

e-Government Policy Framework for Electronic Records Management

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Executive summary

Electronic records management is a key technology underpinning electronic government.

The electronic delivery of services to business and the citizen will produce electronic records as evidence of individual transactions; this evidence will need to be retained and maintained over the medium to long term as records which can demonstrate accountability and preserve reliable access. The replacement of manual and paper-based processes with electronic processes in government administration will generate electronic records as evidence in policy-making, casework and service delivery areas.

Up to the present time, new information systems development often generates electronic records that do not fall under any formal corporate management and control. Effective electronic records management to support information age government will require a formalisation of control over electronic records already existing in departments and agencies, as well as planning for those that will be generated by new service delivery and policy-making systems.

Government organisations need to manage electronic records as valuable corporate information resources...

Records represent an explicit corporate memory for the organisation. Electronic records unlock the content previously difficult to access in paper form, enable more effective sharing of information and contribute to knowledge network flows. They support evidence-based policy making by providing reliable evidence of past actions and decisions; but to do so must be managed so as to retain their integrity and authenticity. Electronic records of authenticated electronic transactions need to be kept in such a manner that retains their qualities of legal admissibility and evidential weight. Privacy and access issues, and particularly freedom of information legislation, requires that electronic records be managed consistently within regulatory frameworks. Aspects of electronic records management should be built into both record-generating and records management systems to ensure that these longer-term requirements are met.

...by constructing interacting systems of software, standards, policies, procedures and interfaces.

Greater commonality between records management systems, including metadata standards, standard logical and physical formats, and compatible procedural control, will support interoperability and joint working between departments

and agencies, and enable the managed sharing and exchange of records. The longer term requirements of public records will require public sector organisations to plan for migration of records, as hardware and software platforms change, to ensure continued access and authenticity. This maintenance of records in electronic form will make feasible their transfer to the Public Record Office, and public access both there and remotely to records in electronic form.

In government, potentially any electronic document will constitute a public record. In practice, end users will identify and declare some (but not all) electronic documents as electronic records - the equivalent of printing and filing as paper. In operational systems, electronic documents which are not records are likely to be managed alongside electronic documents which *are* electronic records for access and retrieval purposes. Records must be subject to more stringent controls, such as prevention of content alteration, and the allocation of schedules for retention and disposal. With the advent of freedom of information, this distinction is less concrete: it will be better to consider that all documents - whether of very short or very long lifespans - should be managed appropriately.

Government organisations must establish such systems by 2004.

The framework for electronic records management:

- provides background guidance to assist with the inclusion of electronic document and records management considerations in departmental e-business strategies
- provides a framework and a set of milestones for departments and agencies to move towards full electronic records management by gaining formal control of existing electronic records that have value as evidence; and to plan for the implementation of electronic records management systems that will meet the *Modernising Government* target - that by 2004 all newly created public records will be electronically stored and retrieved
- encourages the adoption of cross-government standards for metadata and interoperability to support greater commonality and inter-departmental working in electronic document and records management, and in the sharing and exchange of electronic records between government systems.

1 Introduction

1. This document provides an overall framework which describes the enabling role of electronic records management (ERM) in e-government and e-business strategies and management. It aims to:

- provide guidelines for the inclusion of electronic records management considerations in the development of departmental e-business strategies
- provide a framework and a set of milestones to move towards full electronic records management in order to meet the *Modernising Government* target – that by 2004 all newly created public records will be electronically stored and retrieved – through gaining formal control of existing electronic records which have continuing value as evidence; and to plan for the implementation of new electronic records management systems and facilities
- provide guidelines to support greater commonality and inter-departmental working in electronic document and records management, and in the sharing and exchange of electronic records between government organisations.

2. The 2004 target applies to all central government departments and their agencies, and Non-Departmental Public Bodies (NDPBs). The term ‘government organisation’ is used in this document to denote all organisations which fall within this scope.

Ownership and revision of the framework

3. This document is owned by the e-government Sub-group for Electronic Records Management, which is responsible for its further development. The document will be maintained in line with the main e-government strategy for the public sector. The current version amends, updates and supersedes version 1, to reflect recent developments in e-government.

4. The Public Record Office is the lead authority for managing the change and revision process. Future versions will be updated and revised to reflect developments in the e-government strategy for the public sector and related initiatives, and through the consultative process. All stakeholders with an interest in this framework are encouraged to contribute comments on the document and the ways in which it relates to their requirements.

