



the national archives

Guidelines

on the Realisation of Benefits from Electronic Records Management

September 2004

Guidelines on the Realisation of Benefits from Electronic Records Management

SEPTEMBER 2004

The National Archives
Ruskin Avenue
Kew
Surrey
TW9 4DU

email: e-records@nationalarchives.gov.uk

Author: Ian Macfarlane

Produced by The National Archives with assistance from Capgemini

This report can also be accessed on The National Archives' website at:
www.nationalarchives.gov.uk/electronicrecords/advice/default.htm - toolkits

© Crown copyright 2004

This publication may be reproduced in whole or in part, free of charge provided that the content is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title and source of the publication specified.

Designed and typeset by Format Design

www.format-design.co.uk

Contents

1	Introduction	1
1.1	Aims and Intended Use of the Guidance	1
1.2	Audience for the Guidance	1
1.3	Programme Governance	1
1.4	Vision and Outline Business Case	2
1.5	Standards Conformance	5
1.6	Strategic Planning and Implementation of ERM	5
2	Management of Benefits	7
2.1	Planning Benefits Management	7
2.2	Categories of Benefit – Some Definitions	8
2.3	Early Identification of Benefits	9
2.4	Linking Benefits to Organisational Objectives	10
2.5	The Benefits Realisation Process	11
3	Non-financial Benefits	13
3.1	Informational and Knowledge Based Benefits	13
3.2	Corporate Information Management and Integrity of Government Records	14
3.3	Cross-government Services and Administration	16
3.4	Departmental Business Processes	16
3.5	Other Benefits	18
3.6	Quantified Quality Improvements	18
4	Financial Benefits	21
4.1	Savings in Staff Time	21
4.2	Savings in Space Required for Files	24
4.3	Other Financial Savings	28
4.4	Savings in Replaced Systems	28
5	Achieving and Evaluating Benefits	29
5.1	Management of Key Performance Indicators (KPIs)	29
5.2	Measurement and Reporting of KPIs and Benefits	29
5.3	Benefits Realisation Plans	31
5.4	Measuring KPIs and Benefits by User Survey and System Statistics	35
6	References and Sources	45
6.1	References	45
6.2	Sources	45

1 Introduction

1.1 Aims and intended use of the guidance

The aim of this publication is to provide a comprehensive guide to realising benefits from an electronic records management (ERM) programme. For completeness it begins with identifying, planning and predicting benefits and will hopefully be of value to those who are writing or refining a business case. The main target of the guidance however is enabling the achievement of a wide range of benefits and so it places emphasis on the range of potential benefits, supporting achievement of the benefits, and on evaluating and measuring benefits.

The guidance aims to cover the benefits and approaches that are relevant to an ERM programme, and where general guidance on business cases and benefits is available, for example from HM Treasury and the Office of Government Commerce (OGC), references are given rather than duplicating material.

The guidance includes examples taken from many business cases from across central government and some results to date from programmes.

Since the guidance is comprehensive and the benefits management and measurement approach contained in the document is similarly comprehensive, it should be tailored to particular needs including a scaling down if appropriate.

1.2 Audience for the guidance

This guidance is intended primarily to assist Departmental Record Officers and Project or Programme Managers charged with any ERM benefits activities; in particular identification and estimation of benefits, planning to realise benefits, supporting achievement of the benefits, or evaluating and measuring benefits.

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.

1.3 Programme governance

The proper governance of the ERM programme is essential to the timely achievement of the benefits. There should be a Board level sponsor who will actively participate in the management of the programme and attend the top level programme board. The person responsible for the delivery of the programme needs to be a well respected member of staff who has both management and users' confidence. The programme management needs to continually review and be responsive to review findings. Programme plans always change and so the review process can be important in fine-tuning the developed business case, activities for supporting achievement of the benefits plan, and the predicted benefits themselves.

As well as the formal management of the programme it is very useful to have user panels that represent the views of the users. These can be made up of perhaps all 'super-users' or local records officers in each business unit; or a more senior user panel comprising a senior user representative from each business unit. The programme management should hold a series of monthly meetings with each user panel or working group, from as early as possible right through to after implementation when benefits are being tracked.

To support the programme governance structures, formal procedures need to be in place to ensure quality and effectiveness of the ERM system (ERMS). The procedure can be based on PRINCE 2 deliverable acceptance procedures.

The activities described above will assist readiness for formal OGC Gateway reviews especially for Gateway Review 5, benefits evaluation.

1.4 Vision and outline business case

Relate ERM to the strategic context

ERM must be related to the strategic context; ie the organisation's strategy and objectives, government policy imperatives and emphasis on ERM as an aspect of information management/knowledge management. Otherwise there will be risks of lack of corporate support subsequently.

It is necessary to review the following:

- is the vision for the ERM programme clear and agreed?
- is the scope clear and agreed?
- what is the stakeholder awareness and support?
- balance of cost, benefit, risk?

Communicating a clear vision of what the future holds is a critical success factor in an ERM programme. Management and the programme need to reinforce the vision message at every possible chance. Arriving at the vision should be a joint effort between management, implementers and users ie all of the stakeholders. If the vision is clear and agreed the success of the programme can at any time be ascertained by referencing progress to the vision.

Identify strategic drivers for change

Strategic drivers are the factors which provide the primary motivation for an organisation to carry out a programme such as the introduction of ERM. An example is: to enable compliance with Freedom of Information (FOI) legislation. Drivers are normally converted into potential corporate benefits.

Drivers – legislative requirements

Risks of non-compliance

The danger of non-compliance is not just any penalty that might be imposed, but risk to the reputation and credibility of the organisation.

Freedom of Information (FOI) Act 2000

This is one of the most pressing requirements to have created a sense of urgency in implementing government ERM programmes. From the start of 2005, government bodies are required to make any information (subject to various exemptions) available to enquirers who have enquired in writing, within a 20 day limit for response.

ERM enables an answer with confidence to the question whether particular pieces of information exist, then making informed decisions as to their release and taking a copy of the information. It also assists the handling of the information, and copies of the information supplied, if redactions etc are necessary.

Data Protection Act 1998 (and Human Rights Act 1998)

These impose privacy standards. For example, with electronic information being formally managed, it is possible to indicate how long documents need to be kept. This is important when storing information about individuals, which must not be kept longer than necessary. The Data Protection Act also requires disclosure of information held about an individual on written request by that individual.

ERM allows personal information to be flagged and found.

Environmental Information Regulations

These regulations (deriving from EU directive) have for some time required disclosure on request of information concerning the environment. ERM enables systematic controls to be applied.

Public Records Act 1958

The capturing of records in registered files has been in danger of being diluted in recent years as an increasing proportion of government documents are created electronically. Meeting the requirements of the Public Records Act 1958 by printing off all relevant documents (emails, word processed documents, spreadsheets, etc) and filing them in registered paper files, is no longer an option under Modernising Government policy (see below). It has become increasingly easy for non-compliance to occur. As electronic working has become the norm, an ERMS has become essential as part of the solution.

Government accounting rules, audit requirements, Finance Act, Public Accounts Committee

ERM enables systematic controls to be applied including disposal schedules and can provide audit trails both in terms of records as evidence and audit trails of actions of creation, access and amendments.

Organisation-specific statutory requirements

Devolved areas legislation and maintenance of public registers need to be taken into account in ERM strategy and planning.

Modernising Government targets

The target that by 2004 all newly created public records will be electronically stored and retrieved accelerated the impetus for government organisations to seek electronic records management systems.

The target for all communication with government to be possible electronically by 2005 also emphasises the urgent need for electronic records management facilities to underpin electronic government (see 3.4).

Longer term reform in government

This includes:

- the need to underpin all-pervasive electronic working
- assisting Parliamentary scrutiny
- the ability to provide rapid advice to Ministers
- evidence-based decision making
- interchange of information between organisations

Drivers – policy requirements

The Lord Chancellor's Code of Practice on Management of Records

Under Section 46 of the Freedom of Information Act 2000. This gives records management guidance in the FOI environment.

Government Privacy and Data Sharing Policy

ERM underpins meeting requirements.

Supporting achievement of the organisation's specific Public Service Agreement targets

These typically include a value for money target to achieve an x% efficiency saving per year on administrative resources.

Drivers – internal

The following were quoted as internal strategic drivers by some departments. (The benefits described in section 2 onwards need to cover the strategic drivers thus replacing them for the purposes of benefits realisation.)

- Supporting modernising the department through e-government, e-business and e-records.
- Better quality information and knowledge management strategies.
- Managing information overload.
- Providing efficiency savings in staff time and/or physical storage.
- Providing an infrastructure to support end-to-end e-business including Ministerial correspondence.
- Enabling office relocation to smaller office space, or moving more people into existing office space.

Identify key stakeholders

The stakeholders identified need to include those concerned with:

- business process improvement
- IT infrastructure
- change management
- records management.

Identify critical success factors and risks

Critical success factors

It should be decided at an early enough stage in the design phase what the metrics and key performance indicators (KPIs) for the new world will be. These should cover the original critical success factors (CSFs). For example a CSF of active records management culture across the organisation could be covered by a measurement of the level of record keeping (eg % of users active, after implementation of ERM). This is in order to build a collection of these metrics into the ERMS, where possible. The target values it is hoped to achieve for the KPIs should also be determined, to compare the actuals against.

Risk management strategy

A risk register and regular review of this are a valuable tool, in this context, to ensure that expected benefits are not being cut out due to project rationalisations or other changes.

1.5 Standards conformance

The table below indicates standards which may be considered for use in an ERM programme.

