Effective Records Management

Part 2: Practical implementation of BS ISO 15489-1

BSi
Business
Information

Effective records management — Part 2: Practical implementation of BS ISO 15489-1

Julie McLeod

Ref: BIP 0025-2:2002

BSI
Business Information

Reprinted 2003.

BIP 0025-2 **ISBN 0 580 39006 3**

Contents

List of figures

Foreword

All businesses, whether private or public sector, rely on information and records to conduct their affairs in a systematic and legally compliant way. The strategic management of records and information is essential to this process and never more so than in an age of e-commerce and e-government. With a rapidly changing and developing business context there are considerable organizational benefits to adopting a consistent and standardized approach to the management of records and information.

In October 2001 the first international standard for the management of records was launched in Montreal, Canada. The two-part publication of Standard and Technical Report, implemented in the United Kingdom as BS ISO 15489-1:2001 and PD ISO/TR 15489-2:2001, was the culmination of three years' work by a group of international experts to synthesize best practice from around the world in the strategic management of records. This Standard and Technical Report are applicable to multinational companies and small enterprises alike and provide an essential tool for the management of records and information.

The Standard provides a framework within which the necessary management of records and information can take place. This publication is the second in a series of publications on records management supported by BSI and is intended to complement the Standard and Technical Report and help place them in context for the user. The publications expand on the framework that the Standard creates and provide both interpretation and illustration of good practice. Each volume has been written predominantly from the United Kingdom perspective by leading United Kingdom practitioners, who have first hand, practical experience of, and insight into, the issues facing United Kingdom organizations today.

I can wholeheartedly recommend this informative series to the reader, which provides insight into the application of both BS ISO 15489-1:2001 and PD ISO/TR 15489-2:2001.

The other books in this series are:

— BIP 0025-1:2002, *Effective records management — Part 1: A management guide to the value of BS ISO 15489-1*; and
— BIP 0025-3:2003, *Effective records management — Part 3: Performance management for BS ISO 15489-1*.

Further publications may be added in future.

Philip A Jones
Chairman IDT/2/17

1 Introduction

1.1 The standard

BS ISO 15489-1:2001 is the first international standard on records management and has its roots in the first ever national standard on records management, the Australian standard AS 4390-1/6. It is accompanied by a Technical Report, PD ISO/TR 15489-2:2001, which provides further details and explanation together with a methodology for implementing the standard. Both publications are implementations of ISO documents. PD ISO/TR 15489-2:2001 is an implementation guide for records management professionals (and others) who have been assigned responsibility for managing their organization's records.

This book is also a guide to implementing BS ISO 15489-1:2001, so how does it differ from PD ISO/TR 15489-2:2001? It aims to complement it and provide an alternative, easily accessible and practical 'how to' guide for anyone who wishes to implement BS ISO 15489-1:2001, but in particular for new or non-records management professionals. Its focus is BS ISO 15489-1:2001, clauses **7**, **8** and **9**, which can be seen as the 'nuts and bolts' of implementing records management in any organization. Therefore, unlike PD ISO/TR 15489-2:2001, it does not cover all sections of BS ISO 15489-1:2001. Instead it assumes that a decision to adopt a records management approach has been taken, based on the recognition of what records management is and why it is important to your organization. In reaching this decision it will also have been recognized that there will be a range of roles and responsibilities for managing records in your organization, a topic which is highlighted later in this guide. Whilst BIP 0025-1:2002, also part of this series, considers the role and purpose of records management in detail, it is worth summarizing these before considering the key aspects of implementation.

1.2 Why are records and records management important?

Records capture the actions and transactions of your organization. They are the output of its business activities, in the broadest sense of the word. They are unique to your organization and, alongside the organization's people, money and estate, are therefore a valuable asset. Managing them is crucial if they are to be used for evidence and if

their information content, your organization's memory, is to be effectively and efficiently exploited. BS ISO 15489-1:2001 outlines what your organization needs to do to ensure the appropriate and adequate management of its records because good management requires good recordkeeping and records systems.

Although BS ISO 15489-1:2001 is not a compliance standard, using it as a framework will enable your organization to create, capture and manage its records appropriately and adequately. Implementing BS ISO 15489-1:2001 will improve the efficiency and effectiveness of the management of what is arguably your organization's most valuable resource in today's information and service economy.

1.3 What does this guide cover?

This book begins by providing the context and considering the characteristics and requirements of systems for managing records. It moves on to explore the nature of records systems and one well developed methodology for designing and implementing a records system. Some of the main tools which support the management of records, as identified in BS ISO 15489-1:2001, clause **9**, are then highlighted.

The final section takes the form of an action plan, comprising a series of simple checklists, which you can use as a reference tool or starting point for implementing BS ISO 15489-1:2001.

Since it is impossible in a guide of this length to provide you with all of the necessary detail of how to implement BS ISO 15489-1:2001, references are made to it within the text and to PD ISO/TR 15489-2:2001 as well as other useful publications, see Bibliography. Sources of further information are given at the end.

Also not covered in this guide are monitoring, auditing and measuring the performance of records management systems, policies and procedures. A separate guide, BIP 0025-3:2003, is devoted to this very important aspect of records management.

2 Records and records systems

2.1 What are the characteristics and requirements of records and records systems?

This section looks at what is meant by a record and the key characteristics and requirements of a records system which are the precursor to the design and implementation of such a system.

BS ISO 15489-1:2001 defines a records system as an "information system which captures, manages and provides access to records through time" and records as "information created, received and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business". So, records are integral to 'doing business' and BS ISO 15489-1:2001 is concerned with their management over time from conception to 'retirement' or destruction.

All records have:

- content, i.e. information;
- context relating to the business process of which the record is a part; and
- structure, i.e. format.

It is crucial to recognize that records are fixed in time, in that they are the output of and therefore evidence of a particular transaction. If the information contained in a record is utilized and changed as part of another action the result is a new record of a different transaction.

If records are to be authoritative then they should demonstrate particular characteristics which set them apart from some other forms of information, for instance, published information that might be bought or acquired at no cost. They should be:

- *authentic*, i.e. what they claim to be, created or sent by the person claimed to have created them and at the time claimed;
- *reliable*, i.e. trusted to be full and accurate representations of the business transactions;

- *integral*, i.e. complete and unaltered;
- *usable*, i.e. locatable, retrievable, presentable and interpretable.

Records systems should be capable, therefore, of supporting the management of records with these characteristics over time.

You should also ensure that records systems manage both the physical dimension and the logical dimension of the records. The physical dimension is generally associated with the record's medium or format (especially in relation to paper records) and the logical dimension with its message or content (especially in relation to electronic records). But this is a rather simplistic association.

In the world of paper records, for example, the physical dimension relates not only to their format (i.e. structure) but also their context. The physical arrangement and order of records in a paper filing system, for instance, provides important information and understanding about the business or organizational context of which they were a part. In the world of electronic records this is generally not the case. Although electronic records can be bound together or accessed via organized directory structures on a disk, the bits and bytes that make them up are randomly stored on the disk. So the virtual arrangement, i.e. 'physical' dimension, of electronic records does not always provide sufficient information about their context. The context is therefore captured logically in the form of metadata (i.e. data about the record).

The two concepts of records and records systems are very important. However, the interpretation of the terms can vary from one organization to another. In some organizations a record is considered to be a single document, for example a contract. In other organizations a record is a collection of related documents, for example all of the documentation relating to a contract including correspondence, initial bids, etc. which are managed together and 'fixed' as the definitive record at some point in time, perhaps when the contract is agreed or completed.

The terminology should be used in a way that makes sense in your particular business context and ensures that the aim is to meet the characteristics and requirements outlined above.

2.2 What do records systems involve?

Because records are fixed, your records systems should document records transactions, i.e. all processes or actions associated with individual records (see BS ISO 15489-1:2001, **8.3.2**). This can be achieved in one of two ways either by:

i. attaching, associating or embedding data about these processes or actions with the record, these data are usually referred to as metadata; or by

ii. capturing the details in the form of an audit trail.

In either case you should keep the details of the transactions (i.e. the metadata or audit trail) for at least as long as you keep the records to which they relate.

In addition to documenting records transactions, managing records over time within records systems involves the following operations:

- storage and protection of the physical medium, including business continuity planning and disaster prevention;
- distributed management, i.e. the use of alternative locations for the physical storage of records in any medium;
- conversion and migration as a result of a system change, for instance conversion from paper to electronic format or migration from one software application to another;
- access, retrieval and use which need to be controlled to ensure the integrity of the records as well as efficient access;
- retention and disposition which can be audited; ideally retention decisions should be made at the point of records creation or system design and, where appropriate, disposition should be activated automatically.

For further information about these aspects of a records system, see BS ISO 15489-1:2001, **8.3**.

In summary then, records systems support the management of both physical (medium) and logical or intellectual (message) aspects of records over time, i.e. from the point at which they come into existence and for as long as they are needed. This is to ensure their authenticity, reliability and integrity, for evidential purposes, and their usability for corporate/business purposes, i.e. for 'competitive' advantage.

3 Design and implementation methodology

3.1 Introduction

Having established the role and purpose of records and the business needs for systems to manage them, the challenge is to design and implement such systems. How can this be done?

This section shows you how to use one methodology which is based on the generic principles of systems analysis and design but which has been specifically tailored for designing and implementing a records system. The eight step methodology, known as DIRKS (Design and Implementation of RecordKeeping Systems), first appeared in the Australian records management standard, AS 4390-3:1996, **6.2** and is the one referred to in BS ISO 15489-1:2001, **8.4**.

The National Archives of Australia, initially with State Records New South Wales, developed a DIRKS Manual [1], [2], [3], [4] to 'provide organizations with practical guidance on using the methodology', see Section 2 of Part 1 of the DIRKS Manual [1]. Subsequently State Records New South Wales have released their own version of the DIRKS Manual which takes account of the specific juridical context[1]. The aim of this guide is not to cover the DIRKS methodology in the same level of detail, but instead to suggest how DIRKS might be applied in a particular organization to achieve the required outcomes.