5. The ERM framework is published at <http://www.e-envoy.gov.uk> and is made available for wider consultation through the GovTalk website at <http://www.govtalk.gov.uk>. Comments and proposals will be discussed by the

e-government Sub-Group for Electronic Records Management and, where significant, be made available for open consultation before incorporation in the framework.

Electronic records management and the e-government strategy

6. Information age government is underpinned by the effective management of electronic records. Transactional records will be generated by new forms of service delivery, as electronic transactions are received from business and the citizen, and processed in one or several departments. Document-based records will be generated within departments by day-to-day working activities in relation to policy-making and administration, casework and operational services. Increasingly, innovation in ways of working, knowledge-based activities and operational use of information will produce more sophisticated electronic records that can only be managed electronically. All types of electronic record form part of the corporate memory of the organisation.

7. Effective electronic records management (ERM) supports:

- efficient joint working, information exchange and inter-operability between government organisations
- evidence-based policy making by providing reliable and authentic information for the evaluation of past actions and decisions
- administration of data protection principles and effective implementation of freedom of information and other information policy legislation, through good organisation of records
- knowledge management across sectors of government by making reliable information available for sharing, extraction and summarisation
- various specialised legislation by demonstrating the authenticity of records and supporting legal admissibility.

8. Prior to recent information age government initiatives, most government organisations relied (and most still do) on maintaining physical records in conventional paper filing systems, by printing electronic records to paper. As electronic methods of working increase in extent and sophistication these systems are breaking down. For example:

- staff forget to print and file significant documents
- e-mail messages are deleted from servers without any prior archiving

- website and Intranet documents are not effectively controlled as dated versions
- multi-media documents cannot be printed without loss of information.

9. A failure to manage electronic documents and transactions as formal corporate records will mean that significant opportunities are lost, for exploiting the content to support new ways of working with faster access to higher quality and up-to-date information. Electronic records will have to be managed and maintained by electronic means to gain the full benefits of e-government.

Potential benefits include:

- better and consistent development and stewardship of corporate memory
- collaboration across workgroups and the enterprise
- enabling clerical staff to become professional knowledge workers
- faster decision making
- greater access to corporate information
- improved public service and service quality
- managing information as an asset, encouraging its collection, dissemination and sharing
- promotion of organisational learning and understanding
- reduced cost of business operations
- responsiveness to change.

At present there is little infrastructure in government organisations for this task. Government organisations will need to develop infrastructure for ERM in three ways...

- by integrating ERM facilities and procedures into new e-government systems and business processes as these are developed and implemented, and by ensuring that electronic records are captured and made available for effective management in controlled records management systems as these become operational
- by gaining control of the current situation in government organisations, where electronic information may often be lost or kept in an unstructured and uncoordinated manner, to enable identifying, evaluating and integrating of existing electronic documents of continuing value within the ERM infrastructure as it develops

- by implementing electronic systems for the management of electronic documents and records within government organisations, so that these can be accessed, maintained and retrieved in a manner which retains authenticity and integrity; and by harmonising electronic with residual paper-based record-keeping systems.

10. Building such an infrastructure will involve co-ordination of records management and information management issues across several aspects of e-government strategy, including:

- **policy and strategy** issues, to support an integrated strategy and plan within and between departments
- **information policy** issues: authentication and the retention of knowledge of authentication; privacy and data sharing; openness and freedom of information
- **systems design** issues in the development of new IT systems and networks
- **interoperability** issues, including a common approach to the use and description of electronic records through metadata standards, and the ability to develop integrated resource discovery and information retrieval systems
- **skills and competency** development, for all types of user and for records managers, in generating and describing electronic information.

What is an electronic record?

11. All organisations need to keep records of business decisions and transactions to meet the demands of corporate accountability and to service their own information needs. A record is evidence of an activity or decision and demonstrates accountability. Records are created by the day-to-day work in government; they need to be captured, managed and preserved in an organised system which maintains their integrity and authenticity, retaining their value as retrievable corporate records. In the public sector, many record-keeping requirements are determined by legislation on public records, data protection and freedom of information, and other specialist legislation and European Directives. Other requirements are determined by the particular business and operational needs of the organisation concerned.

12. In government, electronic records are public records generated and stored in electronic form. Although more easily shared and accessed remotely (with appropriate access controls) an electronic record is a more fragile thing than paper, and can easily be overwritten, lost or become inaccessible through

technology change. While there are well-developed systems for paper records, the infrastructure for the management of electronic records is poorly developed (if it exists at all), threatening accountability and good governance.