BSI DISC PD 0008 – Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically, together with accompanying workbook PD 0009 Where significant amounts of an organisation's information is scanned into the ERMS this standard is relevant.

BSI DISC PD 0010 – Principles of Good Practice for Information Management

BSI DISC PD 0018 – 2001 Code of Practice: Information Management Systems: Building Systems fit for Audit. For accountability.

ISO 17799/BSI 7799 – Information Security Management Ensures that roles, responsibilities and measures are in place for the secure keeping of information.

ISO 15489 – Information and Documentation: Records Management Assures that policies and procedures are in place.

ISO 9001:2000 – Quality Management Systems ERM systems may assist in bids for BSI 9001:2000 accreditation.

1.6 Strategic planning and implementation of ERM

The full checklist of activities concerned with strategic planning and implementation of ERM are set out in the Framework for Strategic Planning and Implementation (see 6.1.1 References). This guidance is consistent with and expands on the relevant parts of that framework.

It is recognised that change management is an essential area of activities to enable the ERMS to be used effectively and fully, and thus essential to the achievement of benefits. A checklist for developing a change management strategy is also covered in the Framework for Strategic Planning and Implementation.

2 Management of benefits

2.1 Planning benefits management

A considerable amount of general guidance on benefits management in government programmes can be found on the OGC website www.ogc.gov.uk, especially in the OGC Successful Delivery Toolkit section. That material is mostly not repeated in the present document. Guidance in the present document is focused on ERM programmes.

An important point of principle stated in the OGC guidance is that '... the responsibility for managing and realising benefits rests ultimately with business users and managers. The Senior Responsible Owner (SRO) is responsible for ensuring the management of the process ...'. Thus an ERM programme cannot be said of itself to create or realise benefits, but it provides to business owners the potential for realising benefits, and manages the process of doing so.

The realisation of benefits as covered in this guidance comprises the identification and planning of potential benefits, supporting the achievement of benefits, and the evaluation and measurement of the benefits achieved.

It is recommended that ERM programmes should include a benefits workstream from the outset, to ensure that benefits work is fully integrated into the programme and is carried out at the appropriate time, and that the workload is scoped and resourced effectively. If the programme does not include an explicit benefits workstream, it is strongly advised that one should be initiated at whatever is the current stage of development.

While a programme is in the strategy and planning stages, benefits work will have started in the outline business case. Benefit-related activities which should take place at an early stage include:

- ensuring all stakeholders have realistic expectations of the results of the programme, and have a common understanding at the outset
- agreeing which of the benefits will be measured and tracked, and considering whether any data collection can be built into the ERM system to assist with any of the required measures, so that this can be planned in good time
- compiling a benefits register
- determining accountability for:
 - the delivery of each benefit
 - the measurement of each benefit which is to be tracked
 - the reallocation of resources or funds which are released from each benefit where possible
- identifying benefits which can be measured locally, through workshops or interviews with local teams.

This section discusses the categories of benefits which ERM can bring to government organisations, providing a framework for the rest of this document.

2.2 Categories of benefit – some definitions

There are many possible terms for categories of benefits. This section describes the terms and categorisations which are used in the rest of this document. They have been kept to the minimum needed to cover the key areas. This guidance does not attempt to quote the many alternative terms which appear in benefits literature.

Non-financial benefits

These are quantified benefits and intangible or unquantified benefits which may be measured in terms which cannot be translated to monetary value. They are normally an important part of the business case for ERM.

The guidance will also talk of quantified benefits as 'people benefits' or 'performance benefits'.

People benefits

'people benefits' are benefits as experienced by staff as a result of the new system or process changes implemented. They are measured by staff surveys (eg questionnaires or workshop exercises) where questions about perception of matters such as ease of filing, access to information, quality of tools to do the job, or ability to respond quickly, may be scored on a scale from, for example, 1 for 'strongly disagree' to 4 for 'strongly agree'.

This is a way of converting some of the 'softer' operational issues into a measurable form, even though the measurement cannot be precise.

Performance benefits

These are benefits which contribute in some way to performance objectives, whether corporate objectives or local objectives. They make a difference to how well the organisation delivers its service or contributes to strategic outcomes that are important (politically or otherwise) to the organisation, its customers or the general public.

These could include compliance, quality of service delivery, public confidence or customer satisfaction – anything which is measurable in some way, even if not easy to measure. They can include locally defined measures, such as percentage of cases which are handled without a certain issue arising, or the time of the week or month by which a certain regular report is ready to issue, or the percentage of problems reported to a helpdesk or contact centre which are resolved within a target timescale.

Performance benefits need to be defined at a local level, whether they relate to corporate objectives or local objectives. They provide a focus for local teams to evaluate and demonstrate the extent to which a programme is making a difference (or not) to issues that are important in their part of the organisation's operations.

Financial benefits

Financial benefits are anticipated benefits which can be measured in monetary terms (eg savings in licence fees for systems which have been replaced), or which can be measured in other terms which can be translated to monetary value (eg staff time).

Corporate benefits/local benefits

Any benefit may be considered a (primarily) corporate or local benefit. The corporate priorities of the organisation as a whole, and the priorities and issues faced by individual local teams, are not necessarily the same. A system such as ERM is most successful if it addresses issues of importance at both levels. It is

therefore helpful to identify benefits which will accrue to local teams ('local benefits', although important to the organisation as a whole concern issues which are managed at a local rather than a corporate level.), as well as benefits which the system will bring to the organisation as a whole ('corporate benefits').

For example, financial savings are important at a corporate level. But they are generally not a good motivator at a local level, because of the fear that they may result in local budgets being cut. Contributions towards Public Service Agreement targets are also corporate benefits, that may or may not be devolved to local managers.

Each local team will be motivated to achieve its local objectives and targets, and to deliver a good quality service to its immediate external and internal customers. It is therefore important for a programme's benefits management activity to focus some attention on identifying how the new system can be used by each team to support their own activities and aims, in order to ensure that its introduction is capitalised on to improve operations in every part of the organisation.

The following table shows how the terms selected relate to each other, with illustrative examples.

	Non-financial	Financial
Corporate	Performance benefit: high FOI compliance Intangible: Cross-site co-operation	Reduced off-site storage
Local	Performance benefit: cases closed earlier People benefit: do not have to ask colleagues to search	Time saved accessing records

2.3 Early identification of benefits

It is important when producing the outline business case to understand and document the full range of expected benefits.

- The most basic purpose is to confirm that the expected benefits outweigh the expected investment (of time, effort and disruption as well as finance) and the expected risks, before committing further.
- Another valuable purpose is to ensure that all stakeholders have realistic expectations of the results of the programme and have an agreed common understanding at the outset.

Initial stages of benefits management

When building the outline business case, the main focus will be on corporate benefits.

As well as developing work on the corporate benefits defined in the business case, it is recommended that workshops are carried out with local teams to identify performance benefits which can be measured and tracked during the programme. These can relate to corporate objectives to which the local team contributes (eg Public Service Agreements) as well as local objectives. These workshops could be carried out for example one per business unit, with say ten

representatives from across the business unit; or at a lower level, with a workshop for each workgroup or set of workgroups.

It should also be agreed at an early stage which of the benefits will be measured and tracked. If any data collection can be built into the ERM system to assist in tracking these benefits, this can then be designed into the system as soon as possible.

Information on benefits should be compiled into a benefits register as described below.

Determining ownership of benefits

Another requirement of benefits management which should be considered at an early stage is to determine accountability for each of the following (perhaps even by the agreed owners literally 'signing up' to the responsibilities):

- who will own the delivery of each benefit
- who will own the measurement and tracking of the achievement of each quantified benefit
- who will own the reallocation of resources which have been freed up by a quantified benefit
- who will own the reduction or reallocation of budget corresponding to a financial benefit.

2.4 Linking benefits to organisational objectives

A valuable way of organising benefits information is to show how each benefit links to the organisation's objectives. This gives a structure for considering non-financial performance, people and intangible benefits alongside financial benefits, and assists in understanding the relative importance of each benefit.

This is particularly helpful if a business case contains several options and the benefits of each need to be compared. Linking benefits to prioritised business objectives provides a way of comparing one option's benefits against another's.

Benefits register

This can be presented in a benefits register, where each benefit is documented under (for example) the following columns:

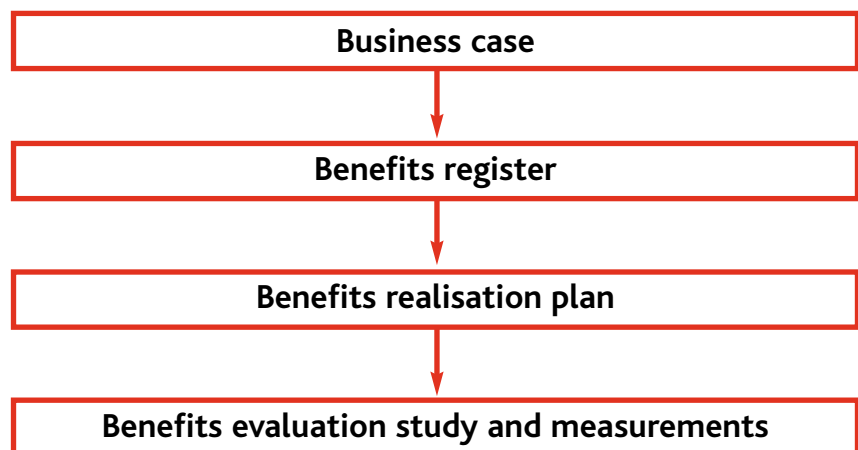
- name/title of benefit
- meaning/definition of benefit
- strategic objective/driver which it relates to
- business objective/internal driver which it relates to
- is it a critical success factor? (yes/no)
- category (performance, people, intangible or financial, and corporate or local)
- type of measurement/assessment/relevant metric
- expected outcome/target measure
- baseline/current measure/current cost
- target timescale for realising the benefit
- accountability for delivery

- accountability for measurement/assessment
- accountability for any reallocation of resources (if applicable)
- accountability for any reduction or reallocation of resources (in the case of financial or other quantified benefits).