3.2 What is DIRKS?

The DIRKS methodology comprises eight steps which are referred to by letters.

Step A: Preliminary investigation

Step B: Analysis of business activity

[1] Available via the National Archives of Australia's website at http://www.naa.gov.au/recordkeeping/dirks/dirksman and the State Records New South Wales website at http://www.records.nsw.gov.au/publicsector/DIRKS/final/title.htm. Both manuals are extensive and very detailed.

Step C: Identification of recordkeeping[2] requirements

Step D: Assessment of existing systems

Step E: Identification of strategies for recordkeeping

Step F: Design of a recordkeeping system

Step G: Implementation of a recordkeeping system

Step H: Post-implementation review

Steps A to C are about 'doing the right things' whilst steps D to H are about 'doing things right'. The first three steps can be particularly resource intensive and unless your organization is fairly small and/or has relatively straightforward business processes, these steps will require the knowledge and skills of a mix of different people. In addition to the records management staff, or the person(s) with responsibility for managing records, IT and systems people, project managers, business experts and, most importantly, the users and creators of records are likely to be involved.

Together these eight steps make for a rigorous approach to design and implementation which can take time and money but, as Section 3 of Part 1 of the DIRKS Manual [1] points out, adopting this approach can help to:

- understand the business, regulatory and social contexts in which your organization operates and to develop a business case for reviewing your records systems;
- identify your organization's recordkeeping requirements by analysing its business activities and environmental factors;
- assess the extent to which your organization's current strategies (such as its policies, procedures and use of IT) satisfy its records requirements;
- either redesign current strategies or develop new ones to address any requirements which are not being met or are poorly satisfied;
- implement, maintain and review the records management strategies.

It is important to remember that you do not necessarily have to conduct the eight steps in the process sequentially. Parts of some steps can be conducted at the same time as other apparently earlier steps and your starting point will depend on the current status of records management within your organization. The process is potentially iterative with feedback loops between different steps. These loops are illustrated in the DIRKS methodology diagram in Section 4 of Part 1 of the DIRKS Manual [1], which is reproduced in PD ISO/TR 15489-2:2001, **3.2.1**. (Note that the acronym DIRS has been used in PD ISO/TR 15489-2:2001 instead of DIRKS.)

3.3 What is the status of records management in your organization?

Given this overview of the DIRKS methodology and the perceived benefits of adopting it, the following statements should be considered so that an initial assessment of where your organization currently is, in terms of managing its records, can be made.

[2] Note the use of the term 'recordkeeping' here rather than the term 'records system', which is the preferred term of BS ISO 15489-1:2001 and therefore of this guide.

	Assessment *SA/A/D/SD*
Policies and standards (for records) are in place	
Procedures and/or guidelines are in place	
There is senior management support for managing our records	
Responsibilities for managing records have been assigned	
Records management services exist (e.g. storage, advice, destruction)	
Specific records management systems exist	
Records management functionality is built into IT systems	
Records are protected (physical security and/or access restrictions)	
A business continuity/disaster plan covers records	
Legal/regulatory requirements are known	
There is a physical space problem relating to records	
Records are retained for specified periods	
There is an electronic storage/system response time problem	
Standards which have a records dimension are in place (e.g. BS EN ISO 9000 series, BS EN 14001, BS ISO/IEC 17799, BS 7799-1, BS 7799-2)	
The organization has had a positive experience (i.e. a success story) due to appropriate records management	
The organization has had a negative experience (i.e. a scare story) due to inadequate records management	

Assessment scale: SA = strongly agree, A = agree, D = disagree, SD = strongly disagree

With the exception of the last statement, if the outcome of your assessment is mostly 'agree' or 'strongly agree' then your organization is clearly already some way towards managing its records and probably has a strong commitment to doing so. There may be different reasons for this. There may be a champion. Your organization may operate in a regulated environment. Maybe your organization is information intensive, or there may be some other reason. Perhaps a scare story prompted action.

If many or some of your assessments are 'disagree' or 'strongly disagree' then you have further to go but, the fact that you are reading this guide suggests you are interested in implementing the records management standard, and improving the way records are managed in your organization.

Having reflected broadly on the current records situation in your organization, and with the overview of one methodology for designing and implementing records systems, the most appropriate overall approach or strategy to take in utilizing this methodology needs to be considered.

3.4 What overall approach should you take?

Depending on the time, money and other resources that can be made available, you may have to adapt the way in which you use DIRKS. You may decide to take one of the following approaches:

- Core functions

Focus on core functions, i.e. those functions which are specific to the sector in which you work; for example they may be drug development in the pharmaceutical sector, teaching or research in the academic sector, transactions in the financial services sector.

- Non-core functions

Focus on common or non-core functions, i.e. those functions which support any and all organizations to do 'business'; these include, for example, finance, personnel and other administrative functions which are often highly transactional in nature and generate large quantities of records. This may be an appropriate focus if physical space or system response times are an issue.

- Part of the organization

Focus on one area of the organization, for example an area or department which is preparing for a major audit or review, is about to be relocated or is about to be re-structured.

- DIRKS steps in sequence

Complete steps A to C first, so that you make a detailed assessment of the right things to do, followed by step D in which you assess your existing systems against the 'ideal' requirements identified.

- DIRKS steps in parallel

Conduct step A and parts of step D concurrently so that, at the same time as you are carrying out your preliminary investigation, you are also making an inventory or survey of your current systems; this approach has the obvious potential benefit of efficiency.

- DIRKS steps out of sequence

Begin with step D and use the results to establish a business case for a more extensive recordkeeping project (see Section D4 of Part 2 of the DIRKS Manual [2]).

3.5 What information will you need to support the DIRKS methodology?

In applying the DIRKS methodology you will need access to a wide range of information sources. You will often use the same information source for more than one purpose, i.e. in more than one step, but it takes time to gather and may be more or less readily available. For instance, some of the information may be explicitly recorded in documents of various types but other information will be tacit, i.e. in the minds of people in the organization. An assessment should be made in terms of the availability of or access to the main types of information required to support the use of DIRKS.

	Assessment *A/AU/IP/N*
Tacit information: • your knowledge of the organization; • the knowledge, experience and expertise of other people in your organization.	
Explicit information: • internal documents: – mission statements and annual reports; – policies and procedures; – systems documentation; • details of systems and processes; • external documents: – regulations; – laws; – standards; – sector specific vs. generic?	

Assessment scale: A = available, AU = available and actively used, IP = in preparation, N = needs to be prepared

Because you and/or others can use some of these information sources in more than one step, you need to decide on how best to record the information. So, before you begin you should decide on some systematic mechanism for recording what information you use and what you find. There may be a method for documenting information sources in common use already in your organization, for example a Lotus Notes Library, a database or a section of your intranet. If there is not, then you could use or adapt the template provided in Appendix 5 of Part 3 of the DIRKS Manual [3], or the DIRKS Documentation Database [5].

3.6 Step-by-step guide to DIRKS

Introduction

Having introduced the DIRKS process the next step is to consider what each of the eight steps involves. This will necessarily be at a macro level but it will enable you to make an initial 'desk-based' assessment of where you currently are in your organization in terms of managing records. It should allow you to formulate a picture of what is being done, what is important and why it is important. Working through the process in this 'quick and dirty' manner will help you to become more familiar with the process in anticipation of actually using it. It will also help you to prepare an action plan which outlines how you are going to meet your organization's records management requirements.

Step A: preliminary investigation

> *Collect information from documentary sources and through interviews; identify and document the role and purpose of the organization, its structure, its legal, regulatory, business and political environment, critical factors and critical weaknesses associated with records management.* See BS ISO 15489-1:2001, **8.4**.

The main activities and major outputs of this first step are shown in Figure 1.