13. Good electronic record-keeping requires:

- a clear understanding of the nature of electronic records, and the electronic information which should be captured as records in order to document the business processes
- that the procedures to routinely capture these records are designed into the electronic systems generating the records (for example, office systems), and are easy and understandable to use
- electronic record-keeping systems that are designed to manage reliable and authentic records, ensuring that the integrity and reliability of electronic records is secured
- a strategy to ensure that electronic records will remain accessible and usable for as long as they are needed
- the ability to apply appropriate appraisal, scheduling and disposal procedures to managed electronic records
- a culture of best practice record-keeping among managers and end users.

14. In order to deliver good electronic record-keeping, these requirements must be supported at three levels, which complement and reinforce each other:

- at the level of the organisation, where the overall policy and strategy is set, and where an organisational culture of good record-keeping can be shaped
- at the record management level, where electronic record management procedures are defined and built into the record lifecycle, and where the operational record-keeping environment is shaped
- at the IT systems level, where appropriate design models and approaches can be employed to build the systems that can support efficient records management.

2 Policy and strategy

Government organisations will need to establish a formal policy for maintaining electronic evidence as corporate records, and a broad strategy for taking forward enterprise-wide electronic records management.

1. This will provide guiding principles as structures and systems change and develop. An important element of a corporate records policy is the existence of a mechanism for assessing and strengthening compliance, to assess the extent to which the policy is met and the strategy followed, and to provide the basis for monitoring achievement of policy goals.

Incorporating ERM into departmental e-business strategies

2. Electronic records management runs across many technologies and underpins the sustainable establishment of electronic services. Such services will generate records, received from business or the citizen or generated by the department in dealing with the transaction, and these must be captured, retained and appropriately disposed of. This framework document should be used as a reference point in thinking through the ERM implications for service delivery plans. Issues relating to electronic document and records management and the recording of transactional data must be addressed in e-business strategies.

For all areas which may potentially generate information that should be captured for evidential and accountability reasons, government organisations must always ask ‘What are the record-keeping implications of making these changes or following this strategy?’

3. A high level business process analysis or information architecture will help to identify key record-generating areas, and the points at which consideration must be given to capturing and storing the resultant information.

4. Evaluation of e-business strategies will include consideration of the extent to which ERM issues have been identified and addressed at a strategic level, and the quality of analysis which has been applied to resolving these issues within the business framework.

Information policy issues

5. Information policy issues form much of the context of electronic records management. ERM should be capable of meeting the needs of the:

- Public Records Acts

- Freedom of Information Act and associated Codes of Practice
- Data Protection Act
- Human Rights Act
- Electronic Communications Act
- relevant European Directives
- cross-government information standards (outlined in section 4)

6. The Public Records Acts place a 'duty of care' on government organisations to manage and safeguard the public records which they create; electronic records of all types fall as much within the scope of these Acts as do conventional paper records.

Privacy, data sharing, freedom of information and public access

7. Electronic records management provides strong support for the management of information falling within data protection legislation, and implementation of decisions on the opening and closing of formal records, including the release of information under the Freedom of Information Act and the establishment of FoI publication schemes. Systems which can provide the effective management of electronic documents and records will be necessary to ensure appropriate retention, use and disposal of personal data within the regulatory framework, and to support the implementation of freedom of information within central government.

8. The Code of Practice on Records Management for Freedom of Information specifies a number of actions necessary to prepare for successful management of FoI, which should be integrated with steps in the implementation of electronic records management: development of a corporate records policy; establishment of an information audit/electronic records inventory; identification of a strategy and plan for appraisal and evaluation; implementation of a structured method for filing and retrieving records.

Government organisations should develop an integrated strategic framework for managing information and not see these as separate strands of activity.

9. The need to manage information consistent with requirements of the Freedom of Information, Data Protection and Human Rights Acts will affect all government organisations; some will also identify more specialist obligations – for example, those arising from the recently revised European Directive on

Environmental Information – which also demand organisation and structuring of recorded information.

Legal admissibility

10. Activities, decisions and transactions should result in electronic records which are adequately documented for their purpose, and which are managed according to the relevant codes of practice for legal admissibility and evidential weight. Any documents or data transactions which may be required as evidence in a court of law at a future date should be managed as secure records, and according to the relevant codes of practice (BSI DISC PD0008 : 1999, *Legal admissibility and evidential weight of information stored electronically*; also included in BSI DISC PD5000: 1999 *International code of practice for Electronic documents and e-commerce transactions as legally admissible evidence*).