The Benefits Register should be used later to form the basis for a benefits realisation plan. A case study is given in section 5.3.

2.5 The Benefits Realisation Process

The overall benefits realisation process is illustrated below.



3 Non-financial benefits

There are significant potential benefits from ERM which are not expressed in financial terms. Despite this, some of these may be considered even more important than the financial benefits.

The key non-financial benefits may be put into four areas, as below, which cover the most significant ERM aspects and subsume the original drivers in section 1.

3.1 Informational and knowledge based benefits

Organisation wide (or wider) designed information structures and sharing of access to information, coupled with a search mechanism and access controls where necessary, are benefits which enable many others. These include awareness and use of information available elsewhere in the organisation and may achieve reductions in rework. The guidance on business classification scheme design (fileplan design) assists on how to achieve these benefits (see 6.1.7 References).

The availability of records in the ERMS supports continuity of job functions across changes of personnel.

Much of an organisation's information will need to be presented accurately on the website or intranet, updated and maintained, and an audit trail of past content kept. Linking the ERMS with the web and intranet content management systems brings the benefit of being able to meet those requirements effectively.

The Knowledge Network or other knowledge management system may hold overview documents. The ERMS will hold full details providing the ability to 'drill down' from the overview.

Examples for sharing and re-using records corporately

This subsection lists examples of potential benefits extracted from ERM business cases across government. Because of this variety of sources, some overlap and have been expressed in different ways.

Benefits from sharing and re-using records corporately may include:

- immediate access to documents as soon as they are filed
- reduction in filing delays and bottlenecks, which can make recently used documents hard to find
- ability to share documents easily with colleagues anywhere on the estate, promoting knowledge-sharing.
- sharing of information about files, their subjects and controllers across a department, again supporting better information sharing
- promotion of organisational learning and understanding
- swifter and more effective and comprehensive evidence-based decision making
- availability of effective records to ensure that new staff can 'hit the ground running'
- improved retention of knowledge when staff retire, leave or move posts

Non-financial benefits

- being able to deal with emergencies, especially when colleagues are out in the field
- senior managers able to access file material out-of-hours and when support staff are unavailable, helping them to respond more effectively to urgent business requirements
- improved access to working information will help staff in all areas to extract better value from the infrastructure
- the ease with which documents can be captured for the record should encourage staff to be diligent in their record keeping
- will allow staff to search for an electronic document by keywords, or by author – a dramatic improvement in convenience for users of current records, and should make those records more and better used
- improved staff productivity by enhancing the use of documents and records as a corporate information source
- better management information on documents and records created, searched and retrieved, aiding the planning process
- avoiding the 're-inventing of wheels', eg using earlier contracts as the basis for new contracts.

3.2 Corporate information management and integrity of government records

The organisation's information can be managed corporately with ERM. This will enable effective responses to enquiries under Freedom of Information and the ability to comply with the Lord Chancellor's Code under FOI. It enables governance controls supporting accountability, providing full and accurate records and audit trails of actions.

Emails should be captured in the ERMS providing the benefit of complete records. Guidance on the management of emails assists on this (see 6.1.7 References). There is also a storage benefit in that the huge personal email account files can be reduced by say deletion of emails after six months.

Through proper use of the corporate fileplan, reductions in duplication of information are achieved.

The ERMS may encompass not only all electronic documents but also management of hard copy files and physical objects (for example video tapes), and links to databases all within the fileplan.

Keeping unnecessary information can be avoided through disposal management. Guidance on disposal scheduling assists on this (see 6.1.7 References).

Long term sustainability

An aspect of corporate information management that is becoming increasingly important as the use of the ERMS builds up both in volumes and over time are the benefits from measures to sustain the records over long periods and ensure the integrity and authenticity of the records. The benefits of adopting and implementing strategies for sustaining the records along with adopting ERM (for a reference to guidance on developing such strategies see 6.1.7 References: sustaining electronic records: strategies for maintenance and preservation) can be summarised as follows:

- identification of the known or potential use of categories of the records and how this may change over time

- identification of the level of reliability required if the records are to be fit to meet the known business and operational use
- identification of the requisite qualities that need to be maintained if the records are to demonstrate a meaningful degree of integrity.
- identification of the changing usability need to present and interpret the record in an intelligible manner
- the ability to justify need and allocation of resources into sustaining particular record categories
- the ability to determine when the sustainability requirements of a set of records might change and work out the implications this might have in terms of risk and resources
- the ability to predict where resources will need to be allocated to handle 1. technology change, particularly changes in software 2. machinery of government changes; to ensure records are sustained to the appropriate level of authenticity
- identification of the risks and consequences involved if the records are not sustained. – eg are the benefits of sustaining greater than the benefits of not sustaining?
- identification of the resource requirements and concomitant costs needed to sustain particular record categories to a defined level of quality.

Vital records and business continuity

ERM has a particular benefit for the organisation's vital records and business continuity. In the event of a major disaster, the organisation will benefit from having its vital records and other records organised in an ERMS with backup copies so that they can be recovered on to the alternative infrastructure as in the organisation's business continuity plan.

Examples for Information management and governance

This and following subsections list examples of potential benefits extracted from ERM business cases across government. Because of this variety of sources, some overlap and have been expressed in different ways. Benefits cited by departments include:

- reliable, definite, evidence for accountability and auditability
- preservation of valuable corporate material and upkeep of the 'corporate memory'
- enabler for the government organisation to act in a leadership role in its field, through ready access to relevant information.
- enabler for better co-ordination of scientific information and advice
- reduced risk of political embarrassment from failing to find relevant documents
- avoidance of Ministerial embarrassment in the face of official inquiries, or of FOI and DPA enquiries from the Press and/or the public
- enabler to handle the pace of change supporting response to recent civil service reviews and initiatives, corporate change, restructuring
- reduced risk from incomplete/inaccurate record of activities

Non-financial benefits

- increased confidence in the integrity of corporate documents, leading to wider recognition of their information value and more effective use of them
- better management information on numbers of documents and records created, searched and retrieved, and turnaround times, allowing new metrics to be defined, baselined, tracked and viewed, to facilitate targeted improvements
- disaster protection – safeguards vital corporate information without which the organisation cannot function, from loss, misuse, tampering and physical damage
- disaster recovery/business continuity - allows off-site backup of records which a paper-based system cannot easily offer; better support for emergency plans
- better response to litigation – accessing evidence to support the department's cause
- reduced potential for adverse effects of litigation under FOI and DPA legislation
- facilitates better induction and a standard operating manual and therefore greater compliance
- benefits can accrue to teams from the initial process of preparation and planning of a file plan prior to the introduction of ERM, in terms of removing duplication; moving electronic files from personal to shared drives; getting a common understanding of the team's file structures; and a general corporate approach
- some departments see benefits in transfer of local bespoke systems for correspondence, case management etc onto ERM systems with cost avoidance in maintenance, obsolescence, data security and service continuity/contingency.

Empowering the public by opening up government processes and information

Benefits cited by departments include:

- identification and protection of records of historical value
- identification of records subject to data protection legislation and enabling accurate and timely responses to data protection enquiries
- enabling ordered, transparent, accurate and timely responses to FOI enquiries
- benefit from electronic transfers of records to The National Archives and in not having to store increasing quantities of paper at TNA.

3.3 Cross-government services and administration

ERM provides a route for exchange of information between departments to government standards of interoperability.

A well designed fileplan and the flexibilities of holding information in an ERMS reduce the overheads incurred in changes in departmental/business unit responsibilities and moves of functions/organisational changes.

3.4 Departmental business processes

A key generic process is communicating documents around the organisation using links (ie a compact pointer to the document to enable it to be accessed easily) instead of sending large attachments comprising the document. The user, by communicating documents in this way, generates the benefit of technical efficiency. Surveys have indicated that documents are copied ten times on average. Thus the load on the network and storage in email folders are reduced dramatically.

The method may also provide additional context by showing the receiving user the rest of the folder which contains the record. As an important by-product of using links, users have to register their record in the ERMS and use of the ERMS at both ends is enforced. This also avoids recourse to alternative information stores, personal or team areas unless appropriate ie for informal or ephemeral material, and avoidance of differing versions in circulation. Links enable a number of people to update a document where appropriate, for instance a unit's progress report or comments on a paper, and ensure that all amendments are captured.

ERMS can provide the core to which can be added a workflow/case management and/or a scanning module.

Examples for underpinning e-government

Benefits cited by departments include:

- facilitates improved quality of service delivery
- facilitates faster response to Parliamentary Questions and Ministerial correspondence
- facilitates faster and more accurate and/or comprehensive response to enquiries
- facilitates improved consistency across the organisation in dealings with customers
- better access to 'precedent' information, supporting casework
- better security and confidentiality of information, as these are more explicitly managed.