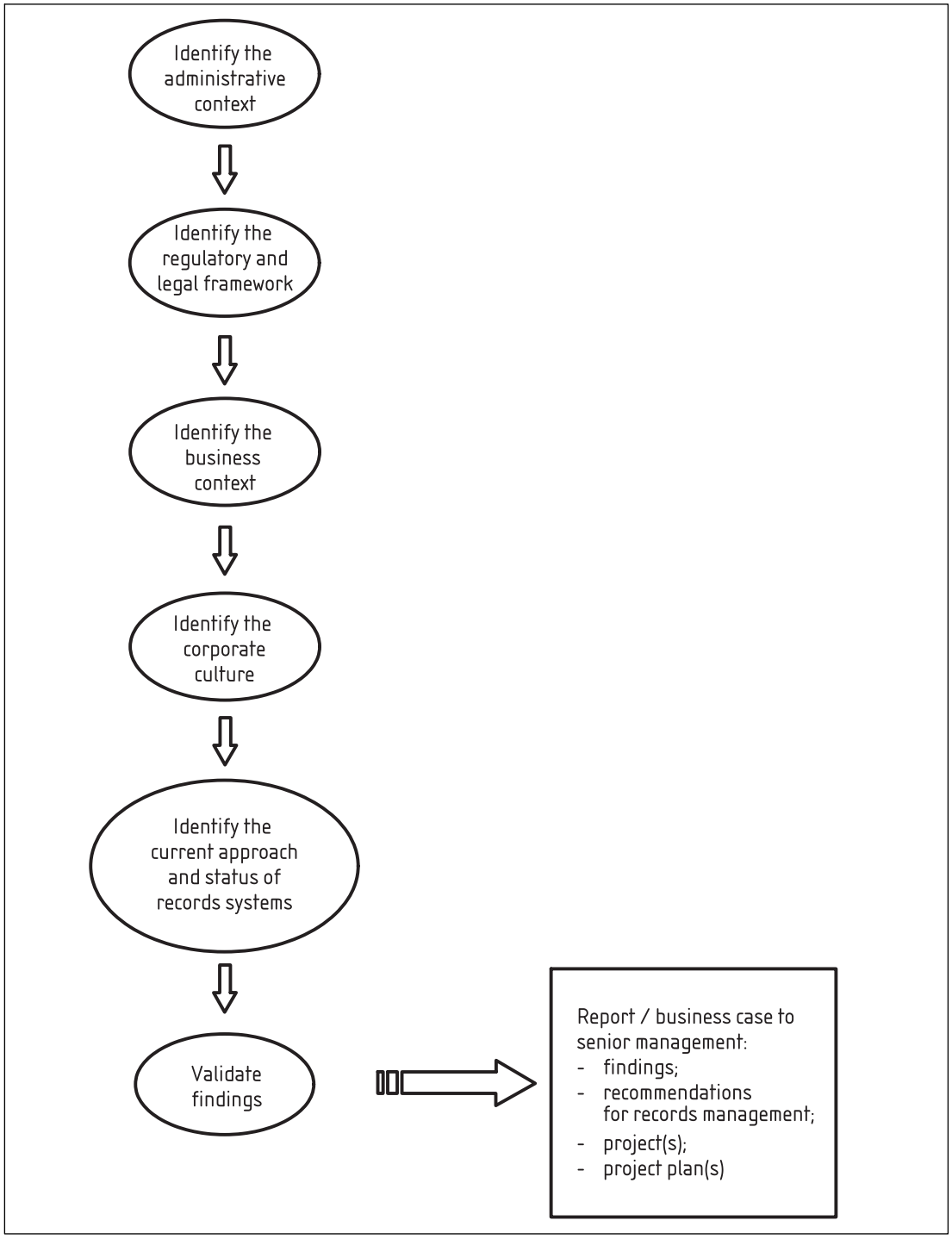

Figure 1. Flowchart of main activities and major outputs for step A: preliminary investigation

The purpose of Step A is to:

- provide you with an understanding of the administrative, legal, business and social contexts in which your organization operates;
- identify major factors influencing the need to create and maintain records in your organization;

- provide a general appreciation of your organization's main strengths and weaknesses in managing its records; and
- provide a firm basis on which to scope a records project and present a business case to management.[3]

Given the purpose of this first step and its key output, a report to management providing the business case for a records management project or initiative, how would you summarize the current situation and current perceptions in your organization? The following questions should be answered based on your own knowledge and experience and drawing on your responses to the initial assessment (see **3.2**).

Is your organization in the private or public sector?

In essence what does your organization do (e.g. provide a service, manufacture goods)?

What is your organization's current strategic focus (e.g. expansion into a new market, focus on new or specific product or service lines)?

How is your organization structured (e.g. hierarchical, project based, business units) and where is it located (e.g. in one or a few places, global)? Where do different activities take place?

How would you describe the organizational culture (e.g. power, task, role, person)? [6]

Is your organization risk averse?

Do you operate in a heavily regulated environment or operate within specific regulations?

Are you subject to explicit recordkeeping requirements through laws or the regulations/standards of external authorities?

Is there a systematic approach to managing records in any part(s) of your organization (e.g. based on policies, procedures and recognized responsibilities)?

Are staff aware of the need to manage records, has there been any training?

Is your organization predominantly paper-based, electronic or a mixture of these plus other media?

To what extent are information and communication technologies used to support business operations?

What are the key drivers for managing records in your organization (e.g. compliance, competitive advantage, efficiency, evidence, statutory obligation, other?)

Based on your answers to the above questions and any other relevant knowledge you have, using Figure 2, how would you assess the main strengths, weaknesses, opportunities and threats in relation to managing your organization's records?

[3] This is based on PD ISO/TR 15489-2:2001.

Any obvious immediate priorities in relation to managing your organization's records should be assessed, for example developing procedures to meet forthcoming legislation, developing a new electronic system for supporting a core business process more efficiently and effectively. This enables a picture to be built up of what might be important in carrying out this step in your organization. Is it likely to be a significant undertaking or is evidence and input readily available to build the necessary business case? Indeed is there a business case to be built or is there already widespread support for the implementation and/or improvement of records systems?

Strengths	**Weaknesses**
(e.g. policies, procedures, compliance)	(e.g. poor physical protection, duplicate records)
Opportunities	**Threats**
(e.g. new management, resources, merger/de-merger, legislation such as Freedom of Information)	(e.g. audit, litigation, lost reputation/revenue)

Figure 2. SWOT analysis

Step B: analysis of business activity

> *Collect information from documentary sources and through interviews; identify and document each business function, activity and transaction and establish a hierarchy of them, that is, a business classification system and identify and document the flow of business processes and the transactions which comprise them.* See BS ISO 15489-1:2001, **8.4**.

The main activities and major outputs of the second step are shown in Figure 3.

The purpose of the business activity analysed is to:

- develop a conceptual model of what your organization does and how it does it;
- demonstrate how records relate to your organization's business and business processes;
- provide an informed analysis and information to support later decision making about the creation, capture, control, storage, disposition and access to records – this is especially important in the context of electronic systems which will not capture and retain records unless they have been specifically designed to do so.[4]

[4] This is based on PD ISO/TR 15489-2:2001.

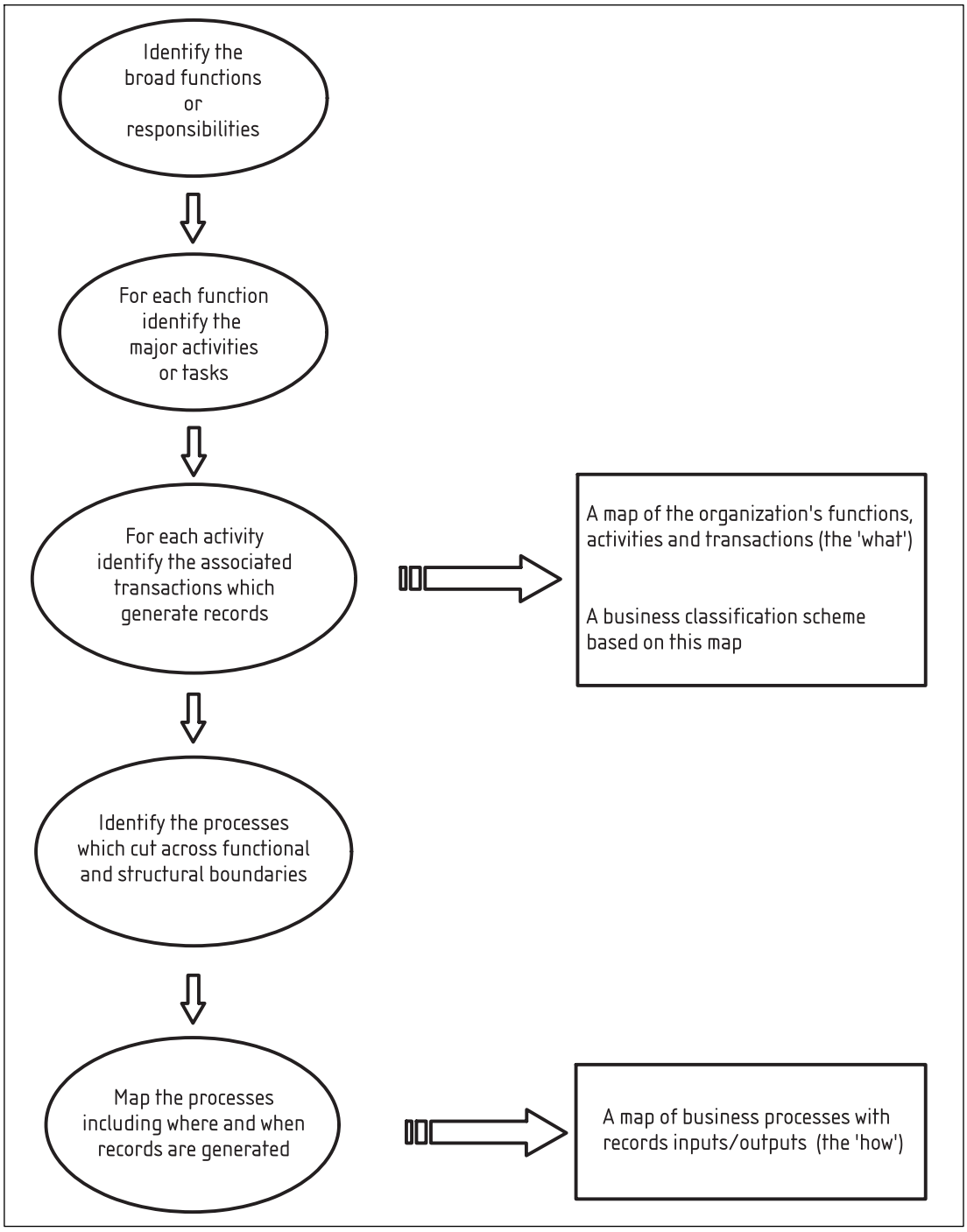

Figure 3. Flowchart of main activities and major outputs for step B: analysis of business activity

This step involves two main tasks, a functional analysis and the usually more detailed process analysis. These analyses have potential uses beyond the design of records systems. A functional analysis can be used to identify gaps and duplication in, for instance, resourcing, to identify priorities and opportunities for outsourcing or new ways of working. Process analysis can be used as input to continuous improvement and other quality management systems. Indeed, although this step may appear daunting, you may find that similar analyses have already been conducted for other purposes, for example for the BS EN ISO 9000 series, and that you can utilize them.

If you have never conducted a functional or process analysis before then you should try to answer the following questions to gain a sense of what they involve.

What does your organization exist to do, what are its goals (e.g. make a profit, provide a service, help others)?

What are the broad functions or main responsibilities that are undertaken in the organization to achieve its goals (e.g. a university might identify teaching and learning, research and administration as its broad functions)?

What are the business critical functions that need to continue in the event of a disaster if your organization is to survive?

For one of the functions identified what are the main activities or tasks which are performed to accomplish that function (e.g. preparing bids, conducting projects and disseminating results are some of the activities associated with the research function)?

What transactions are associated with one of the activities identified (e.g. distribute a draft bid for comment, receive comments on a draft, send the final bid to the funding agency)?

Can you identify a business process that cuts across functions (e.g. staff appraisal, student administration)?