Authentication and audit

11. Some types of transactions will require authentication at the point of service delivery, usually by some form of electronic signature. Within the authentication and security frameworks, ‘trust levels’ linked to levels of risk are specified for each class of transaction carried out over a particular channel to determine the level of authentication required. A complementary requirement to retain, over the longer term, information *about* the facts of authentication, should be identified by government organisations by means of a similar risk analysis. This should reflect the potential evidential weight of this type of record appropriate to the type of transaction documented (i.e. a higher level of authentication will indicate more extensive record-keeping requirements).

12. Electronic documents generated within a government organisation, which have been electronically signed and authenticated, will also need to be retained with evidence of their authenticity.

13. Levels of metadata to be kept about a successfully authenticated transaction or decision could include (depending on the record-keeping needs identified):

- recording of the *fact* that the record has been successfully authenticated
- information resulting from a successful authentication – e.g. the Certification Authority, Certification details, date and time of authentication
- the public key and message digest.

14. Where a secure electronic records management system is in place, the record-keeping system itself will provide evidence of continued authenticity for records

which it contains (since that is its function) and a simple level of metadata on the facts of authentication may be sufficient. In these circumstances, procedures should be defined to control the space between the point of transaction at which the document is authenticated, and entry of the record into a secure record-keeping system.

15. All government organisations should aim to meet the standards for audit set out in the British Standards Institute *Code of Practice for Information management systems: building systems fit for audit* (forthcoming DISC PD0018: 2001).

3 Record-keeping systems design

1. Systems for record-keeping fall into two broad categories:

- electronic records and document management systems, that provide a secure environment for maintaining records that are generated by office systems and common desktop programmes – effectively all single digital objects, including word processing documents, e-mail messages, spreadsheets, presentations, graphic and scanned images, desktop published documents, static web pages, and so on.
- structured data systems which hold transactional records, or website/Intranet databases which construct dynamic HTML/XML pages

2. Structured database systems tend to be more rigorous in their management of data; however, attention should be given to the need to maintain historic data when the transactional or dynamic base record is updated. Issues of authenticity, reliability, integrity and audit apply as much to database systems as to office-based systems.

3. The remainder of this section is concerned with electronic records and document management systems.

Corporate information management

4. The challenge in designing electronic records and document management systems is in successfully combining the records management needs for structure and stability in corporate information architecture, with the operational and user requirement for fast and flexible access to information and fluidity in information flows.

5. Corporate records form the stable core of information management – reliable, accurate, quality information – taking in records from day-to-day operational systems, extracting and summarising to knowledge-based and briefing systems (and capturing the result), and publishing in different formats to websites, Intranets, publication schemes, asset registers. An effective corporate core guarantees accurate and up-to-date information, controlled versions, and sustainable corporate memory.

Records and document management

6. Most organisations will require both electronic document management (EDM) and electronic records management (ERM). These are closely related functions

which are rapidly converging as corporate records management becomes a mainstream application. They may be found in one integrated software package, supporting the management of electronic information in different but complementary ways. New systems development projects should follow the guidance given on records management implications in the two-volume document *Management, appraisal and preservation of electronic records*, published by the Public Record Office at

<http://www.pro.gov.uk/recordsmanagement/eros/guidelines/default.htm>

7. The Public Record Office has also, in conjunction with an inter-departmental group of a dozen other departments and agencies, developed and published detailed, generic and practically oriented functional requirements for electronic records management systems for use in UK government. The requirements are available at

<http://www.pro.gov.uk/recordsmanagement/eros/invest/default.htm>. They can be used as a benchmark for incorporation into departmental specifications; and form the basis for a well-established testing scheme to evaluate commercially available software packages for compliance with the standard. Compliant software systems are listed on the PRO website and are recommended for inclusion in G-CAT and subsequent IT commodity catalogues for UK government, to encourage rapid procurement for projects and programmes aiming to meet the 2004 target for ERM.

8. In the longer term, the scheme also aims to stimulate the IT supplier industry to develop more sophisticated product solutions for electronic records management that are suitable for UK government use, and to incorporate public sector standards.

Electronic document management systems

9. Electronic document management helps organisations to exploit their information more effectively by providing better access to stored information and by supporting teams working together with workflow facilities. EDM supports the immediate operational requirement for business information.

10. Typical requirements for electronic document management are:

- document capture, for internal or external documents
- storage and indexing at the document level
- search and retrieval at the document level

- access management and security control
- off-line archiving for semi-active or inactive documents
- version control
- audit trails on access and changes to the document
- document profiles (information about the document)
- integration with document image processing and workflow systems.

Electronic records management

11. Electronic records management provides a digital environment for capturing electronic documents and applying standard records management practices. ERM supports the medium to long term information management needs of the business. It manages a corporate filing structure, document classification within the filing structure and formal retention and disposition scheduling based on an approved disposition and review schedule.

