show pathname, version number, and various forms of date.

## 4.3 Dynamic updating - dates

In MS applications, it is possible to insert a generic date field which can be updated automatically by the application. These are convenient when used carefully, but will provide false information if used indiscriminately, particularly where different types of date are not clearly labelled and identified.

### Example of dynamic dates

A Date of Saving field is updated each time the action takes place, and may be confused with other types of date. Use of these fields in a template should always be preceded by an appropriate phrase, as in:

#### **Last edited on: {SAVEDATE}**

so that its use for tracking edited versions is made clear, appearing in the document as:

#### **Last edited on: 07/11/00**

Use of a {Today's Date} field which is dynamically updated is not recommended

## 4.4 Storage and distribution formats

Where more than one version of a particular software application is in use, the physical format in which documents are saved should be defined. It is always preferable to limit the number of formats as far as possible, so that current access and future migration problems are reduced.

The basic options are:

- Standardise on a **single application version** when one is in use across the whole organisation to provide complete access.  
*For example use MS Word 97 to save all documents in the current .doc format. Legacy documents will probably need to be migrated to a future application version at some point.*
- Standardise on an **exchange format**, when multiple application versions are in use.  
*For example, use the Microsoft version of RTF, by saving all corporate documents in a .rtf format (which the application can be set to do automatically). These documents will be accessible by different application versions (e.g. MS Word 97 and MS Word 95) and by other word processors; but some formatting information may be lost in certain circumstances.*

- Standardise on a **distribution format**, where documents are finalised and will not be changed in content.

*For example, a PDF rendition has the advantage of making documents effectively read-only, but requires the necessary Acrobat software to produce the rendition. This option is unlikely to be cost-effective for a large number of direct users, and will depend on some form of centralised or clustered storing function.*

- Standardise on an **Internet format**, where an Intranet is the main distribution channel, supported by good document control facilities.

*For example, an HTML format makes the documents very widely accessible through a standard browser; but Office 97 products are unsophisticated at producing html renditions, the html syntax may contain proprietary elements, and it is harder to control document versions.*

#### 4.5 Embed rather than link

Where it is desirable to include the contents of one document in another – for example, to include the contents of a spreadsheet in a text document - embed the content rather than using dynamic linking. While the latter approach will give a more up-to-date view of the information, it is extremely difficult to capture and manage changing versions of the document effectively over time.

If dynamic linking is unavoidable to provide up-to-date operational information, take a copy of the document at significant points of change and retain as a formal document version.

### 5 E-mail and messaging

#### Summary: e-mail

- develop policies clarifying which e-mails should be kept
- develop procedures for managing messages within the e-mail system
- extend procedures to include use of shared drive folders when feasible
- develop guidance for managing e-mail composition and dialogues
- help individuals to manage their own mailbox

E-mail messages should always be treated as potential corporate records of the organisation. More and more departmental business is conducted by e-mail, replacing the conventional memo and, increasingly, the formal letter. Valuable material will be lost if e-mail is not managed in some way; but this can be difficult to do because:

- e-mail is not a simple record series, but a mechanism for transmission, so an e-mail system cannot be scheduled in its entirety
- retention depends on the content and context of the message, and is different for different messages sent or received by the same user, which must be treated separately
- essentially, e-mail is an individual channel, and is managed by the end user, or not at all.



There are three main approaches to managing e-mail records without the support of EDRM software:

- by a 'print-to-paper' policy – but this tends to work even less well than with word processed documents
- by managing within the e-mail system
- by saving messages to a shared drive.

Each approach is discussed below in more detail.

## 5.1 E-mail usage policies

Develop clear policies to guide users on which types of e-mail message should be retained in the medium to longer term. These should cover:

- which messages a user sends that should be retained
- which messages a user receives that should be retained
- which dialogues should be recorded
- where drafts should be retained
- requirements for access to all these types of messages.

In addition, organisational policies should emphasise:

- an assumption that any e-mail message relating to departmental business may be kept as a record
- care in composing and expressing content
- expectations of privacy
- avoidance of inappropriate content.

## 5.2 Managing within the e-mail system

The types of folders within an e-mail system follow the three-level workspace model described in the section summary for this section:

- **personal** folders are limited to individual access only, and cannot constitute a corporate record
- **shared** folders are a workteam space, where messages within an organisational unit can be stored and shared
- **public** folders are equivalent to corporate space.

The aim is to encourage users to store messages appropriately in one of these three areas. To be successful, the co-operation of the individual in regularly moving relevant messages from the personal mailbox to shared or public folders is required. Guidance should therefore always stress the benefits to the individual as well as the organisation.

**Advantages** of managing messages within the e-mail system are:

- all metadata relevant to the record is captured and preserved
- within a manageable environment
- with built-in filtering and deletion facilities available.

There are some **disadvantages**:

- e-mail messages are not integrated with other relevant documents or records in one structure
- so that parallel filing structures will develop, potentially including an individual's personal folder structure
- in addition, deletion does not ensure destruction, since the e-mail will be retained on back-ups.

Although probably not the ideal solution in the long term, this approach will provide valuable groundwork for the move to corporate level EDRM, by establishing good habits and practices in individual and team handling of e-mail as well as demonstrating the value of well-organised records.

### 5.3

#### **Saving to a shared drive**

The option of saving messages to a shared drive has the advantage of bringing together all documents and messages relevant to a theme or activity in the same folder, and making this available for corporate access. It is, therefore, closer to the way in which e-mail messages would be managed in a full EDRMS. Unfortunately, the process of manually saving to a shared drive is rather cumbersome. This option would be best suited to a user population which has already developed good practices in handling e-mail.

#### **User guidance will be needed on the appropriate save format and method to use:**

- when to use the *Save as ...* command and when to *Save attachments* separately. Where any significant information is contained in the body text of the e-mail itself, both the message and any attachments should be saved together in one operation.

#### **Messages can be saved in various formats:**

- a *.msg* format is convenient for use within the Outlook environment, but is proprietary and may be difficult to migrate over time
- a *.rtf* format is a (fairly) standard exchange format, which will embed any attachments within the message body, but will usually take a greater amount of disk space
- use of a *.html* format is not recommended here.

#### **Message formats:**

- transmission data, showing fields such as date of sending and receipt, recipients, subject title, should always be saved with the message text
- messages should not be saved to a shared corporate drive in any encrypted formats.

### 5.4

#### **Creating and replying to messages**

User guidance on the composition of e-mail messages should cover:

- rules for addressing to main recipients and to c.c. recipients
- message length and use of attachments
- managing dialogues
- use of categories and labelling.

### 5.4.1 Addressing messages

The basic rules for responsibility in filing an e-mail message are:

- the sender files a message sent within the organisation
- the recipient files a message sent from outside the organisation
- recipients marked as c.c. do not need to file the message.

#### Example of rules for addressing messages

- Limit main recipients to those who are expected to take action or decisions based on the message content.
- Add c.c. recipients for information only.
- Use the 'reply to all' function with care, balancing open communication against message overload – consider the recipient.
- Avoid sending global messages to all users – post on an Intranet or Public Folders instead.
- Consider whether e-mail is the appropriate channel to communicate this message.

### 5.4.2 Message length and attachments

There are two broad approaches to the use of e-mail for formal business:

- using the e-mail purely as a wrapper for the substantive text, which is contained in an attached document, so that only the document need be saved
- composing longer text messages, which contain the text directly; the message itself is kept as a record.

The former approach requires management of the native document over time, and is unwieldy in many situations. The latter has the advantage that the message is plain-text based, and is easier for the user to produce.

The most appropriate form to use will vary according to the nature of the communication, but it is often better to encourage direct use of e-mail where appropriate, rather than extensive use of attachments – and this format is easier to maintain over time.

### 5.4.3 Managing dialogues

E-mail messaging is an unstructured medium which will tend to become disorderly and tangled unless guided by disciplined procedures. Confused e-mail threads and much repetition of previous message text in dialogues will produce confused and repetitious records. Disjointed replies and the use of embedded messages are also sources of poor structure that are difficult to manage.

#### Examples of rules for managing dialogues

- Use clear and descriptive subject lines
- Indicate if no reply is needed
- Do not *re-send* attachments with a reply unless necessary.
- Resist the tendency to drift away from the precise topic of a thread of discussion by introducing material on an unrelated topic.
- Do not bundle together several topics in one physical e-mail. It is better to create separate messages for separate topics, in the same way that a text document should have a single central focus.

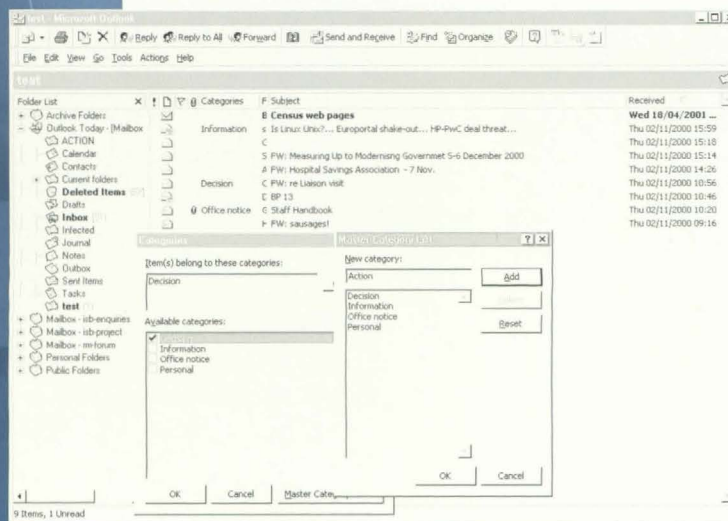
- The organisation should consider making a business rule on the use of *reply with original text* feature. The two options are:
  - to turn off the *reply with original text* feature, so that each sent message contains the text of the reply only; and should (if it is a significant message) be saved as a separate record
  - to include previous text in replies, and identify a significant point at which the whole dialogue is saved as a record in one physical message – often, though, it can be hard to identify this point until some time has elapsed.
- Do not reply by annotating the original text at various points – it is better to group all reply text together in one place.
- Do not embed earlier e-mail messages within the current e-mail messages, since this makes the physical object difficult to file and manage.