For one process what are the tasks associated with it and what records are or should be generated?

In principle these analyses are straightforward, though in practice they can be taxing and/or time-consuming to complete. In some organizations they may be the remit of other personnel, such as business analysts, in which case their assistance or previous work can be usefully enlisted. Whatever the situation, the analyses should be seen as a help rather than a hindrance and therefore conducted only at a level of detail which is appropriate for your organization. For example, the output of your functional analysis will be a hierarchical map, much like an organization chart or family tree, which forms the basis of a business classification scheme. This scheme can be used to name electronic directories on shared network drives, to name folders and files and to determine the retention of records. If your organization is relatively small and not especially complex, then the analysis and the business classification scheme should not be detailed and complex. If, on the other hand, your organization is global and shares a lot of information and records, then effort put into these analyses will reap benefits at a later stage.

Step C: identification of requirements for records

Collect information from documentary sources and through interviews; identify the requirements for evidence of and information about each business function, activity and transaction which should be satisfied through records. The requirements can be derived from an analysis of the organization's regulatory environment and the risk of not creating and maintaining the records. Determine how each requirement may be satisfied through records management processes, and articulate and document the requirements for records. Choose the appropriate records structure which best satisfies each business function, activity or transaction. See BS ISO 15489-1:2001, **8.4**.

The main activities and major outputs of this step are shown in Figure 4.

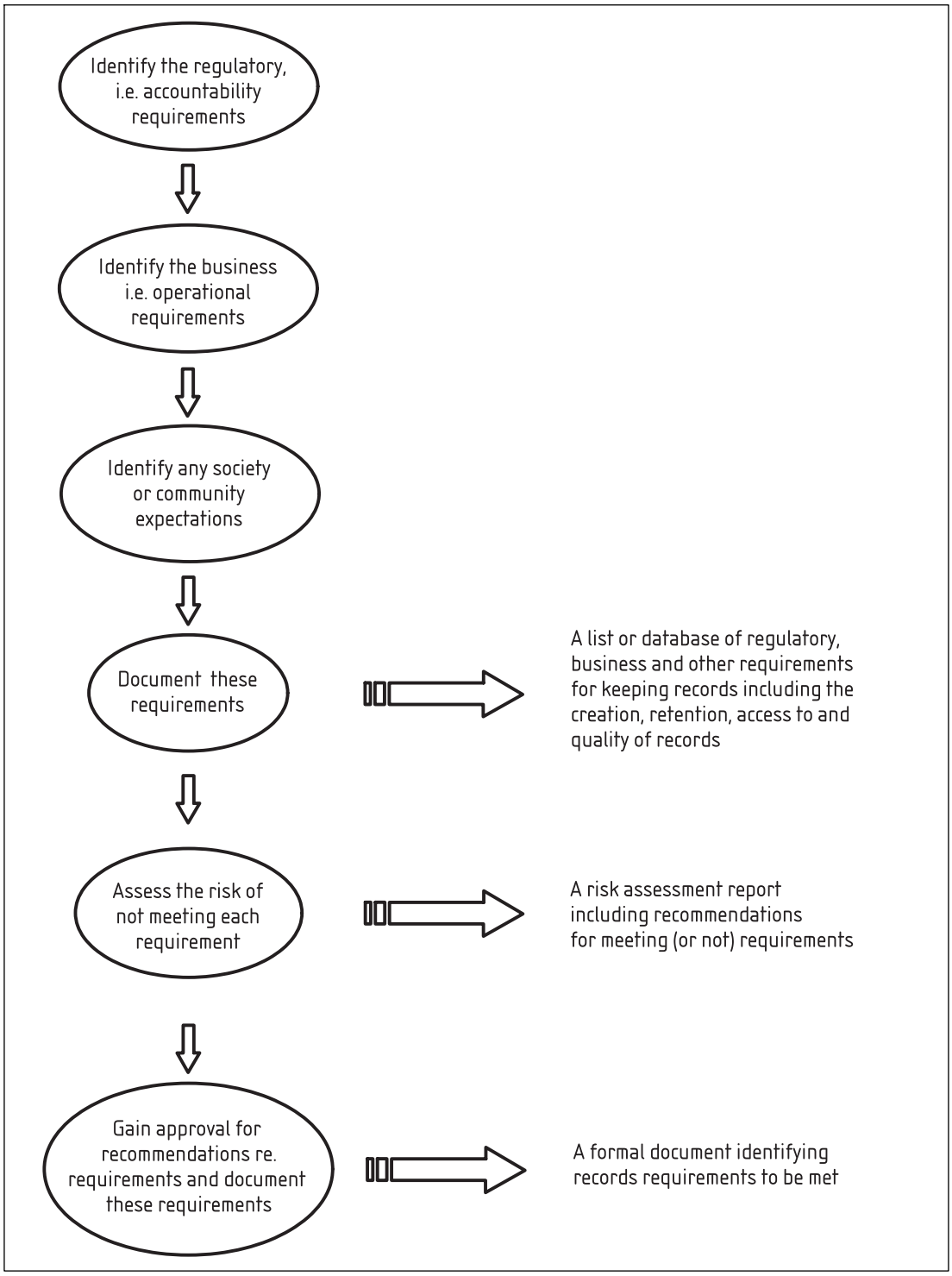

Figure 4. Flowchart of main activities and major outputs for step C: identification of requirements for records

The purpose of the third and final step in terms of 'doing the right things' is to:

- identify your organization's requirements for making, receiving and retaining records of its business activities for accountability and operational purposes (internal and external, legal, administrative or societal);
- document the records requirements in a structured and easy to maintain form;
- assess your organization's exposure to risk if these requirements are not met;
- provide a basis for designing records systems and a benchmark for measuring the performance of current systems.[5]

It is difficult to be sure when all of the requirements for creating and keeping records have been identified. How long is a piece of string? And it can be challenging to read and interpret the records requirements of laws and regulations – some requirements are implicit rather than explicit. To help you prepare for undertaking this step consider the following questions.

What are the major known records requirements (legal, business or other)?

Who, in your organization, can help to fill the gaps, confirm requirements, keep the requirements up-to-date (e.g. legal department, personnel, company secretary, technical directors)?

What would be the best way of documenting records requirements, including their source, and who could do this (e.g. a database)?

Is anyone in your organization responsible for risk management and could they assist in conducting the risk assessment activity in this step?

The answers to these questions help to build up a picture of who in your organization can provide information and practical help for this step. If there is no risk management function then you can use one of a range of published and relatively easy-to-use risk assessment guidelines [3], [7]. Benchmarking and performance measurement are considered in BIP 0025-3:2003.

Completing this step is particularly important in relation to developing a records retention or disposal schedule, one of the key tools for supporting the practical management of records. (See **4.3**).

Step D: assessment of existing systems

> *Identify and analyse existing records systems and other information systems to measure their performance against the requirements for records.* See BS ISO 15489-1:2001, **8.4**.

Step D is the first of the steps which focus on 'doing things right' and the main activities and major outputs of this step are shown in Figure 5.

[5] This is based on PD ISO/TR 15489-2:2001.

The purpose of step D is to:

- survey your organization's existing records and other information systems;
- measure or assess the extent to which these systems capture and maintain the records of your organization's business activities;
- identify gaps between existing systems' capabilities and records requirements;
- provide a basis for redesigning current systems and/or developing new systems.[6]

It is worth noting the, perhaps subtle, but important difference between information and records systems. Records systems are particular types or examples of information systems whose key characteristic is to maintain the evidential value of the records. So, a paper-based filing system in a personnel department is a records system, as is an electronic stock ordering system; a database of financial movements may or may not be a records system. The critical differences are that records cannot be changed whereas information can be dynamic and records are the evidence of a business process or transaction whereas information is not necessarily related to a business transaction.

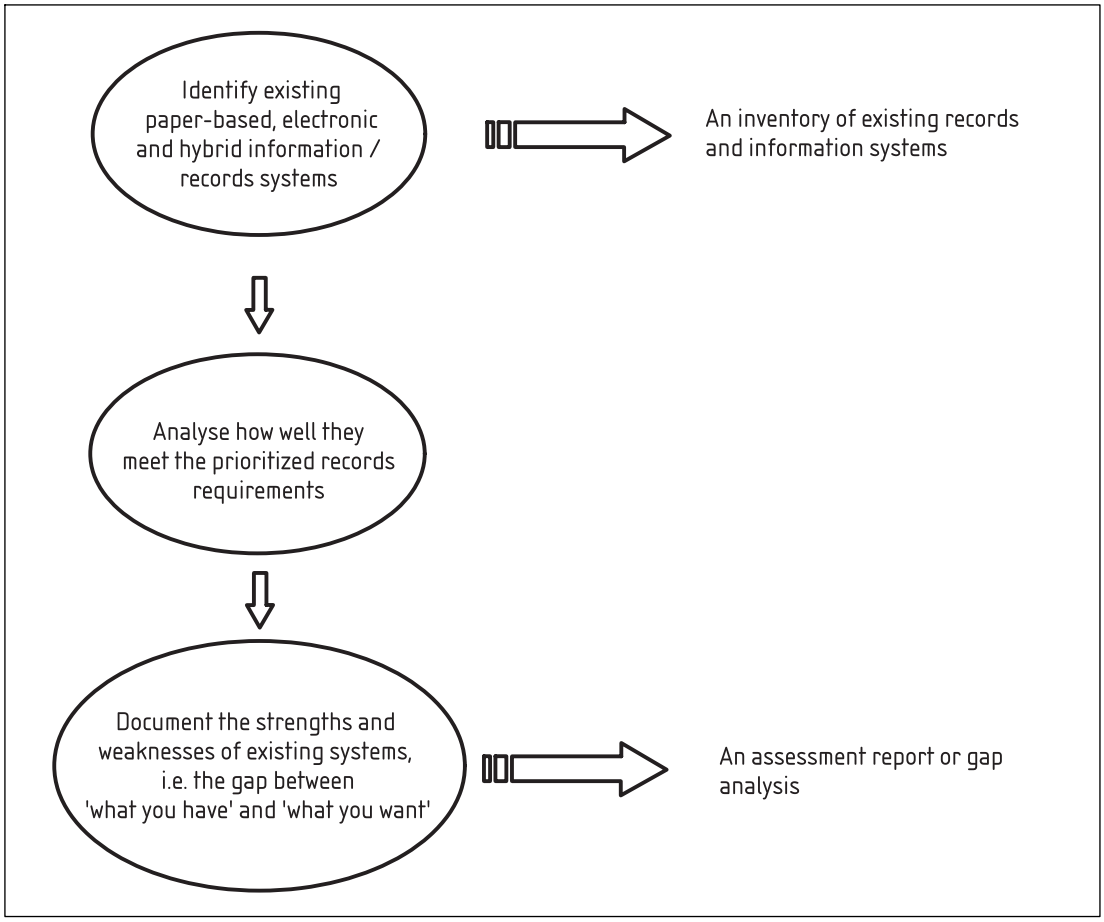

Figure 5. Flowchart of main activities and major outputs for step D: assessment of existing systems

[6] This is based on PD ISO/TR 15489-2:2001.