Opportunity for new/improved working practices

Here are examples from business cases of opportunities identified for supporting working practices:

- enable a full electronic working environment
- will allow split site teams to work on the same material, resulting in reduced need to copy or forward documents to other team members and no requirement to keep multiple copies
- make it easier to share information, thus encouraging and facilitating new approaches to cross-boundary working
- in the longer term, will support more sophisticated facilities for collaborative working

Non-financial benefits

- will facilitate remote access, to allow staff to access information and work on it from different locations, including when off-site or at home
- will facilitate a hot-desking environment
- will facilitate e-government and e-commerce
- will facilitate creation of workflow applications, and associated business process re-engineering.

3.5 Other benefits

Staff benefits

Note that benefits for staff can lead to making the job more attractive, improving the ability to attract and retain good quality staff, and potentially reducing the cost of staff turnover and replacement. They may include:

- better quality work – staff are freed up from physical filing duties
- improved staff morale – where staff have more ready access to the information they need
- enables a more flexible approach to working patterns, such as home working, providing some social benefits, in particular to 'disadvantaged' groups.

Environmental benefits

If the department has particular commitments from specific legislation or policy requirements, environmental benefits may be relevant. Otherwise they are unlikely to be significant. They may include environmental benefits from:

- long term reduction in requirement for paper
- ability to recycle more existing paper
- reduction in need to travel to access information (eg ability to work from home or from remote sites)
- reduction in transport of paperwork
- improved accommodation environment as storage requirements are reduced.

3.6 Quantified quality improvements

It is sometimes possible to quantify benefits that at first sight appear to be unquantifiable, using methods such as:

- customer surveys where the responses are scored
- staff surveys where the results are scored (see 'people benefits' described in section 2 and benefits evaluation at 5.4).

It is recommended that such quantifiable benefits be identified at an early stage, in order where appropriate to put plans in place to collect baseline measurements for them prior to go-live, and subsequent measurements afterwards, as a way of tracking and reporting on improvements which result from use of the new system.

Case study: a successful pilot scheme in a small part of one department measured a number of quality improvements compared with shared drives plus paper files. It used questionnaires and reported the following results in terms of perceptions of staff.

- 20% increase in the perception of the availability of current and up-to-date knowledge.
- 40% increase in confidence that the electronic information found is current, correct and complete.
- 20% increase in the ease of identifying appropriate data sources required.
- 30% increase in confidence of finding a required piece of information.
- 30% increase in confidence in the coverage of searches undertaken.
- 20% increase in the ease of producing and managing reports.
- 40% increase in confidence of finding a particular document or record.
- 40% increase in the consistency of responses provided to customers.
- 30% increase in the efficiency and effectiveness in job performance in respect of record and document management.
- 30% increase in the ability to disseminate information that is relevant to colleagues.
- 40% increase in the quality of the body of knowledge contained in documents and records.
- 40% increase in the ability to audit decisions and assist tracking accountability.

They may involve resources (such as people's time, or in-office storage space) being freed up and available to be used for other purposes. As part of benefits management, it is important to consider how these released resources can be best re-used. By considering this at an early stage, this information can be included in the business case.

For example, if a small amount of time is saved each week for a large number of staff, rather than having a financial value, it may result in the time being freed for the staff to engage in higher value activities, rather than direct financial savings being made.

These quantified quality improvements relate to staff perception of their daily working experience before and after implementation, and can therefore be considered 'people benefits' as described in 2.2 and can be measured using questionnaires as described in section 5.4.

4 Financial benefits

This section covers benefits to which financial value may be assigned in business cases.

4.1 Savings in staff time

This is a common benefit to be costed and in some cases accounts for a large part of the financial justification for ERM in government business cases. However most often the benefit is in releasing people's time for higher quality of work or different work and therefore becomes a people or performance benefit rather than a strict financial benefit.

It is usually split into savings in time to file information, savings in time to retrieve information and savings in re-working time.

Filing time savings

Saving in time to file information includes:

- no longer need to print out documents, find the correct file, insert them, and log them in the index
- reduced registry activity for paper files
- disposal or archiving of documents carried out electronically rather than manually.

To set against this are:

- any extra burden of time taken to capture an electronic record using the ERMS (eg any requirement to enter metadata when saving)
- time spent on the new activity of managing the electronic records management system
- time newly being spent on filing, if staff had not been fully compliant under the old system.

Retrieval time savings

Saving in time to retrieve information includes:

- searching for and accessing registered files, including any photocopying
- searching for and accessing paper files held by self or others, including any photocopying
- searching for and accessing files held electronically by self or others, including any printing
- the time of the 'others' in locating and providing the files, including any photocopying, printing or faxing
- where delays are incurred in obtaining files via other people, the inefficiencies involved in postponing the current task and picking up another task while waiting.

To set against this is:

- for the type of information which was previously kept to hand in personal paper or electronic folders, any longer time for the owner to retrieve that information from the new ERMS than previously from their personal folders (even though it will be a shorter time for others to access it).

Savings in re-work time

Another factor, less often costed, is reduction in re-working carried out:

- when previous work cannot be found
- when it is not even known that previous work exists.

Examples of figures for business case calculations

Any estimates made by an organisation need to take into account the specific characteristics of the organisation. The following are given for illustration purposes.

Time savings estimates

Some of the savings estimates which have been used by different government organisations in their business cases for ERM are:

- 10 minutes saved on filing per day per member of staff, and 10 minutes saved on information retrieval per day per member of staff
- 5% of secretarial/clerical staff's time, 5% of administrative staff's time; 3% of professional staff/managers' time; 2% of senior managers' time
- 6.5% efficiency saving measured from the increase in routine casework tasks completed by staff member per week
- 4% efficiency savings aggregated over teams, by the third year (following significant benefits initially). This assumes adoption by 70% of users
- net redeployment of 0.25 of an administrative post per Section Head per year as manual filing is reduced, and 0.25 of an administrative post per Branch Head from reduction of registry duties, with break-even of more senior staff who will then carry out their own record-keeping whilst benefiting from increased availability of and access to records. These savings to be realised 50% in the first full year after implementation and 100% in following years
- average 6 hours available to be saved per person per week on all document management related activities (including co-ordinating the work of several people on the same document, and re-writing parts of documents which already exist)
- industry analyst statement that each employee of an organisation can waste up to 8 hours per person per week on non-value added document related tasks, of which perhaps half could be saved ie half a day per person per week
- other statements quoted that the average document is copied 9 to 11 times; and that 3% of documents are misfiled
- one department estimated that 2,000 EO-AA days are spent each year in searching for lost files. This did not include the time spent looking for lost documents and files by the average member of staff in their day-to-day work
- estimate that it might take 4 hours to search in connection with each FOI enquiry under an existing paper-based system.

Case study: three pilots initially reported respectively averages of 0% staff time saved, 8% staff time saved, and 20% staff time saved (the latter resulting in scaling back of the team's recruitment plans by 1.5 FTEs); each said the savings were still rising.

The difference in savings related to the differences in types of work carried out by the three pilot teams. However, the team which saved 8.1% of staff time also spent 7.4% more staff time in filing documents, due to the particular ERM system's added requirement for metadata to be entered when saving a document (this may be addressed in later releases), leaving a net saving of only 0.7% of staff time. The longer term expectation is that, having addressed the issues, average time savings will be somewhere between an estimated 7% (pessimistic) and 25% (optimistic) with a realistic target of 13%. Some specifics on the savings are:

- time retrieving documents reduced in one pilot on average from 19 minutes to 5 minutes for an average of 7 searches per person per week; and in a second pilot from 12.5 minutes to 2.5 minutes for an average of 5 searches per person per week; no information was available from the other pilot
- in one pilot, time filing documents reduced on average from 76 minutes to 19 minutes per person per week; the amount of filing was much smaller, and not quantified, in the other two pilots
- one pilot estimated average reduction in re-work from 22 minutes to 6 minutes per person per week.

Time savings experienced

Some actual savings estimated in early results from government ERM systems are:

- an estimated 5% of a pilot unit's time was saved just on document retrieval
- another pilot saved 10% of the PFO's time, 15% of his personal secretary's time, and 3% of two other users' time
- elsewhere, an average 1 hour saved per person per week in searching for files, for all users in a department
- an average 0.5 hour saved per person per week in filing, for the 20% of users in the same department for whom this is a significant task.

Financial implications

The estimated time savings are normally converted into monetary terms by using the relevant department's standard figures for average employment costs, for the relevant profile of grades of staff.

Note that these savings are generally not directly financially achievable. If for example 1 hour per week is freed up for each member of staff, it may be intended for this time to be used by the same staff on more valuable activities, or increased delivery.

In other cases, some of the savings may be cashable by reducing staff numbers in some areas, directly attributing the cost saving to the new system.

Special requirements

Savings (compared against the pre-ERM environment) are likely to be greater in certain circumstances:

- during a Public Inquiry (or similar), when the organisation may be required to produce a very large quantity of records relating to a particular situation
- during litigation, where there is a need to find all relevant evidence
- with the Freedom Of Information Act newly in force in January 2005 if it proves to require a very great volume of record searching and retrieval during the initial period.

Potential for greater time savings later through workflow applications

The above covers time saving benefits from records management. Extending the use of an ERM system to make best use of document management facilities through workflow/casework applications will provide increased benefits in time savings. These can accrue through:

- time saved through automated routing of work
- time saved through automation of tasks
- time saved through removal or simplification of tasks when processes are re-engineered.

These have usually been in a subsequent implementation but could be included in the financial business cases for the initial introduction of ERM systems.

4.2 Savings in space required for files

There are typically two types of physical storage space which will be reduced by use of ERM:

- personal and team storage space, in desks/drawers/shelves/filing cabinets near the individual/team's working area
- off-site storage.