#### 5.4.4 Use of categorisation and optional flags

MS Outlook contains a Master Category list of category terms, which can be attached as labels to an individual e-mail message. The standard terms can be adapted by adding and removing terms from the list. These terms can be used to identify categories of messages which should be handled in particular ways.

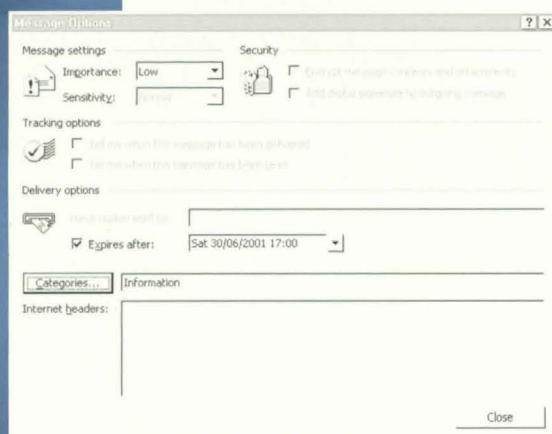
Categorisation can be used to:

- help the individual manage and respond to their e-mail at a personal level
- help to identify important messages that should be filed, from ephemeral messages that should not.



#### Example of use of categories

A list of terms such as: For Decision, For Information, Directive, Personal can be easily constructed. Terms added to a message by the sender will be displayed in the recipient's mailbox (as long as the appropriate *current view* is set up).



Other message options that can be set to help distinguish important and unimportant material are: *Sensitivity level* – Normal, Private, and Confidential; and *Expiry date* – after which display of the message will be struck through.

## 5.5

### Managing the InBox

User guidance on managing a personal mailbox should cover:

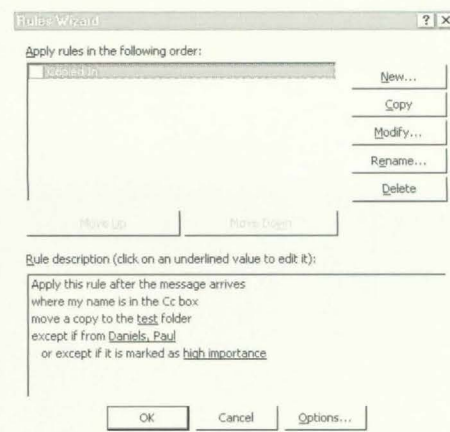
- the value-added benefits of structuring any personal *folders* within the individual mailbox to be consistent with folder structures used to store documents in both personal and corporate workspace drives

*This will help to integrate different filing structures at the logical level, and is a useful step towards integration at the physical level; as well as introducing personal information management disciplines.*

- the need to delete messages and working copies, where these have been saved into a corporate filespace and are no longer of local interest.

*This will help to ensure that in the longer term, duplicate copies of information items are destroyed – important for managing freedom of information – and to reduce the likelihood of alternate versions arising.*

- the potential for automatically routing incoming and outgoing mail to nominated folders, using the InBox Assistant, where standard types of message can be pre-determined according to characteristics recognisable to MS Outlook.



*This can help to build structured sets of records, but should only be used with material that can reliably be identified by metadata characteristics.*

- caveats on using the auto-archiving facility, which automatically archives (i.e. removes from the InBox) messages after a set period – to be used with care!

## 6

### Use of shared network drives

#### Summary: shared drives

- encourage 'publish and point' rather than multiple duplication
- develop logical and useful filing structures for shared drives
- develop common terminology and links to the paper filing systems
- establish control over folder creation
- consider use of electronic zero files
- develop 'good housekeeping' for synchronising and deleting documents

This section deals with the use of shared drives for managing corporate documents. In most local area network architectures, network drives appear to the user as various logical drives, typically arranged as:

- a corporate-wide shared drive, containing documents relevant to the whole organisation
- a branch, or divisional shared drive, containing documents relevant to a single organisational unit
- a personal drive (for example, a P: or U: drive), containing documents relevant only to the individual.

In all cases, it will be necessary to identify clear and acceptable use policies for all three categories of drive. Good practices in managing electronic documents should be initiated in both the user workspace and the corporate space – good practice starts with the individual.

## 6.1 Publish and point

A *publish and point* policy is a method of controlling the duplication of a document which is being widely circulated. Instead of attaching the document to an e-mail message, which gives each recipient an individual copy, a read-only version of the document is placed on a shared drive – *published* – and a *pointer* or shortcut is e-mailed to alert intended recipients. Recipients can then retrieve the document from the shared drive as required.

This policy will:

- help to encourage a culture of sharing documents, within a forum and as an organisational resource, rather than as individually owned items
- encourage users to think more carefully about the most appropriate method for publishing information to recipients and to treat these consistently as formal corporate documents
- reduce keeping of multiple working copies in the folders of many individuals.

A *publish and point* policy will tend to decrease the requirements for individual document storage, but increase the need for network bandwidth by generating more traffic from common storage.

## 6.2 Filing structures

Where there is a significant number of electronic documents stored on a shared network drive, a basic general filing structure should be established. Where a division or branch (and any project-based structures) has specific filing structures, these should aim to conform to the principles of a general filing structure to prevent divergent practices and application.

Basic filing structure on shared drives should

- use simple but logical structures which meet the needs of both the organisation and the users
- *not* use individual names or position titles for directory or folder names
- use names which identify logical elements, such as business functions and activities or theme: sub-theme relationships
- have an established responsibility for creating and naming folders.

While the need for good filing structures in a shared network drive is primary, end users should also be encouraged to use consistent filing structures in their own group and personal workspaces. This will help with the co-ordination between working papers and formal finalised documents, and will ease retrieval and access across all workspaces for the individual.

### Common terminology

Use of a common terminology is essential to integration; planning the use of shared drives should be done in conjunction with thinking about naming conventions, as described in section 3.

- work towards consistent use of common terminology across all departments and units of the whole organisation
- develop formal liaison mechanisms between those responsible for records at the local level to establish and enforce these conventions
- where feasible, make terminology in the shared network folder structure consistent with terminology in the paper filing system
- make links with entries in the inventory of record collections.

## 6.3

### Relating to paper filing system

The organisation of a shared network drive can usually be made to reflect the paper filing structure so that electronic documents are stored in a manner compatible with their paper counterparts. This may be achievable by building a hierarchical 'folder within folder' structure using Windows, to simulate the structure of a paper fileplan.

Some considerations are:

- there is little point in building a paper-based structure in electronic folder form which is not working well in the paper environment; and in most cases, a formal move towards implementation of EDRM will probably require some re-thinking of the approach and structure which is most appropriate for the new environment
- electronic structures tend to be broader and flatter – have less depth – than their paper counterparts; it is important to control the number of levels to retain usability; carefully consider the categories and terminology used at higher levels – in general, more than about 4/5 levels to a hierarchy can quickly become confusing and cumbersome
- alphabetical folder titles are generally more usable (in the electronic environment) than numerical fileplan / classification reference numbers and using both together will produce very long folder titles
- paper filing systems tend to use longer names than are comfortable in a Windows environment, resulting in file directory displays where the relevant, lowest part of the hierarchy is off-screen and not visible; in these circumstances it is also possible, when the full pathway of a document is constructed, to exceed the limit with which a software application can deal and thereby render the document apparently unusable.

## 6.4 Control over folder creation

Where the folder structure on shared drives is formalised in this way, clearly set out rights and responsibilities for folder creation and, where this is restricted, allocate these to specific roles. Consider:

- the extent to which a formal link to paper filing control systems, and the information which they contain (such as retention and disposal information) is desirable
- the role of local records officers in maintaining electronic filing structures
- the extent to which workgroups are able to create electronic folders themselves
- mechanisms for guiding and controlling the use of terminology.

### Use of Zero files

A Zero file is a file which contains metadata about a series of folders, recording common information about that series, including its history, retention and disposal, opening and closing dates, and relationships to other record series. A zero file is sometimes used in paper filing systems, and can be adapted to the electronic environment. Potential uses include:

- as a link to the entry in the inventory of record collections for a set of electronic folders
- as an updateable link to parallel paper series structures, to maintain integrated control, whether the electronic or paper version is considered to be the formal record copy
- recording any access restrictions
- identifying users who are responsible owners
- retention beyond the life of the electronic folders, to document actions taken on the material (important for Freedom of Information)

## 6.5 Balancing drive usage

Gradual extending records management disciplines to the shared network drive environment will eventually involve decisions on technological support platforms and network bandwidth; complementary technical policies and procedures will need to be developed. Consideration should be given to:

- the risks of lost documents in a shared network environment, where more reliability is expected
- the need to provide back-up and (perhaps) mirrored storage
- the implications of shared storage for network traffic and bandwidth requirements
- clear identification of material that should be entrusted to a shared drive and material that should be entrusted to the non-shared environment (and therefore printed to paper).

The move to full EDRM will require decisions on these kinds of issues in any case.