In preparing to complete step D there are two key areas to consider: how to make a survey of your organization's systems and how to conduct the gap analysis. Consider the following questions.

Has a survey of records/information systems been completed in the past and, if so, could it be used as it stands or as a basis for updating?

Do you have a survey technique you can use? If not could you adapt one which is publicly available? The The National Archives has recently published one for electronic records collections but it could be adapted to cover all records and information systems and simplified depending on your context [8].

Do you or does anyone else in the organization have any practical experience of conducting gap analyses?

How can you conduct a gap analysis in a simple but effective way? Can you turn your requirements list from the last step into a series of questions to which the answers would be either Yes, No or In Process?

Are there any other methods you could adopt to assess how well your organization's records and information systems meet its records requirements?

Section D.4.2 of Part 2 of the DIRKS Manual [2] provides an example of how to approach a gap analysis.

Step E: identification of strategies for satisfying records requirements

> *Identify strategies for satisfying records requirements, which may include adopting policies, standards, procedures and practices, designing new systems and implementing systems in a way which satisfies a requirement for records. Strategies may be applied to each records requirement separately or in combination. Strategies should be selected on the basis of the degree of risk involved through failure to satisfy a requirement, either within the business function which the records system is intended to support, the existing systems environment or the corporate culture in which the strategy should succeed.* See BS ISO 15489-1:2001, **8.4**.

The main activities and major outputs of this step are shown in Figure 6.

The purpose of this step quite simply is to:

- determine the most appropriate policies, procedures, standards and tools for your organization to use to satisfy its requirements for creating, capturing and maintaining records.[7]

The main 'strategies' (sometimes confusingly referred to as 'tactics') suggested in the DIRKS methodology are the use of:

- policies, i.e. statements of intent;
- designs, i.e. the specification of system functionality (especially IT based systems);
- implementation tools, i.e. practical solutions to help the records creators and users (e.g. the configuration of the electronic system, the design of directory structures and file plans, or tips and guidelines on using systems, for instance email systems);

[7] This is based on PD ISO/TR 15489-2:2001.

- standards which can relate to any and all aspects of a records system, from training to documentation to storage conditions and formats, etc.

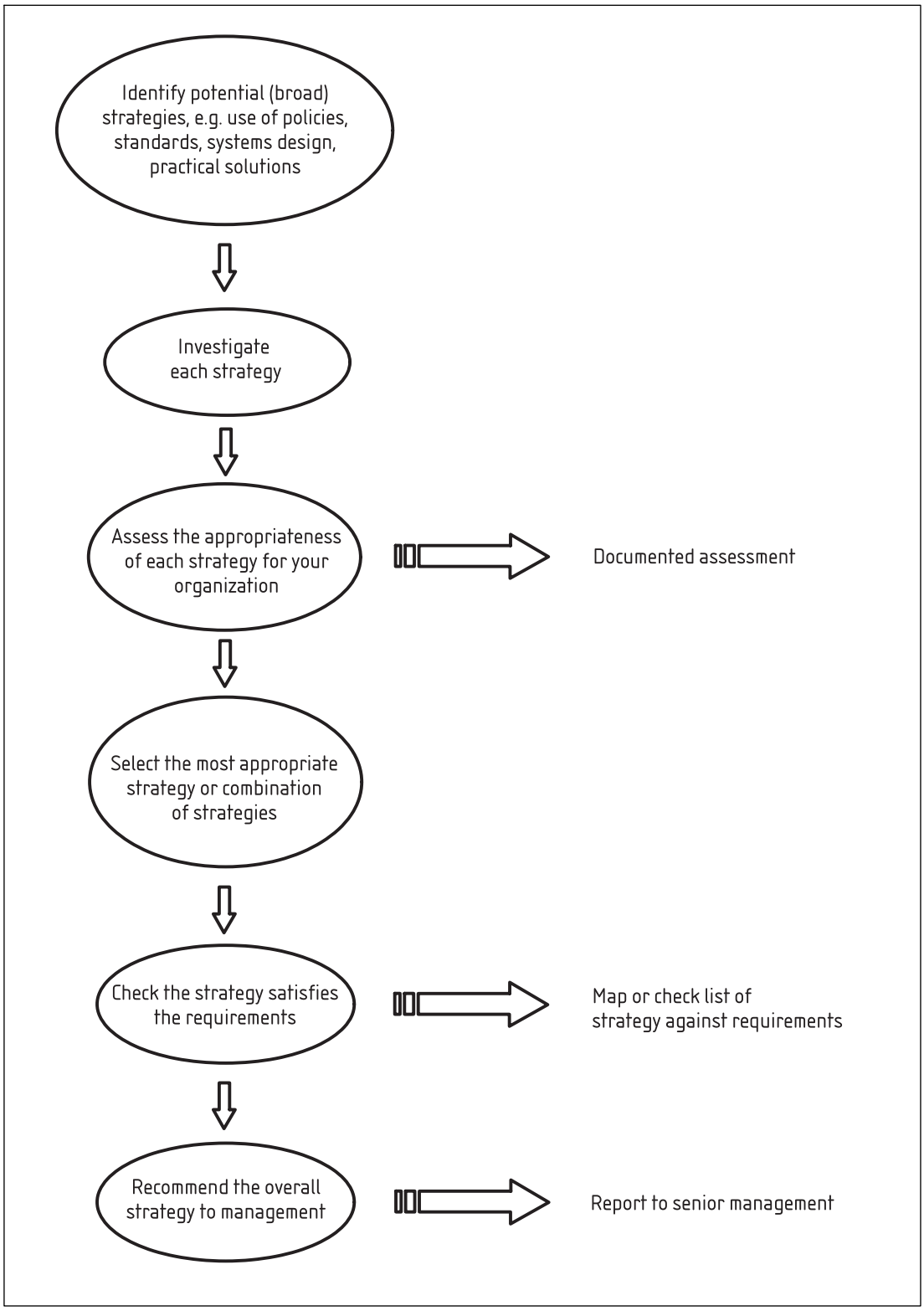

Figure 6. Flowchart of main activities and major outputs for step E: identification of strategies for satisfying records requirements

Your choice of one or more of these strategies will very much depend on your organization's culture and the sector in which it operates. If you operate in a heavily regulated environment, then the use of policies and standards will be common and you may consider it to be the most likely to succeed for records systems. If your organization provides its employees with a reasonable degree of autonomy and freedom, then relying on people to adhere to records policies may not be a successful strategy. If the organization is very IT based, then designing the requirements into the electronic records systems may be preferable.

Thinking about your organization's culture and operating environment which one or combination of strategies, do you think, is most likely to succeed?

Would different strategies work for different functions or parts of the organization?

Now it is time to turn to designing the systems.

Step F: design of a records system

> *Design a records system which incorporates the strategies, processes and practices described in this International Standard; ensure that the records system supports, and does not hinder, business processes; assess and, if necessary, redesign business processes and operational business and communication systems to incorporate records management.* See BS ISO 15489-1:2001, **8.4**.

This is potentially a rather large step and you would be perfectly entitled to question whether this was not in fact the whole purpose of the exercise. In fact this step in essence is concerned with taking the strategies and requirements identified in earlier steps and converting them into what might be described as a 'blueprint' or plan for the records system(s). Potentially the step comprises a lot of significant activities and outputs. Figure 7 shows the likely major ones but it is important to note that you may not find all of them are applicable, depending on the strategies and tactics you have chosen. Also, the activities do not have to be conducted sequentially or in the order shown, hence the use of double-headed arrows. In practice, the way in which you conduct this step is most likely to be influenced or constrained by your organization's general approach to systems development and/or change management.

The purpose of this extensive step is to:

- convert the strategies and tactics selected in step E into a records systems plan;
- ensure the plan for the records systems meets records requirements identified in step C and current system deficiencies identified in step D.[8]

Clearly this is one of the steps in which it is essential to involve the users of the systems, particularly in terms of getting their input and assessment of the design. Remember the design might be for a new and extensive electronic system to support a complex administrative function or for a simple but necessary series of electronic templates for claiming expenses. Either way user input is vital if the system is to meet their operational requirements, irrespective of the broader records requirements, and ultimately be implemented successfully. But other expertise will be required to complete this step including records management, IT, modelling and analytical skills as well as knowledge of the relevant business areas and operating frameworks (e.g. law).

[8] This is based on PD ISO/TR 15489-2:2001.