As personal storage space is generally used for more recent paperwork, after ERM has been introduced, requirement for personal storage space is likely to reduce at a faster rate than requirement for off-site storage, which is likely to tail off over a much longer timescale.

Note that, if an ERMS holds material only up to 'Restricted' security marking, some requirement for paper storage may always remain.

Reduction in personal and team storage space

Reduction in personal and team storage space is not immediately cashable. The space can only be re-used in conjunction with an internal or external office move – that is the point at which the freed-up resource is re-used. This then translates to direct financial savings only when office space is released, sold, or a lease terminated. Thus this benefit is normally realised after a delay, at a point in time determined by changes in estate.

Reduction in personal storage space can convert into further space savings, if or when personal storage space is reduced to the extent that a hot-desking policy can be introduced, reducing the number of desks required to accommodate the same staff.

Reduction in off-site storage space

Reduction in off-site storage is likely to occur at a slower rate, and the rate of reduction will itself eventually slow down as gradually fewer records are stored in paper form. The total amount of paper may not even reduce at first – the initial reduction may only be in the rate at which new paper is being added.

The timing of any translation into cashable savings depends on the circumstances of the off-site storage – whether freed up space can be reallocated, leased, sold or a lease terminated; or whether the service is outsourced and if so whether the fees will reduce proportionately; or whether the economics of whether to outsource or not will change with the reduction in volume.

Reduction in off-site storage can arise from:

- disposal of obsolete information
- reviewing the storage requirements of information needed for continued retention
- transfer of records to The National Archives.

Examples of figures for business case calculations

The following were used within business cases:

- a nominal 2% saving on central London accommodation
- over 20% of storage space can be saved, although only 25% of identified savings are actually realisable as a saving of 4% of annual costs in year 6 rising towards 100% over 25 years.

The following was reported from a pilot:

- a measurement was undertaken that indicates paper storage is at 14% less than would have been the volume without ERM and the use of scanning in particular.

Case study: administration of justice records – potential space saving

An analysis of the paper record types produced and managed by the Court Service indicated very large potential space savings if most new case records were to be generated and held in electronic form.

DCA investigated sample files and recorded the number of files. The numbers of cases annually were based on information from the statistics of workload within the department. Files’ physical sizes were measured and results checked against the results of a much larger survey undertaken a few years before. The table below illustrates the volume of A4 paper documents that would be created over one year.

Since these records are required to be accessible in 30 minutes and therefore use expensive storage in the Court buildings, the potential space savings from ERM are very high.

Document types	Average size of file (cm)	Average no annual cases	Metres/year
Criminal cases	4.55	75299	3426.10
Policy	2.5	18581	464.53
Law Commission files			0
Judge Advocate General	1	500	5.00
Chancery	2.1	37000	777.00
Divorce	1.35	172981	2335.24
Publications			0
Immigration Appeals		35220	2.65
Bankruptcy	2.29	29523	676.07
Criminal Appeals	2.25	7937	178.59
Decrees Absolute/Nisi		142715	89.20
Adoption	1.48	2562	37.92
		Total metres per annum	7993

Document production in the Court Service

The total potential space savings are an incremental 7993 metres each year at the studied volumes.

Against this must be set the costs of storing an additional 3.2 terabytes each year and sustaining the records electronically for 20 years.

Even after 20 years have expired a significant proportion of these records are kept for a much longer period, for up to 75 years.

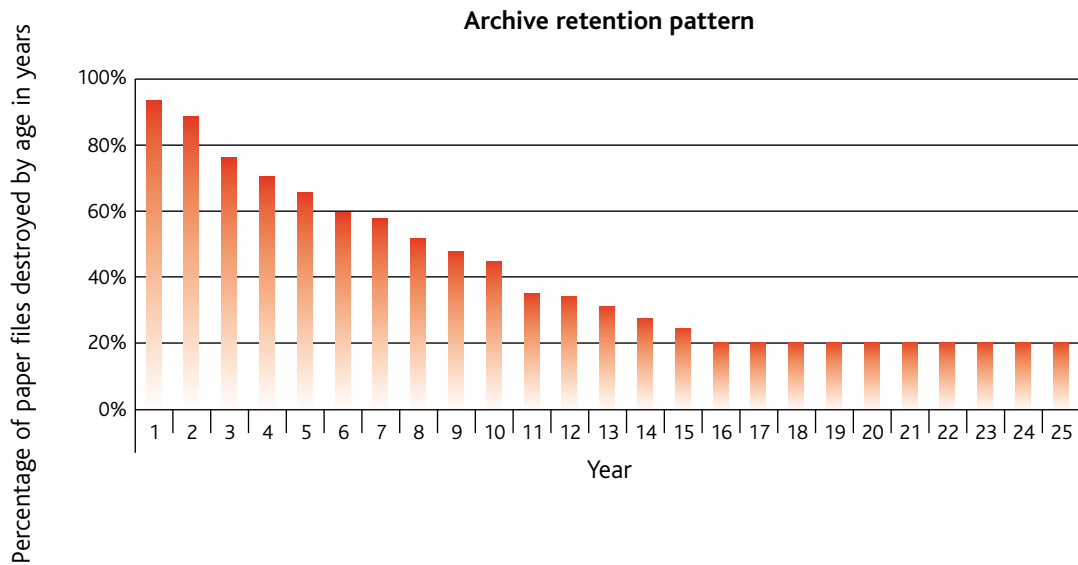
These records have evidential value and may be cited in future cases and appeals. It is essential that these records can be stored securely but be available in a reliable and authenticated format upon demand.

Case study: Department of Health – analysis of storage requirements

In contrast, the work of the Department of Health (DH) is predominantly policy-based, and there is an existing ERM solution 'The Management of Electronic Documents Strategy' known as MEDS. The record retention patterns, and the implication for electronic storage of records created and held by DH on MEDS is described below.

As of May 2004, 3050 users of the MEDS system were using approximately 400Gb of MEDS storage in 400 databases, with a growth pattern of 90Mb per person per year. The total number of users is expected to reach 3,500 including all DH employees and contractors at every DH site by December 2004.

Cursory examination of the dates of documents held in the MEDS databases showed that the filing of documents within a MEDS database was more or less consistent over the six years they had been in existence. Retention patterns are expected to approximate to those of the paper-based archives, with files being retained between two to 25 years. Currently paper archive access patterns are thought to number about 4000 accesses per month, but the electronic storage access patterns may greatly exceed this. The pattern of retention recorded within DH is shown below.



DH has also established a model of the MEDS archive storage requirements. This shows the expected archive needs under a variety of different assumptions of storage and retention patterns, and different file size growth rates. Using this model, the output shows that the MEDS archive storage required is unlikely to exceed two terabytes within 10 years, and is likely to remain below 0.5 terabytes for the first five years.

It is expected that, as workgroups expand, the filing will not increase with the number of users but is expected to grow with the number of workgroups. The reason for this is that if files are being retained properly, there should be less duplication of documents used within the workgroup.

Using a similar conversion between electronic storage and paper to the previous case study, 0.5 terabytes is equivalent to 1250 metres and two terabytes to 5000 metres.

Financial benefits

Results from case studies on storage

These two case studies (previous pages), based on extrapolations from experience with paper files, show that across the range of government storage needs there are significant potential savings which will vary considerably. It may take a considerable time to realise significant proportions of this type of benefit, typically something like over the second to fifth year.

4.3 Other financial savings

There are other efficiency savings for which a financial value could be estimated. As they are mostly smaller than time and space savings, they have often not been costed in existing business cases. However a check should be made to determine if these could be significant. They include:

- reduced purchase of paper
- reduced purchase of other consumables – file jackets, labels, printer cartridges
- reduced use of faxing, photocopying and network printing (even though people still need to print some electronic documents to facilitate reading, taking to meetings, etc)
- minor savings in transport costs with less paper being carried between buildings.

For all benefits, the expected timing of benefit achievement is important – what payback is expected from each costed benefit in each forthcoming financial year should be calculated.

4.4 Savings in replaced systems

In some cases, ERMS have replaced previous systems which had been providing a subset of the new ERMSs' functionality. In these cases, the corresponding savings in licence or maintenance costs should be included in business cases. If they have not been, the costs should be identified and quantified. For example, a management system for paper records may be replaced by an ERMS managing electronic and hybrid/physical folders. Or a corporate ERMS may replace a local system in a particular business unit or regional office.

5 Achieving and evaluating benefits

5.1 Management of Key Performance Indicators (KPIs)

The management of Key Performance Indicators (KPIs) will support the management of benefits.

It is recommended that KPIs be defined and agreed at an early stage in the design and implementation of the ERMS, so that facilities can be configured to collect and report details and statistics automatically, wherever feasible, in order to minimise the requirement for manual recording. The feasibility of doing this may influence the choice of KPIs to use. Targets for the KPIs should be set and the achievement (or otherwise) of them tracked as the programme progresses.

Some examples of measurements of KPIs which might be used are:

- number of individuals trained and given access to the system; ie a KPI of how widespread is the availability of ERMS facilities
- % of users/teams capturing records into the system (70% of users has sometimes been used as an initial target, although clearly the ultimate target is 100%)
- % of users capturing records at: roughly the rate expected; far fewer than expected; far more than expected
- total volumes of electronic filing in the ERMS and in network drives
- % of records in the system which are viewable by anyone in the organisation (as opposed to being confidential to certain teams/roles) ie a KPI of the level of how much information is capable of being shared
- % of users regularly accessing records from the system
- % of users regularly carrying out searches in the system
- % of known records found by searches.