## Disposing of documents

In all cases, 'good housekeeping' of both shared and personal drives is essential to maintaining long-term viability, removing material which should no longer be kept, whether classed as document or record. Since good management in this semi-structured environment depends largely on the application of developed procedures and is not supported by corporate-wide document management software systems, some duplication and redundancy will probably be necessary to ensure good access for business purposes. Guidance should aim to reduce this to the right balance for the organisation – excess redundancy also works against usable access.

Guidance is needed for removing:

- unnecessary duplicates of final documents
- working copies which are no longer required
- documents which have no continuing value.

Users of local drives and personal areas of a network drive should also be encouraged to perform basic housekeeping. Regular use of the Windows Explorer *Find* facility for documents created and modified in a given period of time, will help ensure that locally held files are deleted or copied to the relevant shared drive as appropriate. Local drives should not be used for long-term storage of corporate level documents.

## Laptops and synchronisation

Laptop and handheld computers are now widely used, at all levels of an organisation. These can cause particular difficulties when used in conjunction with a standard desktop PC, where documents are duplicated for working on in a different location. Lack of proper procedures may result in documents existing in different and potentially conflicting versions; it is particularly important to

- maintain a working structure on a laptop which is consistent with that visible from the main desktop machine
- develop a disciplined approach to updating document versions
- nominate a single storage location for documents in development, to hold the primary version and later updates.

File synchronisation facilities such as Windows Briefcase, which keep track of changes to particular files, can help to manage this duplication, as long as use of the facility is clearly understood. Windows is not designed as a robust medium for handling file conflicts, and will not substitute for sound agreed working procedures, particularly where several members of a workteam are working on the same documents.

A similar synchronisation facility is often used with MS Outlook and MS Exchange to synchronise folders in a local copy of an e-mail mailbox held on a laptop, with the same recipient's primary network mailbox. Many people use this facility to create and reply to e-mails using the local laptop copy, that are later uploaded to the main mailbox for despatch. The synchronisation facility harmonises changes in both main and local mailbox versions. Potential difficulties can arise where two separate copies – local and main copy – of a message have been separately edited producing conflicting versions. Careful following of a procedure to ensure that all local changes have been uploaded to the main mailbox before editing existing main mailbox versions will minimise potential replication conflicts.

## 6.7

### Secure shared drive

A secure record drive is a shared network drive which has been configured in such a way as to prevent the amendment or unauthorised deletion of documents which have been saved to the secure drive. With such a mechanism, organisations *may* feel able to treat the electronic documents stored in this way as the formal corporate record, even though a paper copy may also exist. Where this is the case, they should be stored within a separate structure from electronic documents which are not treated as corporate records; with clear definition of who has the right to add to, or delete from, the drive.

- Use a separate logical hard drive with *read-only* settings to prevent any changes being made to documents which have been saved to the drive.
- Users should be able to *read* and *create* documents, but not be given edit rights to existing documents.
- Ensure appropriate back-up and recovery procedures, and maintain the necessary level of access security at the operating system level.
- Assess the criteria and risks involved in this approach and clearly identify the types of document which it may be acceptable to manage in this way; a secure drive does not provide the same level of assurance as a fully managed EDRMS.

Departments and agencies should be aware that, although this method can provide reasonable sound storage of documents in the short term, there may be problems with migrating the material to a full EDRMS in due course. The Windows directory structure does not easily provide document and folder level metadata that will support a structured migration to an EDRM system; and although migration can be achieved it may be a relatively expensive process.

## 6.7.1

### Sensitive information

The shared drive areas where corporate documents are made available should be capable of control by read/write permissions and by password control. Password control will enable control of user access to certain documents, either by:

- saving the document with password control if the application software supports this (as for example MS Word does) and copying the documents to the drive in this form
- placing password control on the entire logical drive.

This may provide some basic access control, but the method has limitations:

- application software password control is not particularly sophisticated
- circulating a password to a number of different people is inherently insecure
- in a read-only drive, the document cannot be easily changed to amend or remove the password, because it is tightly bound with the contents.

In practice, documents containing any sensitive or classified information should probably not normally be stored on a secure shared drive.

## 7 Agenda for action: identifying steps to practical implementation

Action step	Who should be involved?	Does a policy exist?	Build on existing practice?	Initial 'To do' List
		Is it explicit?	Adapt existing practice?	
		Is it followed?	Borrow from elsewhere?	
<i>Naming conventions</i>				
Establish standard name forms and terms				
Develop rules for a structuring titles				
Establish document versioning				
Consider use of a thesaurus				
<i>Standard settings and templates</i>				
Identify uses of Document Properties				

Action step	Who should be involved?	Does a policy exist?	Build on existing practice?	Initial 'To do' List
		Is it explicit? Is it followed?	Adapt existing practice? Borrow from elsewhere?	
Identify potential standard templates				
Standardise on distribution formats				
Standardise on storage formats				
<i>E-mail management</i>				
Develop rules governing keeping of e-mail				
Develop structures for public/shared folders				

Action step	Who should be involved?	Does a policy exist?	Build on existing practice?	Initial 'To do' List
		Is it explicit?	Adapt existing practice?	
		Is it followed?	Borrow from elsewhere?	
Develop guidance for composing messages				
Consider possible uses of shared drive storage				
<i>Shared network drives</i>				
Promote a 'publish and point' policy				
Build links to paper filing				
Consider use of zero files				
Develop mechanisms for document deletion				

## Section 3:

### How to start putting these steps into practice?

#### Summary: practical steps

- identify and consult all relevant stakeholders
- consider the impact on business and IT management
- prioritise key areas where results can be achieved
- develop local experience and commitment

This section deals with:

- consulting the range of stakeholders
- prioritising and planning
- developing local expertise.

## 8

### Stakeholders

Although the topics covered here are of primary interest to records and information managers, there are a range of stakeholders who will have an interest in the areas covered in this toolkit:

- several aspects involve the use of technical resources – in particular drawing on network resource – which are resource elements within the corporate IT infrastructure
- the implications for creating, organising and using information may have an impact on working practices and the way business processes are carried out
- end users will need to be engaged from a personal perspective because success depends on compliant behaviour which cannot be policed.

All these groups will need to be consulted in developing practical working procedures, and may need to be drawn directly into the process of development at the appropriate point.

## 8.1

### Corporate IT infrastructure

Corporate and local IT staff and network administrators will need to be involved with decisions which have implications for:

- network infrastructure and network bandwidth
- provision of drives, servers and back-up mechanisms
- configuration of back office software
- configuration of operating systems
- configuration and provision of desktop applications.

## 8.2

### Business managers

Business managers will be concerned about the implications for:

- the application of business rules
- the development of procedures and the effect on the business processes
- the implications for operational practice
- the information needs of operational staff.

## End Users

End users are primarily concerned with the earlier parts of the document lifecycle: creation and operational use. This is the main group which needs to be convinced of the value in following good practices as outlined in this toolkit, by demonstrating:

- the value of managing documents at the personal level, making information easier to find and reducing information overload
- the responsibilities in creating and capturing organisational information
- the advantages of establishing a custodian for certain types of document – e.g. project documentation
- the advantages of maintaining co-ordinated or integrated filing structures, for example, between e-mail folders, personal drive folders and shared network folders.

## Prioritisation: planning a way forward

Except in the very smallest organisations, it is unlikely that the measures described here can be put into place across the whole organisation in one process. Initially, significant effort will need to be put into:

- establishing over-arching corporate level policies and standards (which should be transferable to the full EDRM environment)
- building local commitment and agreement from users to putting these measures into practice
- developing local expertise through training and organisation.

A strategy for building commitment across the organisation is to identify key priority areas that will provide high profile examples to encourage others to follow, and that offer a platform for developing transferable policies and procedures. Such a phased approach will enable proper consideration to be given to local conditions within a corporate context.

## Identifying key target areas

In identifying key target areas, consider:

- the need to tackle key business processes and transactions which are important for accountability, for example: the interactions between policy advisors; primary line-of-business processes
- the feasibility of establishing good practices in these areas, including the internal political issues
- the relative enthusiasm of end users in putting measures into practice
- the type of documents which are generated, and the technological environment in current use
- the ability to generate 'quick wins' with most effective use of effort.

At the level of the whole organisation, consistent corporate level standards should be developed as a framework for local implementation, including:

- guidance on what types of document should be kept in a formal manner as corporate information and records
- agreement on quality standards

- clear co-ordination with the existing 'print to paper' policy to guard against loss of paper records where these are still required, whilst taking forward the electronic agenda
- consistent strategies on the larger questions, such as a risk analysis of the use of shared network drive filing structures for the storage of authentic corporate documents.

## 9.2 Local and central records control

In extending central principles to local branches, there needs to be a clear understanding on the implications of adopting wider corporate policies and standards, and of the relative roles and responsibilities. Local agreement will need to be established branch by branch; within this process, there may be scope for incorporating more specialised branch and workgroup standards.

Once the scope and purpose is understood and agreed with staff, such local agreements should be formalised and published locally, on an Intranet or similar mechanism. A document which explains the local benefits on offer by agreeing to follow the practices outlined, and the responsibilities inherent in doing so, is one mechanism that can be used – sometimes this is called an *Offer* document because it shows what is on offer.

### 9.2.1 Local document/records officers

Where possible, establish local document/records advisor or business records officers, who have responsibility for setting up and maintaining local filing structures and acting as local centres of expertise. This role requires:

- a sound understanding of business objectives, corporate records policies and procedures
- knowledge of the office systems and software in general use
- responsibility for ensuring security and access
- the ability to create and maintain directories in a shared network space, and to maintain and review working procedures and naming conventions
- the ability to promote good practice to users.