12. Typical requirements for electronic records management, in addition to those already given for electronic document management, are to support:

- capturing, storing, indexing and retrieving all elements of the record as a complex unit, and for all types of record
- management of records within class categories or filing structures to maintain the narrative links between records – i.e. at the file/folder level
- record level metadata including retention and disposal rules
- integration between electronic and paper records
- secure storage and management to ensure authenticity and accountability, including support for legal and regulatory requirements – preventing change to content
- appraisal and selection of records for preservation and transfer to the keeping of the Public Record Office or other permanent archive
- management facilities for the systematic retention and disposition of records
- migration and export of records for permanent preservation without loss of information.

13. While there is overlap between the characteristics of electronic documents and electronic records, the key difference is that electronic records are documents

which have been captured into a corporate classification and filing system, retain the links between documents, and are subject to business rules on retention and disposal. An ERM system must preserve content, structure and context of the electronic records, and must ensure that records are 'registered' and that authentication procedures and audit trails are put in place. This will in turn permit these records to be used as legal evidence, improve corporate accountability and assist organisations in meeting the requirements of internal and external auditors.

Designing electronic records management into systems

14. Often, electronic records management requirements are not sufficiently recognised in determining the functional requirements for a new or upgraded system, and have not been given a high enough priority in the design and development of information systems. It is important to ensure that in all new systems work, the ability to manage electronic records is a visible thread in the design, and that it permeates all aspects of the implementation.

Government organisations should take the opportunity of new systems development to establish a platform for a high quality of electronic records management in the future, and to prevent many of the problems which can be seen in existing systems from developing in the first place.

15. The functional requirements necessary for managing and preserving records, once identified at an early stage, can be built into the design and implementation of electronic systems more easily, and less expensively, than later maintenance changes. Early evaluation of existing systems will also enable modifications to be suggested as part of a planned maintenance programme.

16. Where new systems, or modifications to existing systems, are planned there is an opportunity to influence the requirements specification and design in ways which enable effective records management to be undertaken in the future. There may also be opportunities for suggesting changes to existing business processes which will support the generation of adequate metadata and the effective handling and use of electronic records.

4 Common government standards

1. Joint working and integrated systems will require government organisations to share and exchange electronic records and documents. Export and import between records management systems will be much simplified by a common metadata structure and a common vocabulary – by using standard ways of categorising descriptive elements and standard term for their description. This will also be important for the longer-term migration of electronic documents to new hardware/software platforms. In addition, common metadata standards on issues such as authentication – what information to keep with records of authenticated transactions, for example, in order to demonstrate continued authenticity over time – will improve reliability and accountability.

2. Interoperability issues can be addressed at three levels:

- the data level – including common record-level metadata standards, standardisation of file and document naming conventions and use of a common terminology
- the system level – including issues of systems compatibility across government networks and information/ record exchange, and the use of standards, information retrieval protocols, format control and migration strategies
- the procedural level – the adoption of common functions, and procedures based on compatible systems.

Metadata and access formats

Newly developed records management systems should adopt the UK Government Metadata Framework (e-GMF) and the UK Government Metadata Standard (e-GMS).

3. This is available at <http://www.govtalk.gov.uk/egif/home.html> and defines elements for resource discovery, elements for the management of information and records (including retention and disposal), and elements for managing the preservation of electronic information. The second version, due out in Autumn 2001, will feature extended elements for records management and preservation, and a standard list of key terms including a controlled vocabulary scheme and list of geographic descriptors.

4. Newly developed record-keeping systems should adopt the Government Interoperability Framework (e-GIF) prescriptions for interoperability between

public sector information systems, which sets out Internet standards and access formats. The e-GIF is available at <http://www.govtalk.gov.uk/egif/home.html>. Further advice on formats for medium and long-term preservation and maintenance of accessibility is available from the Public Record Office.

5. Records management systems should also adopt data standards as defined in the Data Standards Catalogue (GDSC), for common elements such as name and date formats. The GDSC includes links to the e-GMF and will be available at <http://www.GovTalk.gov.uk>.

6. These cross-government standards are mandatory for many public sector information systems, and their adoption is recommended for all public sector information systems, to increase interoperability and integration of information resources, and to reduce any duplication of effort.

Standards for export and publishing

7. Where possible, electronic records management systems should move towards the use of XML and government standard XML schemas for exporting and publishing records and their metadata. More information can be found at www.govtalk.gov.uk

8. This will be relevant for the corporate management of the same information resource that, while held in a records management system, may also appear in an Intranet, asset register, public website or FoI publication scheme; and for the export of records from departments and agencies to the Public Record Office for permanent preservation.