5.2 Measurement and reporting of KPIs and benefits

Reasons for measuring KPIs and benefits include:

- to report to the Programme Board
- to report to stakeholders
- to chart progress towards, and verify achievement of, benefits anticipated in the business case
- to satisfy the requirements of OGC Gateway Review 5
- optionally, to create reports for individual business areas on usage and benefits obtained in their specific areas
- to report to staff, to encourage them that the discipline they are following in implementing ERM procedures is paying off, and encourage them to continue and increase usage
- to increase 'ownership' by staff, by involving them in the process of tracking progress towards the achievement of benefits
- to identify anticipated usage which is not occurring, or anticipated benefits which are not being achieved, in order to investigate and address the reasons within the change management activity
- thereby to contribute to maximising the benefits which the organisation obtains from its investment in the programme.

Achieving and evaluating benefits

Baselining

In order to make valid 'before and after' comparisons, it is important to take measurements prior to go-live, if at all possible using the same method that will be used to take measurements following go-live. This is known as baselining.

A baseline should be obtained in this way for every benefit and KPI that is to be measured. For example, if the average time to find a document is to be measured once the ERMS is in operation, it needs to have been measured prior to use of the system, in order to make a comparison and calculate what improvement has been made. This may be done, for example, by asking a sample of staff to note each time they look for a document during a given day (or week) and how long it takes. The only exceptions are some KPIs whose values are inevitably 0 prior to go-live (eg the pre-go-live baseline for 'number of users actively using the ERMS' is obviously 0).

Baseline measurements should be taken in good time before go-live and not left to the last minute, to allow for any types of delay, since by definition they cannot be done after users have gone live. It is good to 'get them out of the way' well before (well over a month before) the users are disturbed again by all the activity surrounding go-live.

Piloting

If any opportunity is available (such as a group of users who will be introduced to the system earlier than the others, as a pilot scheme), it should be used to pilot as much of the benefits measurement system as possible.

Pre-go-live (baseline) and at least one set of post-go-live measurements should be taken, and the full cycle of calculation and reporting carried out, as a trial run of the system which has been designed. This should be reviewed to learn any lessons, and identify any weaknesses in the data collection process, calculations, or report format, or more fundamental issues concerning what benefits and KPIs are being measured, in time to make remedial changes to the system before baseline measurements are carried out for the first substantive tranche of users who are to go live.

At the same time, the actual results of the pilot KPI and benefits measurements should be fed back into change management activities, and actively reviewed to identify any reasons for non-achievement of KPIs or benefits, connected for example with the process surrounding go-live such as training, support, communication, or practical issues with the ERMS functionality.

Briefing of staff

Where staff will be required to make measurements of time spent on various activities, manually track performance measures, complete questionnaires, etc, to feed into the benefits calculations, this should be agreed with them in advance, ideally during training or workshops which are already scheduled as part of the change management process.

More generally, staff should be briefed about the overall benefits activity, its purposes, and the key corporate and local benefits expected from the system, as part of training or workshops (or via business area representatives) before they are asked to assist with the process.

Metrics

A considerable number of measurements or metrics may be planned of various types and from several sources, for example:

- from the ERMS, figures of numbers of documents, folders, number of users
- from the operating system software, storage volumes on the ERMS and on network drives and in email folders
- from the ERMS audit trail log, numbers of users who have created records
- by the DRO team, numbers of requests for retrieval of paper files.

Typical metrics required would be those to support measurement of the KPIs listed at 5.1 and additional metrics both to support measurements in the benefits realisation plan (for example in the case study at 5.3) and other records management measures such as the numbers and total size of documents and folders destroyed per period.

5.3 Benefits realisation plans

A benefits realisation plan draws together the planned benefits, the metrics used to show their achievement, the expected outcome ie the results sought as indicated by the metric, the baseline (as described in section 5.2) and when the measures will be taken. The names and meanings of the benefits, the type of measurement, the baseline and the expected outcome should be taken from the register of benefits (as described in section 2.4) extracted from the business case.

Case study: The National Archives' benefits realisation plan summary

The benefits realisation plan is derived from the register of benefits from the business case. The expected outcomes at the project end will be used to decide if the project has achieved the expected benefits.

A suite of reports will also be made available to business units to increase awareness of the amount of corporate information held on network drives and within the ERMS. It is the intention that the amount of corporate information held on network drives will decrease and the amount held in the ERMS will increase over the course of the project.

Achieving and evaluating benefits

No.	Benefit	Benefit meaning	Metric	Expected Outcome	Baseline	Measurement interval
1	Improvement in collaborative working	<i>The business process improves by minimising duplication of information and aids filing of information</i>	Number of duplicated documents and number of different filing locations.	Decrease	Measure	At implementation of business process
		<i>Ability for staff to read published documents in the file plan</i>	Proportion of folders with 'all users' access permission to see and open the folders	Increase	Measure	At project stage end
2	Improvements in business processes and quality of work	<i>Document current business process and proposed improvement</i>	Stakeholders approve the improvements to the process and the metric	According to documented outcome	Measure according to requirement	After process implementation
3	Permit response to FOI enquiries		According to metric from FOI tracking requirement	According to documented outcome	Measure according to requirement	Project end
4	Significant improvement in user attitude	<i>Staff will have integrated the ERMS into their working lives</i>	Percentage of users who save new Word, Excel or PowerPoint documents into the ERMS from random sample group	Increase	Measure by asking random sample of 50 ERMS users	Project end
			User satisfaction of the system	Increase in satisfaction	Change management sub-project figures	Project end
5	Optimum use of the ERMS	<i>Staff trained in the use of the ERMS will use the system to create and store documents</i>	Total number of documents stored in the ERMS	Increase	Measure	At project stage end
			Percentage of active users that have created less than ten documents	Decrease	Measure	At project stage end
			Number of emails stored in the ERMS	Increase	Measure	At project stage end
			Number of files stored on alternative stores	Decrease to zero	Measure	Monthly or until drives deleted
6	Improve communications through creation of links between the ERMS and TNA intranet		Stakeholders approve the improvements to the process and the metric	According to documented outcome	Measure according to requirement	After process implementation (if recommendations implemented)
7	Saving in staff time spent on filing and retrieving information	<i>Time spent by searching for and retrieving required item from an electronic folder in the ERM File</i>	Poll users about average time spent searching for and retrieving required item from an electronic folder in the ERM File	Decrease	Post-Implementation figures (critical success factor - DRO team)	Project end
8	Reduction in space required to file paper records – eventually reducing to almost zero	<i>Reduction in filing of paper on paper files/ folders</i>	Number of file cover requests a month	Decrease	Post-Implementation figures (critical success factor - DRO team)	Project end
		<i>Reduction in requests for retrieving, lending and returning paper files from file store</i>	Average time spent processing requests a month	Decrease	Post-Implementation figures (critical success factor - DRO team)	Project end

Combining benefits realisation with change management

Benefits realisation measures may be combined with continuing change management activities to provide an overall practical approach to realising benefits.

Case study: benefits realisation measures in a major department

The implementation process for the ERMS solution is designed to support staff in managing changes in adopting new ways of working. This support includes:

- promotional work to reinforce benefits of good records management, especially ERM
- dedicated records management support before, during and after implementation
- pre user take on audits to provide advice on file structure best suited to ERM
- an advice forum so that work groups can discuss new working protocols, roles and responsibilities in ERM
- a records management training programme designed to teach effective ERM and encourage information sharing
- follow-up review visits to provide extra assistance and further advice regarding news ways of working with ERM
- refresher training courses
- workshops on the ERM system tailored to the specific ERM needs of work groups.

This change management approach has worked successfully with the majority of the department, and the ERM team has added services as needed to accommodate work groups requiring extra support.

Extra support for staff in implementing ERM**Overcoming backlogs of electronic filing**

Some groups have found it difficult to start using ERM as they have a backlog of electronic or paper filing. The ERM team is advising the groups concerned, some of whom may need additional temporary support. The ERM team is also closely involved in planning, design and execution of the work.

Staff deterred by the investment of time needed to implement ERM

The ERM team has worked with specific user communities to develop an ERM/records management offering that works better for staff under pressure by reducing their preparation time and streamlining the ERM implementation process. The team is now able to provide more support and assistance for staff by giving extra help in developing local areas of the file plan, more intensive marketing of the benefits and extra 'floor-walking' support immediately after training.

Benefits realisation will be supported further by regular assessments at corporate and business unit levels, including an upgraded audit of records and information management in business units, and a full post-implementation review after the completion of rollout to 100% of users.

Other steps being proposed or considered include:

- *ongoing promotion and publicity*
- *a new information manager role to foster closer liaison with local business groups.*

Criteria for effective use

The Department considers ERM is being used effectively if:

- staff are regularly filing and retrieving information
- email tends to be filed to the ERM system rather than stored up in personal folders
- reference and ephemeral information is stored in working files on the ERMS rather than on network shared drives or in personal email folders
- staff report that they are able to put away and retrieve information easily and quickly
- an incidental benefit from effective use of ERM should be that pressure on mail and network file servers is relieved.

Follow-up support/audit

Upgrading of follow-up work with user groups, to make enquiries about usage more searching. Group sessions six weeks and then three months after initial implementation are scheduled to gain feedback, find out about usage levels and decide on any extra training, specific actions etc.

To meet the more rigorous requirements of the Freedom of Information and Data Protection Acts, the department is also upgrading its periodic records/information management audit to cover document management, working practices, data protection and Freedom Of Information.

The upgraded audit will require more input from managers in business units, and will demand more of the audit team, but will give managers better control of their information, and provide better assurance of good practice across the department. The Departmental IT Steering Group approved the process in principle in late 2003. It was piloted in spring 2004, and the first full audit will be rolled out across the department from September 2004.