It will be essential to ensure that these local officers build and retain strong links with corporate records management structures and with broader information management strategies.

### 9.2.2 Workgroup mentors

Workgroup mentors are end users who have acknowledged best practice skills and can act as initial points of advice for their colleagues, and as localised channels for promoting cultural change in the end user population as a whole. A good strategy for establishing best practice in managing documents will encourage peer mentoring, where mentors can act as ambassadors for good practice.



Good practice

PUBLIC  
RECORD  
OFFICE



*The National Archives*

# managing web resources

MANAGEMENT OF ELECTRONIC RECORDS ON  
WEBSITES AND INTRANETS: AN ERM TOOLKIT

VERSION 1.0

DECEMBER 2001



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# 1 Policy statement

Central government websites (including intranets) contain public records that need to be managed by their creating departments and others who have custody of them. As public records, some government web resources may be of historical value and interest and be appropriate for selection and transfer to the Public Record Office.

Records management principles and procedures need to be applied to government websites in the legitimate interests of all stakeholders. This is for a number of important reasons:

- to support the conduct of public business by ensuring that business requirements for the capture and management of records are met;
- to promote good information management in government (records being an important subset of public information and records management a vital subset of information management);
- to assure accuracy, authenticity, audit and admissibility of web content and web based transactions;
- to preserve accountability;
- to ensure that authentic records can be sustained through time so they are kept for a period appropriate to their use and importance; and
- to support the identification, survival and preservation of website records of historical and research interest in the national archives.

## Implementing the policy

The remainder of this records management toolkit is concerned with practical steps to implement the policy as regards active records management and sustainability within departments.

Selection for the national archives will take place within the existing framework of the Public Record Office's acquisition policy and thematic/departmental Operational Selection Policies.





## 2 About this toolkit

### Audience, roles and responsibilities

Website management has often been seen as the preserve of IT specialists, press/communications functions and librarians. In government, it also needs rigorous records management input. This is a point that has often been overlooked.

The primary intended audience for this toolkit is records managers in government, web project managers or IT and information managers with information and records management responsibilities. Some aspects may be of assistance to business managers. It assumes a reasonable level of general IT and information literacy but is not written from a technical IT perspective.

Records managers will need to become involved in systems design, risk management, surveying, retention scheduling, sustaining through time, exporting to new technological platforms as well as appraising for archival purposes and in some cases transfer to the Public Record Office. This requires involvement from a far earlier stage in the records lifecycle than with paper records. It also means having some involvement in the management of information that may not be considered as formal records.<sup>1</sup>

It requires a collaborative approach with IT managers, web project managers, 'webmasters'/site editors, content providers and general users. It also needs the support of senior management. Suggestions on how records managers might get involved in website management and provide added value are in the model action plan in Section 6.

<sup>1</sup> This could manifest itself in a variety of different ways according to the organisational placement and remit of the records management function. The very minimum might be sufficient involvement to ensure the interface between official records in websites and other content are fully understood and catered for. The other end of the spectrum (and increasingly the most desirable one) is for a joined up approach to strategic information management including records and document management, embracing both the content and the technology issues.



## 3 Introduction

### Purpose

This toolkit outlines the existence of public records in websites and intranets and is designed to explain specific requirements for the management of information and records on websites. It provides pointers to how this can be achieved effectively even where a website is already up and running without rigorous procedures already in place.

The toolkit is also designed to complement the Office of the e-Envoy's Guidelines for UK Government Websites, which gives guidance on the production of effective websites, their management, their content and their accessibility.

It does not replicate the more generic guidance on the management, appraisal and preservation of electronic records already published by the PRO, nor the e-Envoy's Guidelines and other documents. References to these and other useful resources are at the end of this toolkit. Both departments' guidance documents are all available through their respective websites and the addresses (URIs) are given in these references.

### Scope and terminology

This toolkit provides guidance for the management of both public websites and networks using web technology to make information available between narrower groups of people, through a departmental intranet, within the government community across the Government Secure Intranet (GSI), or as part of an Extranet linking public and private sectors. For the purpose of brevity, the word 'websites' is used throughout, usually to denote all three categories.

### The wider electronic records management picture

At the time of writing (autumn 2001), departments are at varying stages in their progress towards enterprise-wide electronic records management by 2004.

This specific target is related to the general target for electronic service delivery by 2005 and also needs to be seen in a wider electronic information management context that also includes the management of information that does not constitute a formal corporate record (including document management).

There will be a number of direct relationships apparent between the contents of this toolkit and other guidance already published by the Public Record Office to assist with this transition. Web records may (should) have been identified during the compilation of information inventories and fed into appraisal and preservation strategies. Many will have been created in a relatively unmanaged environment, outside formal records systems.

As with other records for which this is true, the ultimate goal for web-based records must be to bring their creation and management within the control of a fully functioning electronic document and records management system (EDRMS) when that is implemented across the organisation. It is to be hoped that the next few years will see an awareness of this need in the design of content management solutions so that records management disciplines are built into operational processes and systems and not seen as either an additional overhead or an 'optional extra'.

### What is a 'website'?

A variety of definitions are possible.<sup>2</sup> For the purposes of this publication, we are defining it as: 'A collection of electronic resources:

- **that is made available** in a particular domain of the internet, for the communication of information and/or the conduct of business transactions; and
- **that share a common domain name**, normally belonging to a single or defined group of organisations and having as their virtual location (or Uniform Resource Identifier) a hierarchical (or other) relationship with the main domain content (often referred to as the 'home page'); and
- providing a body of interlinked information resources that is navigable using browser technology.'

The extent of user access is not a part of this definition. This policy relates to government intranet and extranet resources as well as public websites on the part of the internet known as the 'world wide web'<sup>3</sup>

These resources may exist on a single server or be distributed among other information resources owned and hosted by one or many different organisations. Hosting content on the distributed model raises additional challenges to effective records management. If content is not under the direct control of the information owners owing to outsourced web hosting or other IT services etc., additional management procedures will need to be put into place to ensure records are controlled according to corporate policy.

Typically, the website content might include a combination of:

- static pages;
- compound pages formed by displaying together content from a variety of sources;

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<sup>2</sup> *The working definition used by the World Wide Web consortium runs 'a collection of information, documents or databases that is provided to a user community using World Wide Web formats and protocols'. The National Historical Publications and Records Commission (NHPRC) funded guidelines for US Federal websites use 'a set of URLs [uniform resource locators] that fall under a single administrative control'. The proviso is entered that the definition is operational rather than analytic and there was no consistency found in patterns of administration. A single organisation with more than one umbrella domain name for its web resources would by this definition have several websites. This may not be seen as helpful but in reality and (as the NHPRC study says) the administrative permutations are endless.*

<sup>3</sup> *Some of the supporting records management guidance may also be applicable to private networks.*

- dynamic pages formed according to the user's expressed preferences from a variety of sources;
- active server pages (for the entry of simple information to interact with databases that are an integral part of the site such as a search facility or a telephone directory);
- web forms capturing information for processing in separate database applications;
- graphics, audio files, video clips and virtual reality;
- linked documents such as publications.

Many of these are very different in nature from the traditional image of a 'record'; so much so that it can tend to give the impression that no records are present. This can be highly misleading.

## Records in websites

It is no longer a sustainable view that all website content is merely ephemeral.

Early official websites were mainly used to publish documents also available in hard copy. Now they are used to make information available in more imaginative ways (that often have no direct hard copy equivalent) and to conduct business in real time.

Government's rôle in providing information is a vital part of the Knowledge Economy. Access to official information is being dramatically increased under the Freedom of Information Act and the internet will be one of the key enabling technologies in this as well as in implementing electronic government. Implementation of the Freedom of Information Act 2000 will also mandate on all public record bodies compliance with the Code of Practice on Records Management. Meanwhile, the Data Protection Act 1998 has made more stringent requirements for processing personal data to protect individual privacy.

Some examples follow illustrating the diversity of the records management issues that can arise with websites:

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### Example 1: A department uses its website to conduct a policy consultation

Public comments are invited on a consultation draft and some of these arrive through a comments form on the site itself, as well as by 'snail mail'. The issue is a controversial one raising important questions of public policy. An online discussion forum is part of this process.

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### Example 2: A public inquiry into a human tragedy uses its website to publicise its proceedings

The site is used not just to raise awareness, but also to air public safety issues, provide the general public with transcripts of the public hearings and invite comment. It is also intended to prompt witnesses of the event to come forward.

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**Example 3: A department's core business is the provision of information to the public**

Owing to the nature of the business, on the face of it there is little to be done in the way of records management (as opposed to web publishing).

However, the department licenses some of its intellectual property rights to commercial organisations and has charging regulations enabling it to recover some of its costs when it makes certain information available. These transactions are partly web-enabled (small payments, standard contracts).

Substantial portions of the information made available through the site are of continuing cultural and, potentially, research interest. Some of the rest (it is difficult to tell from the outset which) will be taken up in the press and could be subject to parliamentary scrutiny.

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**Example 4: A department's website is used to capture data in a transactional database about social attitudes and conditions, including those of private individuals**

Whilst the immediate business issues are to be producing statistical surveys to assist with economic, fiscal and other planning [and data protection might be the first information management priority], the resultant datasets have great potential historical value.

Some of this will only be realisable once the data is no longer about living identifiable individuals, though redaction techniques and other manipulations of the dataset could present possibilities far sooner.