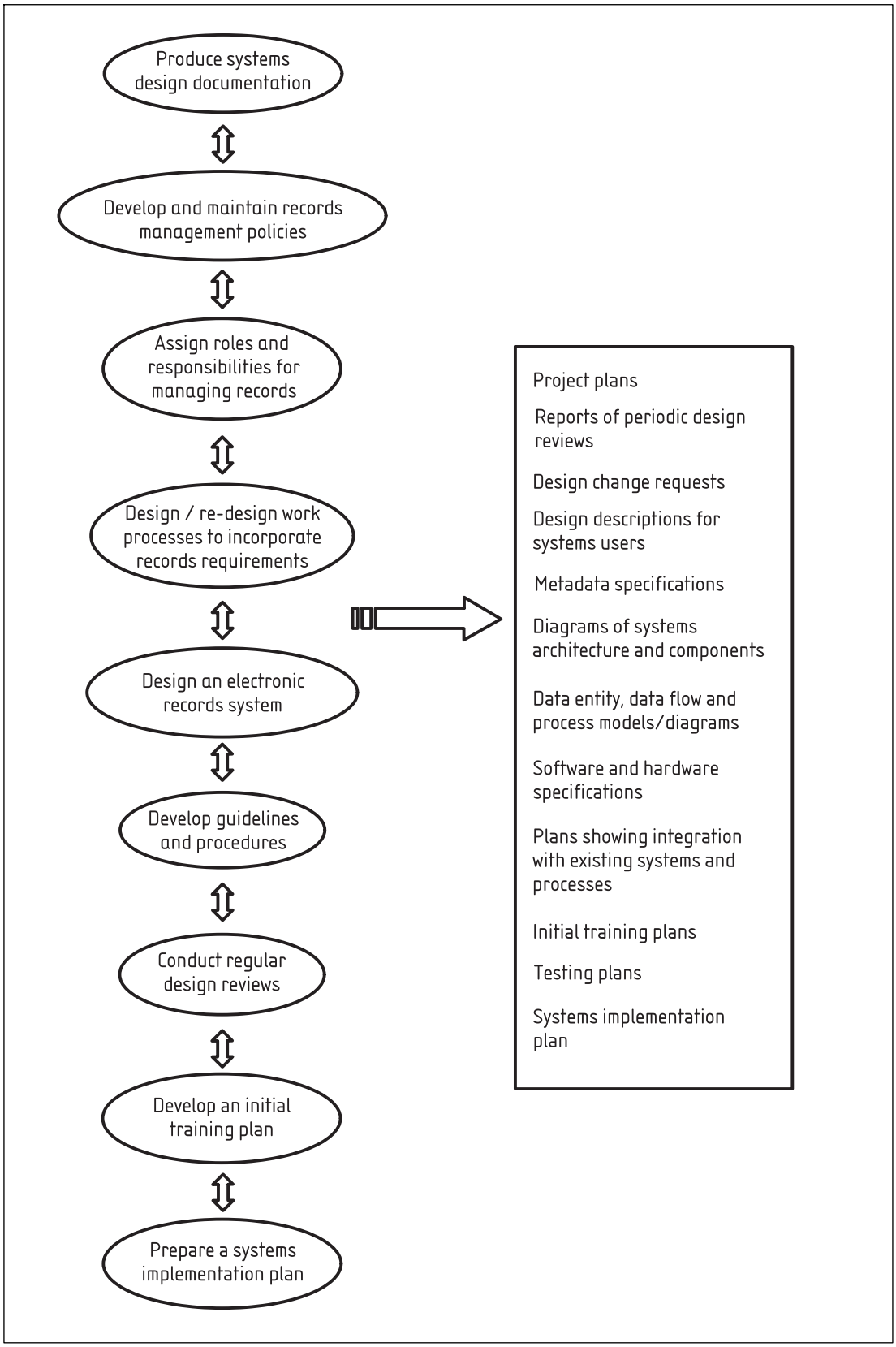

Figure 7. Flowchart of main activities and major outputs for step F: design of a records system

In the context of systems analysis and design, which is what this step is effectively concerned with, consider the following questions in the context of your organization and your thoughts on the previous steps in the process.

Does your organization take a particular approach to systems analysis and design?

Are there any constraints regarding systems design within which you need to operate (e.g. relating to any external authorities)?

At this stage, with your initial thoughts on the scale of the records system design you might face, do you feel you have all of the likely expertise within the organization? If not, what expertise might you need to seek from elsewhere?

Do you feel you need to develop your knowledge of systems analysis and design?

If the answer to the last question was 'yes' then, in addition to any expertise you have access to, there are many articles and books available on the subject. A few are given at the end of this guide in the further sources of information.

And finally, before moving on to the next, it is worth noting that one of the challenges of this step is to decide when the design stops and the implementation begins. In striving for the 'perfect' system there is a danger that no system will ever be implemented, so a decision should be made to stop reviewing and refining the design and start implementing, which is, of course, the next step.

Step G: implementation of a records system

> *Implementing a records system should be undertaken systematically using project planning and methodologies appropriate to the situation and with a view to integrating the operation of records systems with business processes and related systems.* See BS ISO 15489-1:2001, **8.4**.

Although this is not the final step in the process (the final step relates to post-implementation), it is the step in which the plans come to fruition and the system is implemented. If the records system is a major one and complex then there are potentially a lot of outputs from this step but there are fewer main activities as shown in Figure 8. Of course for a relatively small system, such as a single office filing system, the scale of this step may be quite modest.

The rather obvious purpose of this step is to identify and implement an appropriate mix of strategies to implement your plan from the previous step.[9]

No amount of work expended on the preparation, planning and design stages is likely to compensate for poorly executed implementation. This can make or break the system. In thinking about this step, identify two examples of systems implementation of which you have been a part, either as a user or as a member of the project team. One should be an example of a very successful implementation and the other of a less successful, but hopefully not disastrous one.

[9] This is based on PD ISO/TR 15489-2:2001.

What was it that made the successful implementation a success?

What could have worked better with the less successful implementation?

What lessons can be learned from these examples that can be built into this step of the process?

Some of the reasons for success and particularly 'failure' are not within your control – perhaps a sudden change of requirements due to unforeseen circumstances, a sudden change of personnel, or a major organizational change such as a merger. But, in addition to all of the careful systems design and planning of the earlier stages, perhaps the most important factors contributing to successful implementation relate to people and project management. Clearly, managing the project throughout is important if milestones and expectations are to be met. But managing the change that will result from the system is crucial and communication and training will be key tools for change management. These issues are addressed in earlier steps and communication will need to begin when the process begins. But they are particularly important as the implementation stage arrives. Were these issues amongst your success/failure factors above?

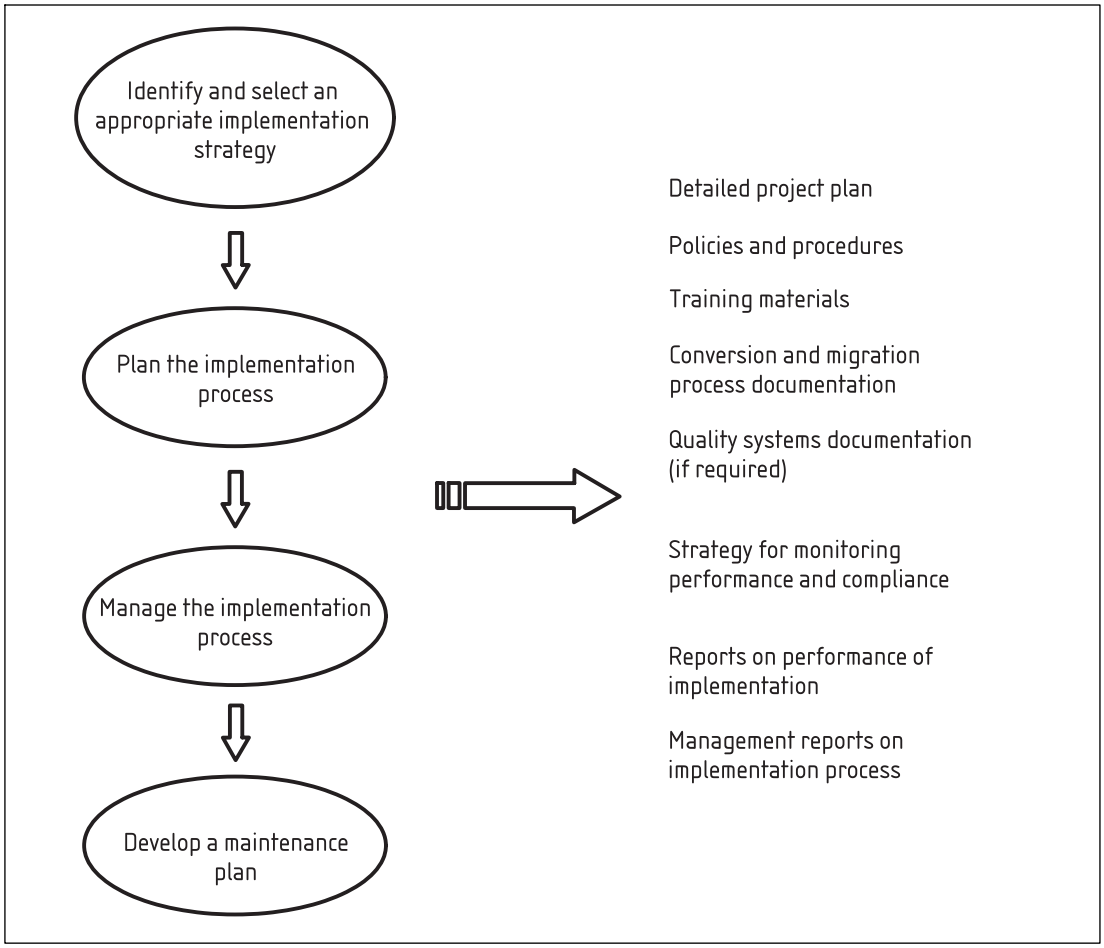

Figure 8. Flowchart of main activities and major outputs for step G: implementation of a records system

Step H: post-implementation review

> *Gather information about the performance of the record system as an integral and ongoing process. This may be undertaken by interviewing members of management and key employees using questionnaires, observing the system in operation, examining procedures manuals, training materials and other documentation, and carrying out random checks on the quality of records and control measures. Review and assess the performance of the system, initiate and monitor corrective action and establish a regime of continuing monitoring and regular evaluation.* See BS ISO 15489-1:2001, **8.4**.