Promotion and publicity

Ongoing promotion and publicity using case studies etc. will be vital to embedding good practice and the use of ERM. Several articles in the in-house newspaper are part of this programme, and entries have been drafted on knowledge and records management and data protection for a pilot Management of Policy Toolkit.

Engagement with Change Programme new ways of working

ERM is seen as a key component of the Knowledge Management Workstream within the department's Change Programme. It is featured as one of the new ways of working required to ensure divisions can manage their work with significantly fewer staff.

New Information Manager role

Effective use of ERM depends substantially on the contribution of staff known within the system as *local records co-ordinators*. The ERM team provides additional training for these staff, who create new files, manage access to local file structures, and ensure that documents and records are well-structured and duplication is minimised.

As a complementary measure, it is envisaged to develop and actively promote the role of *local information manager* within each team. This is seen as formally defining a management role that should be – and usually is – already carried out within business teams, not as extra work requiring additional resources. The local information manager will be responsible for ensuring that :

- information is organised to meet local business needs
- any personal data used in the team is managed in compliance with data protection legislation
- information is available to meet Freedom of Information requests and difficult cases escalated appropriately

- information is secured and properly transferred or destroyed at the conclusion of the project or activity or on transfer of responsibilities.

The Freedom of Information Unit and the Records Management team will support the role by advice and practical support where necessary. Subject to resources being available, it may be possible to host regular events to update local information managers on relevant developments, and provide a forum for sharing experience.

Results of the most recent benefits realisation study

The most recent benefits realisation study highlighted these key findings:

- the majority of the business objectives for ERM outlined in the full business case have unquestionably been delivered. As well as the provision of the specified functionality, the majority of users questioned have experienced increased volumes and speed of filing and easier retrieval of records compared to paper files
- the report confirms the finding of previous studies that the success is due in large part to the selection of a pragmatic and lightweight solution to ERM which is both fairly easy to implement and cost-effective for the user workgroups and the department as a whole
- ERM is being used intensively by the sections to which it has been rolled out
- Many documents are being filed to the ERMS – an average of 900 per section per month. If each one represents a saving of time compared with printing out the same document and filing to a hard copy file, then a substantial amount of time is being saved in these sections.

5.4 Measuring KPIs and benefits by user survey and system statistics

The reasons for measuring KPIs and benefits by user survey as well as by system statistics include:

- to form a balanced range of benefits reporting, in which the benefits demonstrate how the ERMS is contributing to staff's ability to perform their duties well, their motivation and their positive feelings about their work as well as any quantified measures of performance improvements achieved
- to communicate the message that the programme is interested in improving the working environment for staff as well as delivering corporate benefits
- to locate any groups which do not report positively about aspects of the system, in order to identify reasons, and direct resources towards helping the situation
- to collect notable quotations from the comments sections of the questionnaires, both to increase the programme's understanding of people's experience of the system, and to enliven benefits reporting so that it communicates more than just numbers.

Benefits can be measured by the use of questionnaires, as described in this section. An alternative is the use of 'before' and 'after' workshops.

The questions/statements should be designed to cover some of the most important aspects of the job which it is hoped the new system may improve, ranging over different categories such as efficient working, quality of output, and quality of working life. In addition to this, several further questions should be designed around the difference which the ERM system has made so far.

Case study: Department of Health's benefits evaluation study questionnaire

The questionnaire was used following implementation and a period of use of the electronic records management system solution (MEDS).

The questionnaire form was personalised and completed with individuals by an interviewer. The interviewees were a cross-section of users. A report was produced analysing and summarising the replies (see next case study overleaf).

The questionnaire was as follows:

1 Pattern of use of MEDS

1.1 Individual/job/business unit details

1.2 How long have you been using MEDS: (1 month, 2 - 4 months, 4 – 12 months, more than 12 months?)

1.3 Do you use Remote Working – the department's mobile working solution)?

1.3a Do you use MEDS on Remote Working?

1.4 How do you rank yourself as a MEDS user? (Accomplished, comfortable, reluctant, hesitant, non-user)

2 Reasons for using/not using MEDS

2.1 Why do you use/not use MEDS? (Use reasons - Pressure from management, legal requirement, easier than printing and filing paper, easier to find/retrieve information, improved security, manage email folders)

Not use reasons – don't need to file, file structure not complete: still use paper, don't know how to use it properly, prefer to keep local electronic copies, prefer to keep local paper copies, someone else files for me, use other system, concerned about security)

2.2 Other reason?

3 Working methods

3.1 How many emails do you receive each day? (More than 50, 25 – 50, 10 – 24, less than 10)

3.2 Do you file in folders in your mail box more or less than before the implementation of MEDS? (Much more, more, the same, less, much less)

3.3 Does someone else in your section do some or all of your filing for you?

3.4 Do you file documents in your local or shared drives? If so, which files would you put in these drives and which in MEDS?

3.5 Do you now file more or less than before the implementation of MEDS? (Much more, more, the same, less, much less)

3.6 Does your filing take more or less time than before the implementation of MEDS? (Much more, more, the same, less, much less)

3.7 Do you scan paper documents? (Frequently, occasionally, never)

3.8 Do you hard-copy index paper documents? (Frequently, occasionally, never)

- 3.9 Can you retrieve information now more or less easily than before the implementation of MEDS?**
(Much more, more, the same, less, much less)
- 3.10 Do you use the archive, ie view documents that have been archived?**
- 3.11 Has MEDS had any impact on the way you work?**
- 3.11a How?**

- 4 Views on MEDS**
- 4.1 What are the two best functions of MEDS?**
- 4.2 What are the two worst functions of MEDS?**
- 4.3 Do you have any comments regarding its appearance and user-friendliness?**
- 4.4 Are there areas of MEDS you feel you need to know more about?**
- 4.4a Which?**

- 5 Support and contacts**
- 5.1 Does your management team encourage the use of MEDS?**
- 5.2 Who would you contact first if you have a problem with MEDS?**
- 5.3 Are you aware of the MEDS helpdesk?**
- 5.4 Have you had any MEDS problems that you have raised with the helpdesk?**
- 5.5 If so, which helpdesk? (IT, MEDS)**
- 5.6 How was their response? (availability & speed)**
- 5.7 Was the problem resolved?**

- 6. Any other comments**

Benefits evaluation study

It is not realistic to ask anyone to complete a post-go-live people questionnaire on more than one occasion. This may be avoided when repeating benefits evaluation by taking a different though comparable sample of users for example by including the same business units but asking different users.

Normally, however, it should be sufficient to take just one post-go-live measurement for each business unit, for example in the tenth week following go-live, or at some other convenient point in time (for example to coincide with collection of system statistics when sufficient volumes of usage and storage have built up or to coincide with time-savings benefit data).

All this information can then be pulled together and analysed to produce a report on the benefits evaluation study.

Case study: analysed results from benefits evaluation study in the Department of Health

1. User awareness and perception

Objective: to reduce the administrative burden on staff by helping them to store and retrieve items with the minimum of effort

Prior to the implementation of MEDS a workgroup seeking to fulfil its record keeping obligations under the legislation and the Department's 'For the Record' guidelines would need to print off all relevant documents and file them in a pink registered file. A workgroup in this position should experience a considerable saving of time if it were to file the same volume of documents but were able to file electronically rather than in hard copy. The suspicion is, however, that many workgroups facing an increasing deluge of electronic documents and communication have simply failed to keep up with the volume of paper filing that this would imply. MEDS should enable these groups to get on top of the situation again. They should experience not necessarily a saving of time, but an increase in the volume of documents being filed compared with the pre-MEDS situation. We would anticipate therefore that if MEDS is delivering this objective we would witness a combination of increased filing and less time spent filing.

Question: Do you now file more or less than before the implementation of MEDS?

Answers:	Much less	0	0%
	Less	4	13%
	The same (includes non-users)	9	30%
	More	14	47%
	Much more	3	10%

Those filing less will include staff who previously had sole responsibility for the section's filing.

Question: Does your filing now take more or less time than before the implementation of MEDS?

Answers:	Much less	4	13%
	Less	11	37%
	The same (includes non-users)	8	27%
	More	7	23%
	Much more	0	0%

Here, of course, the volume of filing is relevant to any statement about time taken. Of those users taking the same time or more over their filing 11/15 were filing more or much more than before. In addition, of those spending less or much less time filing 7/15 were filing the same as before and 6/15 were filing more or much more!

Of course, one of the principal benefits of a well structured record management system is the ability to retrieve information quickly and easily. In the department's case this may be in response to an external request, eg a Parliamentary Question or, in the future, a request under FOI. In addition, the ability of workgroups to share information among themselves more easily should lead, from a Knowledge Management perspective, to an increase in internal efficiency. Here we would expect users to experience enhanced retrieval of information. The majority of users found this to be the case, but there were some who cited the search functionality as one of the worst features of MEDS (interestingly, an equal number of users cited the same search functionality as one of the best features of MEDS!). This may well be because, while the interface is the standard Notes one and undoubtedly powerful, it can be perceived as unintuitive and not user-friendly.

Question: Can you retrieve information now more or less easily than before the implementation of MEDS?

Answers:	Much less	1	3%
	Less	5	17%
	The same (includes non-users)	6	20%
	More	13	43%
	Much more	5	17%

Objective: allow for the scanning and incorporation of document images (eg annotated documents, incoming correspondence, etc.).