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To summarise the effects of all this, there is a paradigm shift occurring in where the prime record occurs. For example:

- if web pages are what the public, user, etc will refer to when making a decision such as entering into a contract or deciding to travel abroad, then both they and the organisation making the information available have a continuing stake in it and there is a business record present; or
- if the website itself hosts dynamic transactions, including purchasing or filling in an official form, then either it or any underlying application needs to capture a record of the transaction and for it to be maintained in accordance with its importance and value; and
- in addition, there is potential record value in the content, transactional functionality and user experience being presented to the public by government in the course of discharging its functions.

As noted above, these web-based records often cannot accurately be represented by printing out to paper. To attempt to do so would not only lose aspects of the user's experience (e.g. video clips, links from one part of a document to another) but potentially even the content itself (in the case of linked and compound documents).

## Stakeholders

Virtually everyone has an interest in the management of public sector web resources:

- creating organisations
- the general public
- business
- other public bodies
- the Courts
- the media
- academics
- historical researchers.

The lifecycle of the resources could be summarised broadly as having three stages:

- creation and active use (typically being made available to a wide group of users for information and the conduct of business);
- medium term sustainability to meet business needs for continued retention of the records after they have ceased to be referred to regularly for current activity (e.g. for audit, accountability, information reuse/management reasons);
- archival preservation.

The balance of different stakeholders' interests will vary according to the stage in their lifecycle the records have reached. For example, historical researchers will mainly be concerned with archival preservation. Creating organisations will be interested in all stages, business primarily in the active use phase, and so on. Members of the general public will be concerned with the provision of up to date information and services, but also the privacy of their personal data.

What is done (or not done) at the earlier stages in the life of electronic resources can have a profound effect on what happens to them later. Unless electronic resources are managed right from their creation, there is a likelihood that they might not survive at all. This is because of the fragility of electronic media compared with the traditional hard copy environment and issues encountered with systems migration and software obsolescence.

Arguably (and in common with other electronic records), management of the records needs to begin at the point when the system is designed and well before any records are created in the first place.





## 4 How websites differ from other electronic resources

Standards for the management, appraisal and preservation of electronic records (including both principles and procedures) are already available on the PRO's website (second editions, 1999). These apply in full to website records. The guidance in this toolkit is consistent with those principles and procedures and they are only reproduced here insofar as they serve to clarify particular issues with websites.

### The main issues

The particular records management challenges posed by websites are:

#### *Immature technology*

- the main driver for the technology to date has been mainly one-way communication, with less thought given to underlying management mechanisms needed for more involved use, such as e-business;
- the use of interactive and dynamic displays to make websites more informative, attractive and entertaining has compounded this tendency;
- the technology is rapidly evolving, resulting in unstable technological standards.

#### *Content management solutions*

Important caveats need to be entered about some of the 'content management' solutions currently on the market in terms of their records management capabilities:

- some websites have very rapidly changing content as full advantage is taken of the 'immediate publication' potential of the web. Content is not always properly considered before posting;
- the facilities for publishing to websites directly from standard office software can encourage uncontrolled publishing;
- version control can be haphazard;
- there is a perception that such 'content management' solutions actually take care of records management considerations. In general, they do not: they either provide document management facilities with little or no records management functionality<sup>4</sup> or are merely a rapid publishing mechanism that can sometimes lessen the likelihood of these aims being achieved or even considered.

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<sup>4</sup> A succinct summary of the difference between ERM and EDM appears in the e-Government policy framework for records management, available on the e-Envoy's website.

### *Records capture*

- capturing the content of websites in other formats, electronic or otherwise, will usually result in loss of functionality or present a degraded reproduction of the original user's experience, especially over time;
- compound documents, drawing together in the user's browser a selection of resources from different electronic objects, pose particular challenges. These are heightened where the selection itself is the result of some 'intelligent' system rather than the users' expressed preferences;
- website content will for many departments represent the first or one of the earliest types of record that cannot be accurately represented by a hard copy printout<sup>5</sup>. Thus a departmental policy that may apply to certain other records of printing electronic records to paper is not a satisfactory option;
- website resources that have the status of records may have been produced and retained in an unmanaged environment, often with little input from records managers;
- appraisal is particularly challenging given the amount of ephemeral information on websites and the existence of some or all of the information they contain in other forms and formats.

### *Sustainability*

- long-term sustainability is an untried area. It is unlikely that public bodies will be able to tackle this by preserving a museum of current computer hardware to enable the exact replication of the website user's experience for posterity. This is owing to the resource and the technological implications;
- a variety of strategies for website sustainability have been suggested, including taking periodic snapshots of entire or partial websites and the contrasting approach of concentrating on the transactional records generated through web hosted business. Both approaches have potential costs and pitfalls that need to be carefully considered.

---

<sup>5</sup> *Printing to paper might be considered 'better than nothing' for the representation of a few single-version static pages with very rudimentary linkage, but is of little other use. At the time of writing, as with managing electronic documents on a local area network, it is the view of the Public Record Office that effective records management is not promoted by such an approach. This is because business pressures will be producing change in web deployment and, de facto, changing the record content of websites, whatever the wording of formal records policies.*

## 5 Management control mechanisms

There are three broad steps to establishing a robust management mechanism where one does not already exist:

- identify which categories of website material need to be captured as corporate records;
- identify methods to address this immediately where necessary (e.g. to manage uncontrolled business risk exposure);
- identify a management strategy and processes to develop for future management within a structured environment.

The next section (Model action plan, page 21) contains guidance on implementing the choices that this analysis will present.

### Determining the 'record-ness' of content

It is essential to clarify which website content has the status of a corporate record and which does not. Departmental inventories produced to assist in planning for the 2004 target will assist in clarifying this. Some useful questions to ask are:

- is the website content a unique instance?
- **if so**, what is its importance? Or:
- **if not**, is the website version of business importance *in its own right* (although also held elsewhere?)

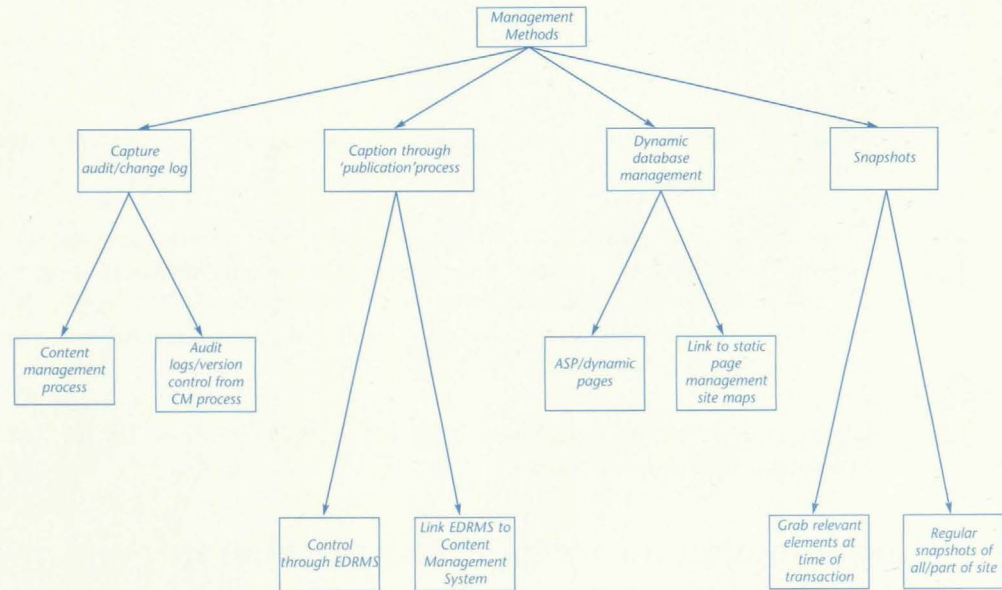
When considering the third bullet point, it helps to examine how useful the information contained in the records is (or what use it could potentially be put to) by the people who view it: see also the heading 'Risk assessment' in the next section starting on page 21.

Website documents rarely exist in isolation – they have been produced by and for a business function that will have created other records to record its activities for business and accountability reasons. There may also be records of the web publishing process itself, but preserving the source documents may not provide evidence of what the website said without some evidence of the publishing process that demonstrates its integrity.

You should clarify for each record type whether your records management procedures need to capture an individual event (e.g. what the website user sees at the crucial moment) or a physical object (that are available to them for access). There is potential danger in attempting to do both half-heartedly and actually ending up achieving neither.

There will still be a need in most cases to capture the point at which the web content was published and removed and to retain that information for a length of time appropriate to its

Figure 1: Schematisation of possible management processes



significance and value (in accordance with an official retention schedule). This can either be done in an EDRMS or in a document management system with version control facilities as appropriate for the status of the content (see below).

### Management processes

A variety of management options are possible, from instituting the sort of version control and structure recommended in the PRO's toolkit *Good practice in managing electronic documents using Office 97 on a local area network*, to implementing version control (with or without a full document management solution) and tightening the handling of structured information in databases with full audit logging and capturing content in a fully-functioning EDRMS. A possible structure for these options appears in figure 1 (above).

The solution should be fit for purpose according to the business requirements rather than being driven solely by technology. As already stated, it should also fit into the wider information management strategy for the organisation. It is important that procedures are agreed, spelt out and properly understood within the organisation.

## Content management – capturing website records in a fully functioning electronic document and records management system (EDRMS)

Website content that has the status of records should ideally be captured at the point of creation and managed throughout its life in an EDRMS to ensure the capture of records management metadata and preserve the contextual and evidential value of the material. The PRO has published functional requirements for ERMS systems and currently tests off-the-shelf systems against these (where this has not been possible from the outset, some pointers in improving management disciplines are provided in the next section). A number of the approved systems have document management facilities or are integrations of a records management client with an enterprise-wide document management system.