There is one final and vital step in the process and that is to review the system implemented and to measure its effectiveness, evaluate the efficiency of the design and implementation process, and recommend and implement any improvements. The main activities and major outputs of this final step are shown in Figure 9.

The purpose of the final step is to:

- measure the effectiveness of your records system(s);
- evaluate the efficiency and appropriateness of the process adopted for developing the system(s);
- recommend and implement improvements;
- establish a monitoring system.[10]

A newly implemented system should be reviewed to measure its effectiveness against your organization's requirements, and the business drivers for the system. Depending on the nature and extent of the system this evaluation may be qualitative, seeking so-called 'soft' measurements such as users' opinions, or it may be quantitative, seeking 'hard' measurements, such as retrieval times and actual usage, as in the case of a new IT system. In the latter case it may also be possible to measure automatically some aspects of performance using, for example, system logs.

One aspect of review, which is sometimes overlooked, is the efficiency of the design and implementation process (i.e. the project) itself. This type of evaluation can provide important input for the next time.

Does your organization have a preferred approach to post-implementation systems review? Do you use any standard measures or indicators for evaluating system performance (e.g. usage, speed of retrieval)?

If the answer to either or both of these questions is yes then a suitable framework may be readily available for this final step or at least a starting point. If not, then BIP 0025-3:2003 should be useful.

[10] This is based on PD ISO/TR 15489-2:2001.

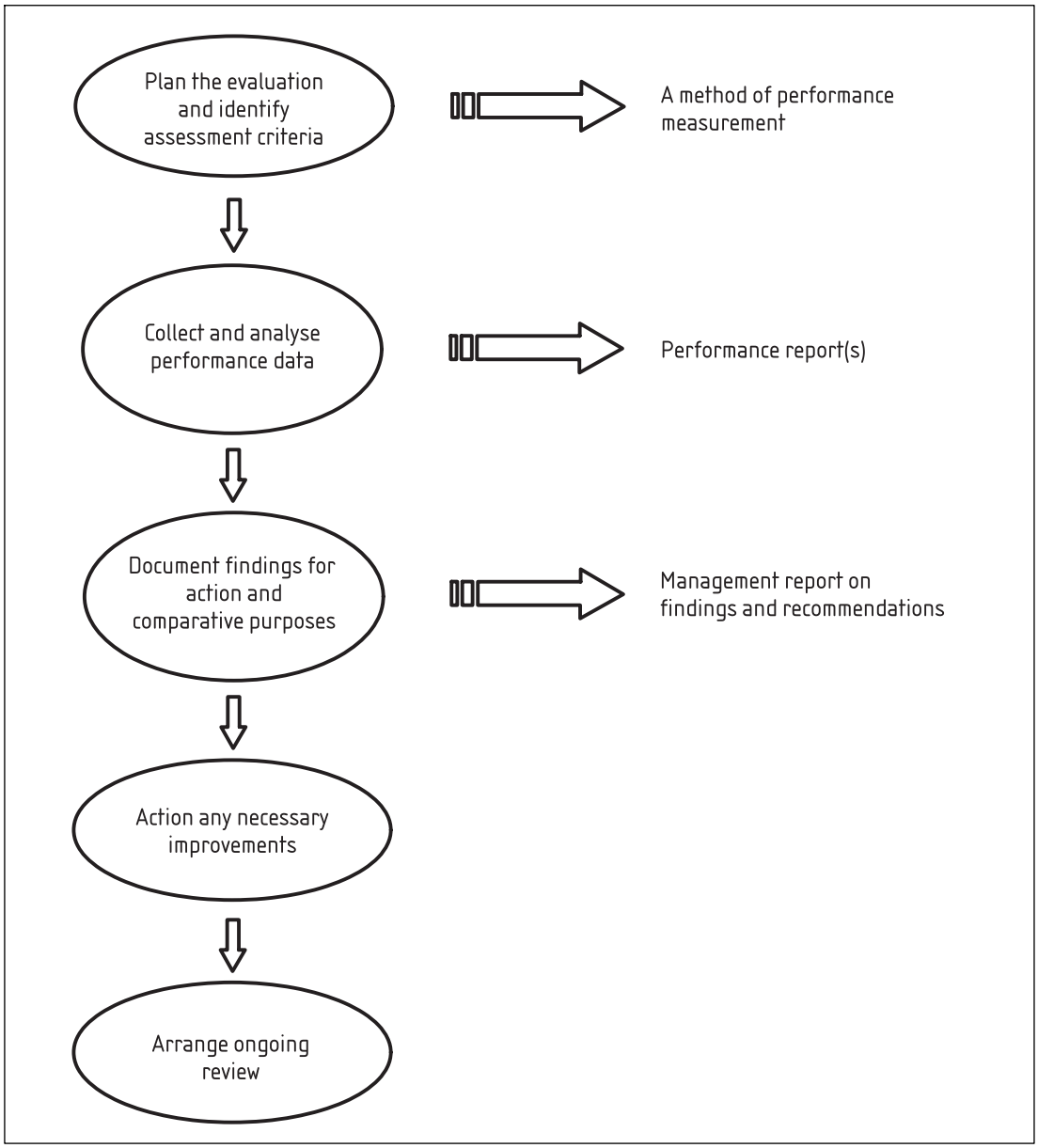

Figure 9. Flowchart of main activities and major outputs for step H: post-implementation review

3.7 Summary of DIRKS

Having stepped through the entire DIRKS process on paper, its content and philosophy should be clear. DIRKS is a detailed approach but its strength lies in its basic rigorous framework and discipline. You can therefore adopt the eight steps at the level of detail appropriate to your organization's situation and utilize some of its flexibility in terms of the choice of starting point. Even with the simplest of systems all of these steps, or parts of them, will need to have been completed, no matter how quickly and easily that is done in practice. And the reason for this is that the methodology is based on sound principles and makes sense.

4 Tools for managing records

4.1 The range of tools

BS ISO 15489-1:2001, clause **9** identifies a selection of key tools or instruments which support 'records management operations', i.e. the management of records in practice. Some of these are specific to records management and others, such as business risk analysis, are not.

The three main records management specific tools are:

- a business activity classification scheme;
- a records retention/disposal schedule;
- a security and access classification scheme.

Two additional tools, used for indexing records, are:

- a thesaurus;
- a glossary or list of authorized terms.

This section of the guide briefly explains each of these tools and attempts to highlight their potential value and the pros and cons of employing them, in order to help you make a decision about which ones are most relevant in your organizational context.

4.2 Business activity classification schemes

A business classification scheme is simply a map of the functions and activities of an organization, i.e. what the organization does to achieve its goals. This is subtly but distinctively different to an organization's structure (i.e. how it is organized to achieve its functions and activities), although there may be some overlap. For example, in a university the main functions may be education, research, consultancy and administration. Activities associated with education will include teaching and assessment. However, a university will not be structured such that there are education and research departments. It is more likely to be structured on the basis of faculties relating to specific subject areas in which all of the main functions (education, research, consultancy and administration) take place.

A business classification scheme that is based on an organization's functions and activities is far more stable than one that is based on its organizational structure, which can be relatively dynamic! Such a classification scheme can be used:

- to identify groups or classes of records since they are the output of business activities;
- to develop paper or electronic file plans and directory structures;
- as the basis for titling and indexing records;
- to apply retention periods;
- to determine storage and protection requirements; and
- to facilitate access and use.

Given the range of applications of a business classification scheme it is a potentially very valuable tool for managing records. In practice, the decision is less about whether or not to develop one and more about the level of detail required from the scheme. But even a macro level scheme can be very useful.

4.3 Records retention/disposal schedules

The records retention or records disposal schedule has long been regarded as the key records management tool. In essence it is a list of which records need to be retained and for how long and what is their ultimate fate, i.e. destruction or permanent retention. The list can be a simple paper or electronic document or a sophisticated database and may be structured using a business classification scheme. Versions of the schedule should be approved to ensure its status. In the paper environment the decisions about retention, which are captured in the schedule, are applied to paper records at the relevant point in their life. In the electronic environment the decisions can be applied (or attached) to the records at their point of capture into the recordkeeping system.

The value and need for a retention or disposal schedule or system is clear. It documents agreed decisions and the rationale behind those decisions. But on its own it is not sufficient. It should be supported by procedures to ensure its systematic implementation.

4.4 Security and access classification schemes

The purpose of such a classification scheme is self-evident – to protect the information contained in the records and to determine access rights to people according to their roles and responsibilities. The value of such a system is also self-evident, i.e. protection against disclosure, personal privacy, confidentiality, misuse, deletion and destruction, as well as amendment.

In organizations which are relatively large or complex in operation, the process of developing and maintaining a robust security classification scheme can be a significant undertaking. You need to consider whether a fairly limited set of classification categories can be applied to any group of records (e.g. unrestricted, confidential and secret) and then cross-matched with roles and responsibilities within functional areas.

It may be that a more sophisticated scheme is required to meet legal and business requirements, based on an analysis of risk.

4.5 Thesauri and lists of authorized terms

Thesauri and lists of authorized terms, sometimes referred to as authority lists or subject headings, are tools which help to control the vocabulary or terminology used to describe records and business functions and activities. So, for example, what one part of an organization might refer to as a 'client file' another part might refer to as a 'customer file', when in fact both types of record are identical in terms of the way we need to manage them. Using a thesaurus or an authority list, i.e. a list of allowed or acceptable terms, would avoid the use of both terms and force the use of the preferred one.

The difference between these two tools is in their detail and structure. An authority list is simply a list of allowed terms which controls the use of:

- synonyms, i.e. different words which have the same meaning such as toilet and lavatory;
- homonyms, i.e. words which are the same but have different meanings such as cookies – biscuits or software macros,
- abbreviations, i.e. iv or intravenous;
- acronyms, i.e. ISO or International Standards Organization.