Government organisations should develop a preservation strategy that defines standard long-term formats for maintaining accessibility, and supports migration of existing records between technological platforms as software and hardware changes and is replaced.

9. These formats should be consistent with the e-GIF and with Public Record Office recommendations.

Standards for common procedures

10. As joint working and interoperability develop, it will become more important to carefully consider and clearly define the point at which a record should be captured. This may, in some cases, be necessary at a point prior to the information entering the department, as well as for later processing: for example, at the point where a record is received by a public portal or gateway processing

facility. Records of this type may be perceived as a single document by the sender, but be separated into constituent parts for later processing by different departments as it passes through the gateway.

11. Departments may also enter into arrangements with private sector partners, which involve the partner storing and maintaining records of transactions with the government host organisation. There will need to be clear understanding of the legal and accountability implications of such arrangements, and the common procedures and standards that must be applied.

12. In these circumstances, it will be important for co-operating departments to:

- develop a common understanding on the relative balance of responsibilities for record-keeping between co-operating organisations – public or private sector partners
- determine which constituent parts, or versions, of a record are held by which organisation
- develop common procedures and standards for managing and maintaining the records as accessible information
- determine the point, or points, at which the record should be captured: for example, as seen by the citizen, or as processed by the department.

5 Skills and competencies

Information professional skills: records management and IT

1. The emphasis in electronic records management shifts from direct management of the record as physical artefact towards design of the infrastructure in which the record is created, captured and managed by a mix of the individual end user, software systems, and management procedures. For records management and IT staff, this is likely to involve the acquisition of a new range of skills; new records management skills are required by records managers and IT staff to manage new kinds of systems in new contexts. For organisations, this involves the development of multi-skilled and multi-purpose project and operational teams, bringing together a range of different skills and expertise – some new and relatively untested.
2. Responsibility rests here for developing the record-keeping infrastructure, and providing guidance and training opportunities for the end user who creates and uses electronic records. A PRO-sponsored modern programme of education and training in records and information management aimed at the information professional in government is now established and available as short one-day courses.

End user skills: record-keeping

3. In a fully electronic environment, new record-making skills are required of end users as creators and users of records. They will have much more responsibility for correctly identifying and dealing with electronic records at the point of creation; and these shifts imply significant cultural change in attitudes and behaviour towards record making and use.
4. If the end user creating the record does not carry out the correct action, the record may be effectively lost – because it cannot be found. There are significant training implications for the implementation of enterprise-wide electronic records management. record-keeping skills for end users should be integrated into more general programmes aimed at the development of information literacy skills.

6 Framework and completion criteria for 2004

1. This section sets out a framework and route map of milestones for the development of full electronic records management by the *Modernising Government* target date of 2004, and the completion criteria for assessing final achievement of the target. The target completion date given for each milestone is the latest (rather than optimal) date by which government organisations should aim to put in place measures to address the issues represented by each milestone. Since different organisations will be starting from different strengths, and have particular constraints and advantages in their individual situation, some aspects of the framework may be easier to advance than others; milestone activities which have missed their target date will still need to be completed, even though later than expected.

2. There are two primary strategic planning points:

- the explicit inclusion of electronic records management implications in the review of departmental e-business strategies (by July 2001, and any later reviews)
- co-ordinated strategic planning (by September 2001) for the integration of ERM strands (gaining control of the existing situation, and incorporating ERM into new system developments), from which the design of detailed procedures and facilities should follow. This will clearly draw on and develop the records management implications identified in e-business strategies.

Setting policy at organisation level

3. A **formal corporate policy** for electronic records, approved and promulgated by Management Board or equivalent, forms the agreement across the organisation on the guiding principles by which records will be managed. The policy should be given clear senior commitment because it is the platform for further action.

4. There are three main strands building on this foundation:

- gaining control of existing electronic document and record generation
- planning for incorporation of ERM into new systems and services
- integration of both strands into an enterprise-wide plan for corporate electronic records management.

Gaining control of existing electronic records

5. In order to effectively manage electronic information, it is necessary to know what exists and how the material relates to organisational objectives and activities. The milestones requiring establishment of:

- an **inventory** of existing records collections
- an **evaluation plan** for assessing inventory contents, with timescales
- a **sustainability strategy** for maintaining access to, and reliability of, electronic documents identified as having continuing value.

This will enable an organisation to progressively bring unmanaged documents into a managed environment.