There are early signs that software suppliers are beginning to respond to the potential market for linking content management solutions to EDRMS. The approach taken is likely to involve maintaining page structure and change history in the EDRMS and the objects themselves in the content management solution, thereby embedding the records management disciplines into the business publishing process.

This is one of the areas where we expect the situation to change over the next couple of years.

## Document management and versioning

Other content also requires careful management that should be complemented by the records management considerations. For example:

- non-current material may be redundant and require removal;
- there may be a requirement to retain access to outdated versions, whilst making their status clear to users (for example, departments are required<sup>6</sup> to maintain policy consultations until the next change of government even if public policy has moved on);
- alternative versions of documents that are substantially the same may be required to promote accessibility (e.g. HTML rather than just *.pdf*, minority languages or plain English versions).

This requires proper version control mechanisms and compliance with the e-Government Metadata Framework resource description metadata standard (e-GMF/e-GMS)<sup>7</sup>.

## Managing content common to both website and intranet

One of the major advantages of web technology advocated in the private sector is the ability to make the information resources that exist inside an organisation available outside. This can be limited to modest websites or embrace comprehensive knowledge systems.

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<sup>6</sup> *e-Envoy's guidelines*

<sup>7</sup> *On the e-Envoy's website*

Where security considerations allow, it is worth public sector organisations considering the potential benefits of having common source files for both information views (i.e. being made available both within and outside a single organisation).

Extensible mark-up language (XML) and other technology can enable different views of the same text files to be made available to users in different domains. Alternatively, it may be possible to control the content at source file level and publishing into both domains. For material with the status of record, the integrity of this process will have to be assured by robust, contemporaneous record and metadata capture. This requires the deployment of an EDRMS as stated on the previous page and careful metadata configuration (i.e. of publishing domains).

### The role of site maps and control of uniform resource identifiers (URIs)

Site maps are an invaluable tool to assist in the technical management of large websites. Used with an inventory<sup>8</sup>, they can assist the records manager and others to understand how both the logical and the actual structure of the site have been implemented and developed over time. Sophisticated tools are available for the automatic generation of site maps. These have an obvious relevance to the management of dynamic content (see page 18) and extended retention of them may be essential to website records management.

Some system of tracking the development and allocation of uniform resource identifiers (URIs or 'web addresses') within a site needs to be put into place. This could prove critical if the objects forming the user's experience of the site are distributed across different servers or even organisational and national boundaries. This is essential for the management of content purely as a current information resource – otherwise users will experience very rapidly broken links. Software is available to check periodically whether hyperlinks are still working.

<sup>8</sup> For example the inventory of records departments have recently prepared to establish what records need to be migrated across to the environment with enterprise-wide EDRM and which can be scheduled for disposal or disposed of when the immediate operational use has expired.

## Using site maps to manage record relationships

It is even more important to preserve a record of the relationships between various content if any of it has been found to have the status of a formal record. These relationships will not be based on a simple hierarchy.

There may well be a conventional hierarchical structure apparent in paths users might take to navigate from lists of links on 'home pages' to broad topics or business areas and then down to narrower subjects or individual transactions. However, this is unlikely to be either the only means of navigation, nor the only logical structure of the information: good web material is often authored differently from that always intended for hard copy publication. Other structures will be implemented by Hyperlinks from parts of documents to parts of others and navigation enabled by these, Freetext, subject field and other types of searching.

Overall site structure needs to be borne in mind for managing information and records that might be:

- visible to current users;
- removed from view but retained for record purposes;
- not viewable by accessing the site in the normal way but present and accessible through links from elsewhere (e.g. departmental information asset registers accessed through HMSO's *Inforoute*); and/or
- never viewable by the site's users but related to the administration of the site (e.g. technical metadata, etc<sup>9</sup>).

## Managing static content

The model of early government websites with infrequent changes to a small quantity of static content is perhaps no longer the norm, nor compliant with best practice (see the e-Envoy's Guidelines). Some public functions will nonetheless have less dynamic sites than others, including ones that have either a short lifespan or no public policy remit<sup>10</sup>.

Some straightforward methods for managing records in this scenario might be appropriate. For example:

- documenting publishing processes thoroughly (including changes to existing pages);
- taking snapshots of small sites formed of static pages (noting the caveats about snapshots in the final section of this guidance).

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<sup>9</sup> Specific issues relating to the management and preservation of website technical documentation (including for preservation purposes) are intended for the next edition of this guidance

<sup>10</sup> An example might be the site of a public inquiry, though these now sometimes invite interaction from the public.



## Collaborative working applications on intranets<sup>11</sup> (e.g. newsboards, instant messaging, chatrooms)

Interaction with users through a website (i.e. interactions causing changes to some content rather than just displaying for information or entertainment) produces records of some sort; for example, submitting a feedback form or ordering a publication.

Much of this is likely to be purely ephemeral, for example:

- newsboard or discussion group content is likely to be ephemeral unless it is feedback to a public policy consultation (in which case it requires to be captured with the other records of that function);
- this sort of material can rapidly clutter up web pages. Whilst open discussions may require the other contributions to remain visible and this is a valuable contribution to the openness of debate, government departments could potentially be broadcasting libel if their websites host defamatory statements posted by users;
- communications such as requests for the webmaster's assistance or free publications ordering that may not really require formal recording mechanisms.

## Underlying database applications

Records managers need to be clear whether users' interaction is with the website itself or with an integral underlying application that happens to be interfaced through the website. This means of access may not be exclusive.

An underlying application may have its own audit trails and its own records capture mechanisms. Many of these will involve databases that may have been around for quite some time but are being used in new ways. Where the application is an integral part of the website itself, the content will require managing according to its business importance. A transactional website specifically designed for substantive business through a web interface will probably require full audit logging functionality.

## Possible approaches to managing compound documents on websites

An analogy could be drawn between dynamic web content (e.g. active server pages or '.asp' files – that are populated dynamically from content existing in a separate series of files or links to them from a separate database) and electronic files containing macro fields that

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<sup>11</sup> Management processes will need to put into place in circumstances where there is a danger that instant electronic messaging might be used for substantive business. This is because the technology is not fit for this purpose. Organisations have worked hard in recent years to deal with a similar challenge posed by the electronic mail and will need to use a similar combination of policy, persuasion and procedure to manage this risk. At the time of writing (Autumn 2001) actual technological solutions to these problems are not yet apparent. The lack in many cases of a viable printing facility even removes a temporary coping mechanism available in the past with electronic mail

update according to external conditions in force when the file is manipulated. The website .asp file might not produce the same result if changes have been made to the relevant content it retrieves when the query is run.

The Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically (DISC PD0008, 2nd Edition, 1999) includes handling instructions for 'self-modifying' files<sup>12</sup>. The extra challenge in the context of websites is that the source material is not an integral part of the page used to display the results but is held elsewhere, for example in another directory or even another server which may not even be sited within the UK.

This difference could be managed in a variety of ways, broadly amounting to robust records management of the content potentially made available to the results page file:

- capture of each individual component in an EDRMS;
- capture of associated metadata to include the .asp files, frames etc that the object could potentially have been made available to establish the ways in which these components could have been assembled 'on the fly';
- there may also be a need for metadata elements such as: 'made available [published] on [date]' & 'discontinued from [intranet/internet] domain on [date]';
- an EDRMS with web publishing functionality may have the capability to be configured to facilitate this capture demonstrably *without* human definition of the metadata.

In some business areas, this could be sufficient to manage business risks. Make a careful assessment of how important the information content is to the conduct of business or informing decisions by people to whom a department might owe a duty of care. Taking regular snapshots, audit logging or even maintaining static listings instead might be a more appropriate solution for some applications in higher risk environments.

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**Example: Some departments use common gateway interface (or 'cgi') files to keep up to date publications lists on their websites. The .cgi file retrieves either the information content itself or a list of active links to the information, which is generated from an unstructured database. Because the database is updated when publications are either discontinued or added, the results from launching the list are different as it does not hold the information independently but runs a query on the database in real time.**

One approach might be to preserve snapshots of such lists each time an update is made. Another would be to ensure that the database had a comprehensive audit log function. Either or both of these might be required in high risk environments. An alternative would be to rely on the metadata and the capture of the individual electronic objects.

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<sup>12</sup> Paragraph 4.16 Self-modifying files (Documentation of procedures for controlling macros)

There comes a point with dynamic content (especially with general .asp format search screens) that it is probably pointless to try to pin down what content would have appeared or did appear in the user's browser at a particular time. It may be as much as could be achieved to define what could potentially have appeared there. Whilst it may not be possible to reconstruct actual user experience, this may give a better chance of maintaining the content, the information and perhaps a 'fit for purpose' evidential record.

Where business risks are particularly high, it may be prudent to avoid this type of content completely where it constitutes a formal record.

## 6 Model action plan for bringing existing website records under corporate control

A table and checklist for this implementation plan is in Annex 1 of this Toolkit. It assumes that the records manager has only just become involved in the management of the website. Records managers with prior involvement may wish to use the checklist to identify which stage they have reached and what remains to be done.

### Risk assessment of the website and its use

Your department will need to conduct a risk assessment to ascertain which of its web content is a vital record, which a corporate record and which merely ephemeral and/or a version of something adequately captured elsewhere that can be disposed of once it is no longer required on the site. As a department's use of its website will develop quite rapidly, you need to repeat the risk assessment at regular intervals. In the present period of rapid change, a minimum of every six months is recommended.

Your risk assessment needs to take into account:

- business transactions conducted directly through the website; and
- the interests of *all* stakeholders in the information presented there.

For example, some departments use the internet to provide information on the strength of which external individuals and organisations take decisions.