The functionality exists in Notes 'out of the box' for images, either of documents or anything else, to be incorporated into a Notes document, either as an attachment or as an image immediately visible on opening the document. All that is required is a scanner to convert the document to an image, and for some groups that is the basic stumbling block – they have not got one. Beyond that initial hurdle it is a question of judgement for each group whether the time taken to scan and file a paper document is justified by the likely saving of time to retrieve it electronically rather than as hard copy. Many documents will need to be saved as hard copy anyway (for example because they are incoming correspondence, or they contain signatures or annotations) Therefore, they may take the view (as indeed does DRO in many cases) that the paper file and the electronic file are merely two halves of the same file, and that scanning these documents is an unnecessary additional effort.

That said, there is an obvious advantage in being able to retrieve all documents from one repository rather than more than one. As user groups become more used to storing and retrieving information electronically they may well become increasingly frustrated at having to search more than one place for it. One compromise solution lies in the additional functionality provided within MEDS to create a 'hard copy index'. This is simply an additional record in MEDS to say that a hard copy document exists, where it can be found, what it is about and what its source is. Then a search of the MEDS file office will produce a list not only of the documents that are stored therein but also of pointers to other documents, available as hard copy, which may be relevant. We have attempted to discover to what extent users avail themselves of this functionality.

Question: Do you scan paper documents?

Answers:	Yes	16	53%
	No	14	47%

Question: Do you hard copy index paper documents?

Answers:	Frequently	3	10%
	Occasionally	12	40%
	Never	15	50%

Workgroups who handle a lot of paper may well take the view that neither solution is time-efficient, preferring always to refer to both paper and electronic files when seeking information.

Objective: support access with adequate performance and appropriate security by any user from any fixed or mobile departmental ROIS III workstation to any services to which that user has access rights.

Question: Do you use ROIS? (ROIS is the DH remote working solution using dial-up access from the user's laptop computer)

Question: Do you use MEDS on ROIS?

Answers:	ROIS	MEDS on ROIS		
	Yes 12	Yes	4	13%
		No	8	27%
	No 18	N/A		60%

It appears that MEDS users who also use ROIS are either unaware that MEDS can be used on ROIS or choose to do their filing to MEDS when they are in the office. The narrowness of the ROIS bandwidth does pose replication issues for remote users of MEDS and users are always recommended to replicate when in the office.

Objective: provide a managed environment for documents and records, including the physical storage of electronic documents and cross-reference to associated paper documents and files.

Prior to the introduction of MEDS users had principally used their email folders for storage of mail and shared network drives for storage of other electronic documents. In no sense are either of these environments managed, from a record keeping perspective. We would expect a successful ERMS to reduce usage of these two alternative storage areas.

Question: Do you use your mail folders more or less than before the implementation of MEDS?

Answers:	Much less	9	30%
	Less	6	20%
	The same (includes non-users)	11	37%
	More	4	13%
	Much more	0	0%

The high proportion of users for whom MEDS has made no difference to levels of mail folder usage probably reflects their chosen working method. They may, for example, file to MEDS as they go along, but retain documents locally while the topic is still current, deleting them from their mail file when they are no longer immediately required. In this sense the mail folders become a short term working area and MEDS a longer term storage area.

Further user perception (positive)

Question: What are the two best features of MEDS?

Selected answers: Favourites (5 users)
Ease of filing (7)
Ease of retrieval (7)
Searching (4)
One-stop shop for files
You can file as you send
Less paper and less finger damage
Forces you to think about filing
Immediate (filing and retrieval)
Help file
Audit trail of who has filed what

Further user perception (negative)

Question: What are the two worst features of MEDS?

Selected answers: Not being able to change the title of the document once it has been filed on a registered file.

The pop-up box is a constant source of annoyance

You can't delete an item if you file it incorrectly

Should prevent duplicates

Search facility variable in results and not intuitive (several users)

No option to 'Move to MEDS' when you send

The file numbering can become unwieldy when dealing with a large number of files covering various contracts

A number of answers in this section related to difficulties using their own file structure and a desire for more training to take advantage of the range of features, rather than issues with the way MEDS is constructed per se.

2. Analysis of file office usage statistics

A random sample of 20 file offices was taken. This covered file offices from a wide range of different business areas, including policy, finance, IT support, international, Private Office and external agencies. Results from this sample are shown below.

Total number of documents filed per month (average of last three months)	18010
Average number of documents filed per file office per month	900
Total number of users with access	581
Average number of users per file office	29
Total number of filers	213
Average number of filers per file office	11
Average number of documents filed per user	31
Average number of documents filed per filer	85
Average % active usage of file office (filers/users)	37%

The conclusions we would draw from these statistics are:

1. MEDS is being intensively used by the sections to which it has been rolled out
2. Many documents are being filed to MEDS – an average of 900 per section per month. If each one represents a saving of time compared with printing out the same document and filing to a pink file, then a substantial amount of time is being saved in these sections
3. Active users (filers) file an average of four documents each working day
4. The figure for active usage underestimates the true figure since there are many users who are included in the Access Control Lists of file offices other than the one in which they do their own filing. In addition LRCs frequently fail to remove from the Access Control List users who have left their section. We estimate the true figure to be nearer 50%. In addition, there are a number of reasons why someone who has access to MEDS may not be an active user. These include:
 - a. senior member of staff has his/her filing done by a PA
 - b. use alternative electronic system as primary repository, eg IT developers
 - c. concerns over security, eg HR or personal information
 - d. lack of confidence in use – need additional training.

3. Other

Construction of file lists

Unless the users were involved in the construction of the MEDS file list, they tended not to find it intuitive to find the right file if they have not been the person doing the filing in their section previously. This causes problems when they are deciding where to file records and whether new files are required, and is one reason why more senior members of the Sections ask their Personal Assistants to do the filing for them. However, given that the ethos in MEDS is for users to do their own filing, this is a cultural issue which will dissipate in time.

Usability

In line with the previous study users were generally happy with the appearance and user-friendliness of MEDS. Some users commented that they would like to either search the contents of a specific file or relate the search results to the files from which they came. Both are possible currently, but it is not intuitive how to do this. These tasks will be easier in the search interface included in MEDS 3.

Most users were great advocates of MEDS and its ability to save time compared to the traditional hard copy filing. They liked other time efficient functions such as the ability to copy entire email folders across from email to MEDS and the fact that it reduces the amount of paper in the office. Where working practices supported it, they also liked the fact that document management was shared across the Section which led to a more open method of working and sharing of information and responsibilities.

Support

Most users who had recourse to support for MEDS were generally happy with the response. If the request was placed through the IT helpdesk the process was considerably slower, but most users were aware of the MEDS helpdesk and used it or contacted the MEDS team directly. In this case the response was much faster.

Archiving

Most interviewees had not used the document archive, ie read documents which had been archived. Usually this was simply because archiving had not happened in the registries concerned. However, all were aware of the archive and that documents were still available once archived.

Record management awareness

One side-effect of the Change Programme has been the number of new teams set up within DH. Many of these are staffed with contractors/consultants as well as new and existing civil servants. Among these teams there is little appreciation of the legal requirements and implications of records management (Public Records Act, FOI) or the departmental records management guidelines. It is therefore difficult to engage with these teams in a discussion about MEDS without tackling these issues first. By their nature it is best to tackle these issues at a fairly senior level.

6 References and sources

6.1 References

1. Framework for Strategic Planning and Implementation of ERM
www.nationalarchives.gov.uk/electronicrecords/advice/pdf/framework.pdf
2. Lord Chancellor's Code of Practice on the Management of Records under section 46 of the Freedom of Information Act 2000 is at www.dca.gov.uk/foi/codemanrec.pdf
3. The Treasury Green Book gives instructions and guidelines on the production of business cases within government, including the benefits aspect. It can be found on HM Treasury's website: www.hm-treasury.gov.uk . It includes guidance on the use of discount rates to calculate the Net Present Value (NPV) of an investment. 'optimism bias' adjustment: note that since early 2004, the Treasury Green Book has included the requirement to adjust benefit statements (and also statements of cost and timing) to adjust for the phenomenon of 'optimism bias'. Information is included in the Green Book guidance on the Treasury website. It emphasises the importance of identifying all expected benefits (not only to the government organisation but to the UK as a whole), and finding ways of quantifying them where possible, whether financially or not
4. The Office of Government Commerce (OGC) has produced guidance. The OGC Successful Delivery Toolkit includes sections on both business case and benefits management which can be found on its website www.ogc.gov.uk . Material on OGC Gateway Reviews can be found also on the OGC website. The business case, and benefits management, are essential elements of OGC Gateway Reviews 0 to 5, and are expected to be refined/developed at each stage
5. Some departments have put business cases on RM-Forum for reference by other central government organisations. Registration is needed (access is password controlled) at www.recordmanagers.gov.uk/in Document Library, e-records, ERM business case
6. Comments and business cases and other material for inclusion on RM-Forum can be sent to: e-records@nationalarchives.gov.uk
7. *Guidance on business classification scheme design, developing a policy for managing email, disposal scheduling and sustaining electronic records: strategies for maintenance and preservation* may be found in the list of published guidance at: www.nationalarchives.gov.uk/electronicrecords/advice/default.htm

6.2 Sources

1. DCA potential space savings – thanks to Don Burt for providing the information
2. DH storage requirements – thanks to Steve Wells and David Powell for providing the information
3. TNA benefits realisation plan – report provided by David Thomas
4. DH benefits evaluation study – report provided by Steve Wells and Simon Holloway.

Tel: 020 8876 3444
Fax: 020 8392 5286
email: e-records@nationalarchives.gov.uk
The National Archives Kew Surrey TW9 4DU