6. These activities provide a framework to:

- identify existing electronic documents which may or may not be currently held as paper copies
- support a 'bottom-up' analysis of documents that are actually being produced on the ground, to complement a 'top-down' analysis of documents that should be being produced by organisational processes
- develop a process for evaluating current document collections, and establish a strategy for maintaining current accessibility or migrating material to new IT platforms as necessary
- encourage changes in user habits and behaviour by identifying and promoting best practice at the individual and work team level
- identify hybrid (part-electronic/part-paper) collections and develop consistent organising, indexing and retrieving structures.

Planning for ERM in new systems and processes

7. To ensure that new systems do not generate electronic records which fall outside a managed environment, strategy and planning for new systems and facilities, including those developed as electronic service delivery systems within the e-government context, must incorporate consideration of electronic records management. The milestones for:

- **recognition of ERM implications in e-business strategies**, and a strategic approach for ensuring these implications are taken forward

- **strategic planning** for ERM, including incorporation of these implications (with those from other strands)

together are the means for addressing this need. These milestones should enable departments to link business process analysis and work on information architectures with record-generation and record-keeping processes.

Planning and implementing enterprise-wide ERM

8. Both strands – current record/document production and new systems planning – must be brought together in a consistent enterprise-wide approach to ERM implementation.

The milestones for:

- strategic planning for ERM
- detailed ERM requirements
- ERM implementation planning

outline the logical steps for this work.

9. Government organisations are encouraged to develop pilot projects and use a modular or incremental approach to implementation. Electronic records management is a relatively new application area for UK government, and an incremental approach will support an ability to learn from experience, and to avoid pitfalls often inherent in large single-rollout projects.

10. The list of approved systems identified as capable of meeting ERM requirements

(<http://www.pro.gov.uk/recordsmanagement/eros/invest/default.htm>) will be a major source for procurement planning.

Milestones summary for achievement of 2004 target for electronic records management

Table 1 Milestones summary for achievement of 2004 target for electronic records management

2004 Route map milestone	Target completion date	Lead	In support
1 Corporate policy on electronic records to be in operation ERM plans documented within initial departmental e-business strategy	October 2000	Departments	Public Record Office (PRO)

2 Establishment and continued extension and maintenance of an inventory of existing electronic record collections	December 2000	Departments	PRO
3 Strategy for and implications of ERM in new systems and services development incorporated into the revised departmental e-business strategy	July 2001	Departments	PRO Office of e-Envoy
4 Plan for appraisal and evaluation of information assets identified in the inventory of record collections	September 2001	Departments	PRO
5 Strategy for medium term preservation of documents identified as having continuing value, including migration to a future corporate ERM system	September 2001	Departments	PRO
6 Detailed strategic plan for the development of enterprise-wide electronic records and document management systems, procedures and facilities	September 2001	Departments	PRO
7 Specification of detailed requirements for systems, facilities and procedures for corporate management and control of electronic records and documents	March 2002	Departments	PRO
8 Implementation plan for systems, facilities and procedures for corporate management and control of electronic records and documents	December 2002	Departments	PRO
9 Implementation of facilities and procedures for the maintenance and preservation of the electronic records collections	December 2003	Departments	PRO