Depending on the importance of those decisions and the part played in them by the information, a department could expose itself to financial and other liabilities should it find itself unable to provide evidence of what information was on its website at a particular time.

- The risk assessment is likely to be the best opportunity to convince senior managers of the need for records management of websites.

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#### Example scenario 1: A government department or agency uses its website as an official channel to warn of serious public health or personal safety risks.

Risk: If the department was unable to demonstrate what the relevant page of the site said at a particular time, it might be vulnerable to civil claims should citizens fall ill or find themselves in jeopardy because individuals might be able to assert that the warning was not made available to them at the relevant time.

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**Example scenario 2: A regulatory body has a provision in its founding legislation that indemnifies the directors of client organisations from personal liability should a breach of the civil law occur whilst following its advice.**

Risk: If the regulatory body has put guidance on its website on the subject but is unable to demonstrate exactly what it said at the relevant time, it might be unable to argue that directors had not acted in good faith on its advice and consequently unable to use its regulatory and enforcement powers to call them to account.

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## Content audit

- audit website content as you would other records and information. Guidance is available in *Guidance for an inventory of electronic record collections*. This will produce a full picture of what records are currently being captured;
- consider the results of the content audit carefully in the light of the risk assessment. Specifically, map the information flows involved in exercising the relevant public function as there could be areas where records capture should be happening but is not. In the electronic environment this issue can be hidden. Urgent corrective action may be required.

## Introducing records management procedures

### *Records capture and standards*

- design new records capture procedures where these have been shown to be missing during the content audit;
- in the electronic environment, it is important that such issues as records appraisal, retention scheduling and metadata standards are applied as early as possible. Ideally, this would have been at systems design stage. Where this has not been possible, it needs to be as close as possible to (and preferably *at*) the point of records creation. Records managers will need to take the lead in setting policies and standards for these;
- there may be additional records capture issues highlighted in the next section (*Sustaining web records over time*, page 25) for records that are to be required for long periods or even permanent preservation;
- there is additional information in the *Toolkit on Sustainable electronic records: strategies for the maintenance and preservation of electronic records and documents in the transition to 2004*;
- ensure that metadata standards for the website comply with the e-GMS metadata standard published by the Office of the e-Envoy and any records have additional metadata required for records management.

### *Publishing process*

- do you need to maintain a separate directory of material that has had its format converted for posting on the website? Your publishing processes may make this desirable in case any mishap occurs and versioning becomes unclear (or, alternatively, for back-up and information reuse purposes);

- if the separate directory option is chosen, the *Good practice in managing electronic documents using Office 97 on a local area network*, may contain useful guidance on its management. Document management and/or version control software may also help;
- alternatively, reexamine the publishing process: there maybe ways of maintaining more robust audit trails of what content was accessible on the site and when, for example using an EDRMS to capture the content itself.

### *Terminology*

- when IT colleagues use such terms as 'metadata' and 'archiving', they may not be using them in the way you would. Discuss to clarify your understanding.

### *Disposal scheduling*

- it is irritating and potentially misleading from the website users' point of view to be looking at out of date information. Your concern for managing the records has a direct benefit to users;
- base disposal schedules for website material on business need. There may be special considerations arising from the points flagged up in Section 5 of this Toolkit (*Management control mechanisms* pp. 13-20);
- there will be instances when administrative retention by the creating department is required for a period after a version has been sent for permanent preservation to PRO. This should be discussed with the PRO client manager and factored into the retention schedule. Annex 2 contains a sample of how this might be expressed on a Departmental retention schedule;
- the disposal schedule needs to specify two disposal events: removal from the website and **final** disposal (i.e. destruction of the material or transfer to the PRO);
- collaborate with the web publishers and IT function to ensure the retention schedule is understood and implemented consistently;
- some internet users may be able to view non-current website content that has had its links from home and other pages removed. It is better to move it to another place if it is still required.

### *Appraisal and scheduling of compound documents*

- the levels of granularity involved are, theoretically, limitless. Some implications of the suggested approach to management of compound documents on websites are as follows:
- the purpose of retention scheduling is to produce class rules for retention of records of a similar nature. On websites, you may need to approach scheduling from both the browser end (as normal and familiar - what is seen?) and from the server end (i.e. what objects are there present?) and resolve any retention inconsistencies by retaining for the longer of the two periods;
- it may be possible to simplify administration of this sort of issue in a fully functioning EDRMS compliant with the PRO's functional requirements. Some of these products resolve similar issues with non-web records by inhibiting disposal of an object apparently covered by differing retention periods until the *later* of them is reached).

*Implementation of disposal schedules*

- final disposal should mean just that. Normal deletion of an electronic document merely removes the pointer to it: it will remain there (and could potentially be recovered) until it is written over. If you do not have an EDRMS in place, you will need to ensure the material cannot be viewed any longer (and not just by normal website users).

*Sustainability*

- feed back to your colleagues the implications of the sustainability issues in the next section of this Toolkit and the toolkit on Sustainable electronic records.

## 7 Sustaining web resources over time

There will be business needs for sustaining access to some website content over long periods of time. An EDRMS fully compliant with the PRO's Statement of functional requirements will have some exporting functionality to enable migration to another system. This improves, but does not resolve all the issues of sustaining records across time, especially those relating to software obsolescence.

Another toolkit, *Sustainable electronic records: strategies for the maintenance and preservation of electronic records and documents in the transition to 2004*, contains more general guidance on tackling sustainability issues within departments between now and the implementation of full EDRMS. This section should be read in conjunction with it.

### File and text formatting

The e-Government Interoperability Framework (e-GIF) stipulates access standards and specifications for government websites to ensure websites are properly inclusive. Many of the file formats used to support videoclips, virtual reality, sound and other interactivity will be proprietary formats that do not conform to any industry-wide standards and may become obsolete very rapidly. This is not only problematic for current accessibility: it could also prevent the future retrieval of their information content and/or presentation. Some organisations may take the decision to avoid this sort of format as a result.

Even with ordinary documents created in office suite type software (such as Microsoft *Office*), there is no guarantee that future versions of the software will be able to handle files held in their native format in a previous version of the same software. Documents in these formats may sometimes form part of website content. Refer to the separate toolkit on sustainability strategies for further discussion of this point.

Certain file formats are emerging as industry standards and these may provide some degree of insurance against this tendency. Examples are:

- .pdf (portable document format)
- HTML (hypertext mark-up language)<sup>13</sup>

These may not be true 'open' (or completely vendor independent) formats<sup>14</sup>. Merger, insolvency, takeover or just product development by any of the owners of these formats could lead to obsolescence.

Records, IT and information managers are advised to maintain an awareness of the recommendations of the World wide web consortium (W3c), an influential consortium

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<sup>13</sup> Proprietary RTF (rich text format), such as Microsoft's, has the same backwards compatibility issues as other word processing formats. There may also be issues with some of the functionality of proprietary versions of HTML.

<sup>14</sup> There are proprietary versions that need to be distinguished from 'clean' HTML (software is available to check the status of HTML content in this respect).



making recommendations for the world wide web (<http://www.w3c.org>). It is government policy that our websites support the W3c recommendations for such things as the Web Accessibility Initiative. (Refer to the *Guidelines for UK government websites* published by the e-Envoy).

Examples of W3c recommendations that may prove relevant to the management of web based records include:

- XML<sup>15</sup> (extensible markup language and the standard for the e-GIF);
- XHTML (a version of HTML that complies with XML recommendation published by W3c);

### Preservation of website 'snapshots'

Organisations where the website risk exposure (as identified in the risk assessment) is high may need to capture full or partial snapshots of their websites at regular intervals to manage these business risks. For simple websites a program such as Adobe *Webcapture*, *Teleport PRO*, *HTTrack* or *WebCopier* can be used to achieve this.

Taking snapshots for records management purposes is a separate issue from the Office of the e-Envoy's recommendation to keep mirror copies of complete websites for site management (i.e. checking how new content will fit the existing structure, links and general usability) and backup purposes. Any snapshots likely to be required for extended periods should ideally be in a format that is platform independent.

The intervals will shorten according to the level of risk, the public exposure, how controversial the content is likely to be and how often the content changes. Tracking and sustaining these changes comprehensively across time will pose complex issues and involve substantial costs as noted above.

### Transactional databases

Management of structured information in databases, including the challenges posed by technical obsolescence and migration, has historically tended to be better achieved than with other electronic information. This is because of the inherent structure of the resources and the frequent congruence between the immediate operational need and the preservation of the data.

Use of the web to transact a far greater proportion of government business will necessitate more comprehensive audit logging in databases accessed through the user's browser. Experience with accessioning databases of historical interest to the National Digital Archive of Datasets (NDAD) has also raised a number of issues relating to the preservation of database content (especially database technical documentation).

It is likely that further guidance from the Public Record Office will be required in this area.

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<sup>15</sup> XML is a subset of SGML (standard generalised markup language). SGML is an international standard [ISO8879] that will be familiar to many records managers and archivists as the parent language of Encoded Archival Description (EAD).