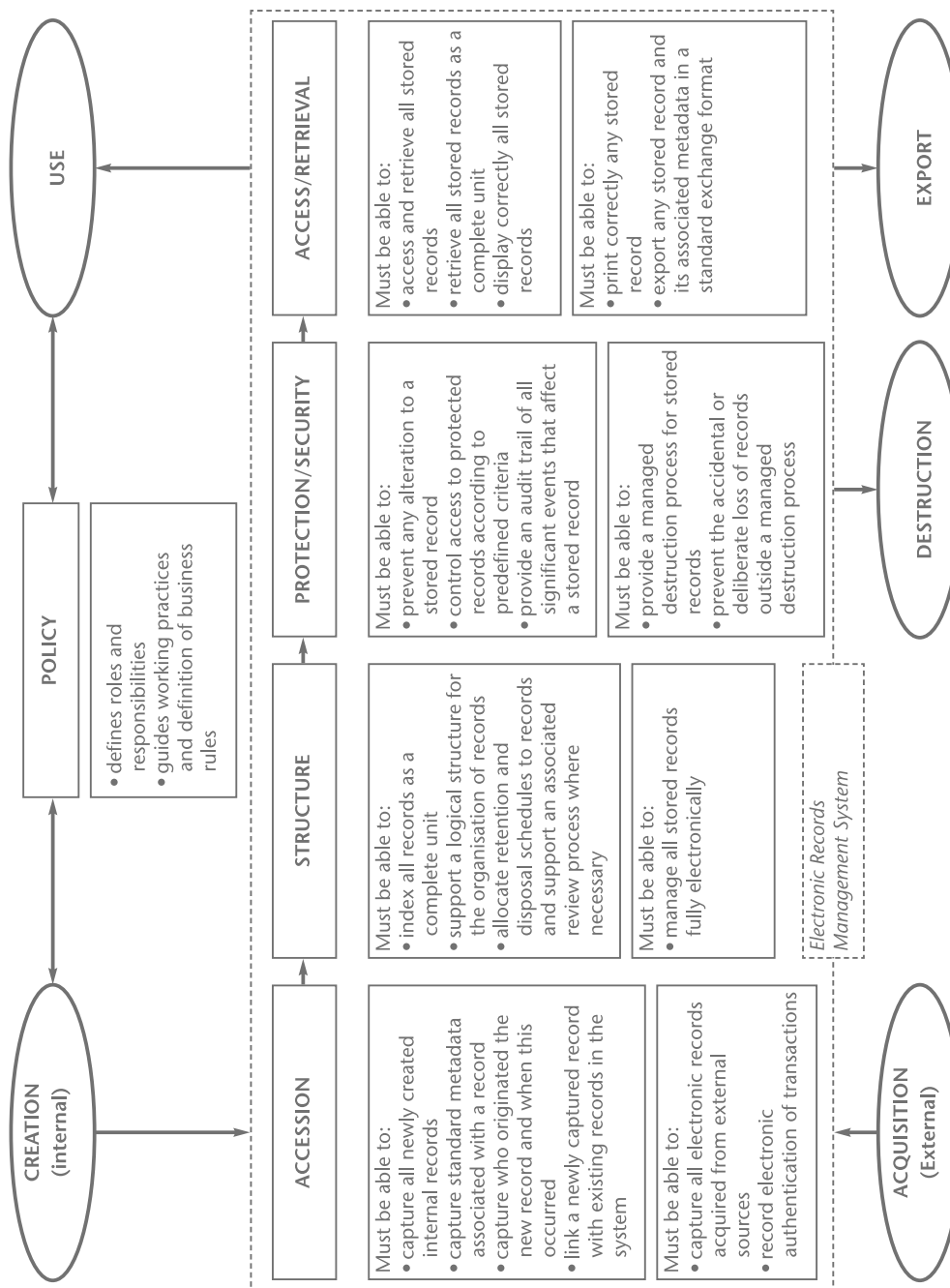
Completion criteria for assessing achievement of 2004

11. These completion criteria are intended as:

- achievement criteria which central government departments, agencies and non-departmental public bodies should use to determine whether the organisation has fully achieved the target, and if not to identify those aspects which have not yet reached completion
- acceptance criteria which the PRO will use in its 2004 monitoring programme to determine whether a central government department, agency and non-

departmental public body has met the 2004 target to store, manage and retrieve electronic records by electronic means.

12. Figure 1 below shows a process model structure which is a compact summary of completion criteria and the relationship between them. The text below describes the same model, and can be read as accompanying commentary on the process model.



13. The organisation must be able to demonstrate that:

- a formal corporate-wide policy on electronic records is fully implemented and in working practice

- existing records creation practices have been brought within a fully managed environment that enables the capture, management and access of electronic records so that the organisation is able to capture all newly created internal records into an electronic records management system
- e-business and e-government systems and other new systems incorporate, or interface directly with, an electronic records management system so that the organisation is able to capture all externally-generated electronic records and record authenticated transactions
- corporate-wide electronic record management systems are established that provide facilities for the capture, management, and access of newly-created internal records (which will be electronic in form) and externally-generated electronic records that are received from outside the organisation in electronic form.

14. Record capture facilities must be able to:

- capture content and format for all types of electronic records that are generated
- capture who originated the record and when it was created
- capture standard metadata associated with the record, supporting UK government metadata standards in force.

15. Record management facilities must be able to:

- support a logical structure for the organisation of records that associates records falling into the same category
- protect all finalised records from change in content at all times
- allocate retention and disposal schedules to records, support the review process where necessary, and enable revision of the application of schedules to records
- export (and where available, publish) from the records management system records and all their associated metadata together, supporting UK government standard interoperability formats in force
- provide a managed destruction process for records so scheduled
- prevent accidental or deliberate loss of records outside a managed destruction process
- provide an audit trail of all events that affect records.

16. Record access facilities must be able to:

- index and retrieve all records each as a complete unit
- enable the correct display and printing of all records at all times
- control access to protected records according to pre-defined criteria.