## References

### Public Record Office publications and guidance

(available at <http://www.pro.gov.uk/recordsmanagement>)

*e-Government policy framework for electronic records management*, 2001

*Functional requirements for electronic records management systems*, (2 vols.) 1999

*Sustainable electronic records: strategies for the maintenance and preservation of electronic records and documents in the transition to 2004*, 2001

*Good Practice in managing electronic documents using Office 97 on a local area network*, 2001

*Guidance for an inventory of electronic record collections*, 2000

*Evaluating information assets: appraising the inventory of electronic records*, 2001

*Management, appraisal and preservation of electronic records*, (2nd edition, 2 vols., 1999)

### Office of the e-Envoy publications and guidance

(available at <http://www.e-envoy.gov.uk/publications> and <http://www.govtalk.gov.uk>)

*Guidelines for UK government websites* (2nd edition, 2001)

*e-government interoperability framework (e-GIF)*

*e-government metadata framework (e-EMF)*

*e-government metadata standard, (e-GMS) Version 2*, 2001

### Other resources

*British Standards Institution DISC PD0008: Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically*, 2nd Edition, 1999)

*National Archives of Australia: Archiving web resources: Guidelines for keeping records of web-based activity in the Commonwealth government*, 2001

*National Archives of Canada, Office of Government records: Managing internet and intranet information for long term access and accountability: implementation guide*. IM forum, 1999

## REFERENCES

LeFurgy, W. G. *Records and archival management of world wide web sites*. Society of American Archivists, Government Record News, April 2001. <http://www.governmentrecordssection.org>

McClure, C. R. and Sprehe, J.T.: *Guidelines for electronic records management on state and federal agency websites* at <http://istweb.syr.edu/~mcclure/nhprc>

World wide web consortium website: <http://www.W3c/org>

## Annex 1: Checklist for implementation of model action plan

Action	Responsibility	Checked	Other issues/references	Suggested time interval (for action)
<b>Initial website risk assessment</b>				
Category 1. site used for information provision only. Any subsequent transactions follow other exchanges of information captured elsewhere (not on website)	Web project manager / webmaster in collaboration with content providers		—	Very frequent (at least bi-monthly) as e-Government agenda is taken forward
Category 2. Information provision is a key corporate function (e.g. public advisory functions)	Operational managers, web project manager / webmaster and records managers		May need internal legal advice on status of disclaimers (may be ineffective)	Very frequent (at least monthly) as e-Government agenda is taken forward
Category 3. Site used to host transactional applications	Operational managers, database administrators, records managers		Extent of audit trails in application itself	Very frequent (at least monthly) as e-Government agenda is taken forward
<b>Existing content audit completed</b>	Records managers		—	—
<b>Addressing issues of non-capture of records</b>	Records managers in consultation with business managers		—	As use of website develops, arising from repeats of risk assessment
<b>Appraisal of content from both browser and directory levels</b>	Record managers		—	As use of website develops, arising from repeats of risk assessment

*continues overleaf*

<b>Metadata</b>				
1. e-GMS compliant metadata standards agreed for documents and records	Record managers		—	On extension of the e-GMF/ PRO standards
2. e-GMF compliant metadata standards introduced for new content	Records managers in collaboration with web project managers, webmasters, content providers and IT managers		—	—
3. e-GMF compliant metadata standards applied to legacy content	Records managers in collaboration with web project managers, content providers and IT / web managers		—	—
<b>Examine publishing processes</b>				
1. Consider desirability of document management for directory used to publish website documents	Records managers / IT managers / web project managers		Depends on whether records can be captured adequately elsewhere; needs of publishing function / contingency arrangements	—
2. Flag up sustainability issues relating to file formats	Records managers		Particularly important if web content to be sustained for across several platform migrations for business or historical reasons	—
<b>Audit compliance with standards and implementation of scheduling</b>	Records managers, (also webmasters following user feedback)		—	Six-monthly
<b>Repeat risk assessment</b>	—		—	As above

## Annex 2: Sample entry on a Departmental retention schedule expressing disposal arrangements for website records

Function	Series	Domain	Trigger 1 ('T1') (removal from site)	Trigger 2 ('T2') (disposal rule)
Operations	Operational guidance / Staff instruction	Internet & intranet	On becoming non-current ( <i>i.e. superseded or withdrawn</i> )	5 years from becoming non-current (T1+5 years)
			Disposal action 1	Disposal action 2
			To offline storage	Final deletion
Policy	Major policy consultation	Internet	On change of administration ( <i>in line with OeE web guidelines</i> )	Transfer to Public Record Office within 1 migration cycle (T1 + max 5 years)
			Disposal action 1	Disposal action 2
			To offline storage	Final deletion 15 years from creation / posting <i>if transfer confirmed</i>
		Intranet	12 months from end of consultation period	12 months from end of consultation period (internet version retained as above)
			Disposal action 1	Disposal action 2
			To offline storage (content will be the same, RM metadata different)	As above ( <i>if selected</i> )
Facilities	Health and Safety arrangements	Intranet only	On becoming non-current	T1 + 75 years
			Disposal action 1	Disposal action 2
			To offline storage	Final deletion

- *Italicised text is for explanation only.*
- *Please note any retention periods on this page are for illustration only, they should not be construed as disposal scheduling guidance from PRO.*



## Frequently asked questions

*Q: We've decided we don't have any original records on our website – it's all either copies of something else or purely ephemeral. Is that OK?*

A: Early government websites were typically used merely to make available official publications that continued to be produced and distributed in hard copy. Later, even the use of websites for publication purposes developed so it is unusual for a department not to have at least some publications that have only been published on the internet.

Since then, a great deal has changed and there are central guidelines published by the Office of the e-Envoy on (among other things) what minimum content a government website must contain.

The e-government agenda also means that the web is becoming the principal method for delivering electronic services. Records are a necessary by-product of business activity. They capture information about the transaction for the benefit of both parties, confirming understanding and promoting trust. This is particularly important in the electronic environment. This makes it highly unlikely that you do not have records management issues to consider with your website.

*Q: Can we manage the records on our website by just printing to paper?*

A: Probably not, or at least not for much longer. Please refer to the answer to the previous question. In addition, there are types of electronic content that cannot be accurately represented by a paper surrogate (e.g. interactive features). You should also be preparing to manage your electronic records electronically by 2004 to meet the cross government target.

*Q: So this means we're all right with our intranet then?*

A: We have scoped this guidance to include intranets and extranets (including the GSI) as well as public websites.

Civil servants within your organisation or otherwise with access to your organisation's information through the GSI will be making business decisions on the basis of the information. For example, they may be viewing staff instructions to assist them with casework. Refer to Section 5 of the toolkit for further discussion of this issue.

In addition, the Freedom of Information Act 2000 and other developments will greatly increase the potential for public access to your information resources previously thought of as purely 'internal'.



Then, many departments make information available to their staff about their employment, health and safety etc. using an intranet. Some of these records may be required in evidence and some have to be retained for a very long time.

*Q: What about dynamic content and compound documents?*

A: This is one of the principal differences between web based resources and more conventional material. The presentation of content from a variety of different source files in the user's browser is part of the communication revolution currently underway and a vital part of providing services tailored to individual customers.

Managing evidential records in this context is highly complex. In fact, for areas of high risk we are suggesting that this type of presentation should be avoided. Some principles are suggested in this guidance, relating to metadata capture and appraisal issues (sections 4 and 6).

Software obsolescence in formats used for web resources is even more of an issue than with ordinary office software. There are very substantial cost implications in trying to maintain the user's experience across long time periods.

This guidance is intended to help departments with the current situation. A great deal will change over the next few years and it is to be hoped that some of the issues will become a little clearer and some consensus emerge about possible solutions.

*Q: We don't have an electronic records management system in place yet – what can we do?*

A: Departments are at different stages in their implementation plans, although they have been set common milestones along the route to full EDRM. Many of the issues with managing record on websites can be made a little simpler by the implementation of EDRMS, though only some of the software products currently available have much functionality in this area. Most 'Content management' solutions actually do very little to encourage or enhance the management of records.

If you do not have an EDRMS implemented, you have a problem and one that may be exposing your organisation to an unmanaged risk, depending on what your website is used for. Tighter document management procedures may provide some improvement. Refer to Section 5 on risk assessment in the guidance.

If your organisation has a high risk exposure owing to its web based activity you may well have specific business requirements to consider when you do come to drawing up your EDRMS requirements.

*Q: Our website is hosted by an external contractor. How do we manage the records?*

A: Many organisations have contracted out their IT services in recent years, including web hosting. You need to ensure that the same controls are in place over your information as would be there if it was still in-house. This may require negotiating more stringent controls over your electronic information and records.

There are other areas of electronic information management where this is equally important: e.g. compliance with the Data Protection Act 1998. This too may have implications if personal data is being manipulated (processed) using a website.

*Q: Should we use snapshots to keep a complete record of what our website said and when?*

A: Snapshots of websites can indeed be captured – some proprietary software is available that is capable of capturing the number of levels removed from a particular URL and maintaining the linkage between the pages involved. Unfortunately, this is only really suitable for simple sites and begs the question: 'What use are the snapshots are likely to be?'

One purpose is the maintenance of a fully functional site for back-up purposes, as recommended by the Office of the e-Envoy (also to aid the publishing process by providing a 'test environment' for new content). This is entirely separate from the use of snapshots for records management purposes.

Considering that over time the format(s) will become obsolete, migration will be difficult and costly, it is questionable whether snapshots will tell a great deal about the appearance of the site to any one individual user in the past. We would not know, for example, which options they selected or which links they clicked. Additionally, some sites change many times a day and a vast number of snapshots would be required.

Snapshots are likely to have some application in high risk areas where retention for a relatively short period is useful in managing the business risks.

*Q: Does the Public Record Office want a snapshot of our website?*

A: As they contain public records, web resources need to be considered for selection in the same way that other public records are.

The principles governing selection are outlined in the PRO's Acquisition Policy. This is being implemented through Operational Selection Policies (OSPs) covering particular themes or departments. OSPs will indicate which records, including those in websites, we will select for preservation in the PRO.

These will be the subject of consultation with the department concerned and other stakeholders.