In addition to controlling these aspects of terminology a thesaurus also identifies links or relationships between different terms and guides users to the appropriate or alternative terms to use. These links include:

- hierarchical relationships, e.g. optical disks, DVD and magnetic tapes are all examples of digital storage media;
- semantic relationships, i.e. the homonyms, abbreviations and acronyms mentioned previously;
- equivalence relationships, i.e. the synonyms identified above; and
- associative relationships, e.g. teaching is associated with learning but one does not (necessarily) infer the other.

Both tools can be extremely useful, although the development and maintenance of a thesaurus is usually a significant activity and often only cost effective for large and complex organizations with the need for tight control. An example is *Keyword AAA: Thesaurus of General Term*s [9], which has been developed for classifying and indexing common administrative records. Authority lists, however, are less challenging to construct and may cover employee names, project names, functions and activities. They are particularly useful in the context of indexing and attaching metadata to records.

5 Action plan

Annex A of this book is a summary, in the form of a series of checklists, of what needs to be done and how to do it. It is intended to form the basis of an action plan for implementing BS ISO 15489-1:2001 within your organization.

The first checklist is concerned with the 'big picture' and is top-level. It should help to set some of the boundaries for the work. You might also find it useful either to ask other selected colleagues to complete it and share their opinions, or to complete it yourself and use it as the basis of an initial meeting with others about implementing BS ISO 15489-1:2001. Inevitably you will consider the items covered in this checklist in greater detail later but, at this stage, the aim of the checklist is to try to set some initial targets for the project.

The remaining checklists relate to each of the steps in the DIRKS methodology. They summarize the main activities of each step and provide suggestions as to how they might be achieved. They are not detailed, they are simply meant as an aide-memoire and could be extracted, as appropriate, into your project or action plan. They will draw on your answers to some of the questions already asked. Because it is unlikely that you are beginning with a blank sheet of paper, there is a column in which you can assess where you are with that step using a simple scale (in place or completed, in preparation, or to do). Further sources of information to help with the different steps can be found in the appendixes of Part 3 of the DIRKS Manual [3] which contain very useful guides, practical advice and examples.

Good luck with the implementation!

Annex A (normative)
Checklists

Initial checklist

Which overall approach?

*Look back at **3.3** of this guide and decide on your overall approach.*

What are the priorities?

Within this overall approach note any particular priorities, e.g. relating to areas of forthcoming legislation.

Who will be involved and what will be their main responsibilities?

At this stage you may list individuals or simply roles; you may not be sure of the detailed responsibilities. But do consider who will lead the implementation and whether the resources will be mostly in-house or external or a combination.

What other resources will be needed?

List the types of resource if not the detailed amounts (e.g. money, space, time, equipment).

When will it happen?

What is the timescale for the preliminary investigation or the project itself (e.g. does it need to fit with your organization's planning cycle – annual, 3 yearly, other)?

Checklist for step A: preliminary investigation

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
A1. Identify the organization and its administrative context • consult annual reports, organization charts, policies.	
A2. Identify the regulatory and legal framework • consult policies, articles of incorporation, legal or governance function, other key personnel (e.g. health and safety); • use external electronic information systems (e.g. legal and standards databases and the World Wide Web, see Bibliography).	
A3. Identify the business context • consult company literature, use your own knowledge, consult key personnel to establish products, operating environment (including known changes) and stakeholder interests/issues.	
A4. Identify the corporate culture • consult current strategic business plans and/or annual report; • interview/approach relevant functions/departments for audit, compliance and risk management; • conduct a SWOT analysis of records systems by interviewing representative or key staff across main departments or functions; • consult IT department/strategy.	
A5. Validate your findings • consult a cross-section of staff at different levels and in different functions.	
A6. Prepare report/business case to senior management The precise nature of this report will depend on the context in which the preliminary investigation was undertaken and the support already secured. It may simply be an overview (with priorities highlighted) or a recommendation for a specific project (large or small) and may be in the formof a feasibility study or a business case. DIRKS offers guidelines on preparing both of these. As a minimum it should include the following: • write a situation analysis summarizing the organization's core business functions, major stakeholders, role of records in supporting business and key legal/regulatory requirements; • list the strengths and weaknesses of current records systems (including commitment to records activities); • list opportunities and threats (including any business risks); • recommend options for improving records systems/management including the 'do nothing' option; include an estimate of resources required and project plan.	

Checklist for step B: analysis of business activity

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
B1. Identify the organization's broad functions or responsibilities • consult mission statements, organization charts, senior staff.	
B2. For each function identify the major activities or tasks • use internal telephone directories and job descriptions; • consult a cross-section of personnel involved in the function.	
B3. For each activity identify the associated transactions which generate or should generate records • consult personnel involved in the activity.	
B4. Identify the processes which cut across functional and structural boundaries • consider what processes you are involved in which are not specific to your function or department; • consult IT staff to identify electronic systems which support processes across the organization; • interview key staff across main departments or functions.	
B5. Create a hierarchical map of the organization's functions, activities and transactions (FAT) • utilize any hierarchical mapping such as organization chart software available.	
B6. Create a business classification scheme based on the FAT map • utilize examples in PD ISO/TR 15489-2:2001 and standard records management texts listed at the end (e.g. Parker [10]).	
B7. Map the processes with records inputs and outputs • utilize any in-house expertise on process mapping (e.g. from systems departments or quality departments); • utilize Morelli's process mapping approach [11]; • utilize any process or flowcharting software available.	

Checklist for step C: identification of recordkeeping requirements

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
C1. Identify the regulatory (i.e. accountability) requirements • identify published sources containing advice (e.g. Hamer [12]); • consult in-house legal experts; • consult other personnel in areas subject to regulation.	
C2. Identify the business (i.e. operational) requirements • consult policies, procedures, representative personnel.	
C3. Identify any society or community expectations • consult policy statements, mission, annual report; • consult liaison committees, public relations, advisors.	
C4. Document the requirements • choose a system for recording the requirements and their sources which can be maintained; • design or commission the design of the system if, for instance, it is a database.	
C5. Assess the risk of not meeting each requirement • conduct a risk analysis utilizing in-house expertise or one of the published risk assessment frameworks referred to at the end; • produce a risk assessment report with recommendations for meeting the requirements or not.	
C6. Gain approval for risk assessment recommendations and document the requirements to be met • submit risk assessment report to appropriate management; • document records requirements agreed to be met/not met and rationale.	

Checklist for step D: assessment of existing systems

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
D1. Identify existing paper-based, electronic and hybrid information and records systems • utilize one of the standard inventory or survey techniques (e.g. physical walk through work areas, questionnaire, interviews) [13] to [16]; • devise a system for capturing the results (e.g. a spreadsheet or database).	
D2. Analyse how well the systems meet the prioritized records requirements agreed in the previous step • devise a simple framework for making the assessment, preferably one which requires yes/no/in part answers; • conduct a gap analysis (a sample gap analysis can be found in Part 2 of the DIRKS Manual [2] Step D).	
D3. Document the strengths and weaknesses of existing systems • prepare the assessment report or gap analysis findings.	

Checklist for step E: identification of strategies for recordkeeping

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
E1. Identify potential (broad) strategies • list the suggested strategies from Section E.4 of Part 2 of the DIRKS Manual [2], i.e. policies, standards, systems design, practical solutions; • seek suggestions from peers, other relevant staff; • consult the records management literature.	
E2. Investigate each strategy • read relevant literature about their use; • seek input from colleagues who have utilized them.	
E3. Assess the appropriateness of each strategy for your organization • make a list of pros and cons of each strategy; • score each strategy against a set of appropriate criteria or factors which might hinder or help (e.g. resources required, likely acceptance, likely success rate, degree of difficulty, obligations).	
E4. Select the most appropriate strategy or combination • utilize the results of the previous step.	
E5. Check the strategy satisfies the requirements • produce a high-level cross-check against requirements identified in step C and gaps identified in step D, either in tabular form (with ticks and crosses) or diagrammatic form.	
E6. Recommend the overall strategy to management • write a report or proposal to management (using the appropriate in-house style) including a situation analysis, options, a summary of your assessment, and the recommendation and rationale – Appendix 9 of Part 3 of the DIRKS Manual [3], providing a guide to developing a business case, may be valuable at this point.	

Checklist for step F: design of a recordkeeping system

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
F1. Decide which of the activities listed in this step are required for your chosen strategy • check the list given in this step and add any others; • follow up on only these activities from the list below.	
F2. Develop and maintain records management procedures • consult any existing in-house procedures for guidance; • seek training and/or utilize in-house expertise on writing procedures; • use sample procedures from the internet or other external sources for guidance.	
F3. Assign roles and responsibilities for managing records • begin with the five categories of responsibility given in BS ISO 15489-1:2001; • negotiate with relevant personnel to assign named positions and individuals where required; • document and agree the roles and responsibilities.	
F4. Design/redesign work processes to incorporate records requirements • identify teams to complete this task; • support the work using processing mapping and workflow techniques; • ensure designs/redesigns are reviewed and evaluated by users.	
F5. Design and electronic systems • depending on the scale of this activity (probably significant) assemble a team to complete it; • consider off-the-shelf or out-of-the-box solutions as well as in-house or externally developed bespoke systems; • seek information on what solutions other organizations in your sector or elsewhere have adopted for similar situations.	
F6. Develop guidelines and procedures • identify what guidelines and procedures are required; • assign responsibilities for drafting them; • utilize any published guidelines/procedures as a basis and utilize in-house styles and formats; • pilot or text them with relevant personnel and revise accordingly.	
F7. Conduct regular design reviews • this step should be built into other relevant steps above and into the appropriate project plans.	

Checklist for step F: design of a recordkeeping system (continued)

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
F8. Develop an initial training plan • determine initial and subsequent training requirements (top level requirements); • consider different options and styles of training (face-to-face in groups, manuals, online help, help cards etc.) and find out what has worked well in similar situations in the past in your organization or others; • determine the content and who will deliver; • make it fun!	
F9. Prepare an initial systems implementation plan • build the preparation of this plan into the other activities in this step but complete it only when the other design elements have been completed; • produce high level plan showing how the relevant systems components fit together and what needs to happen when.	

Checklist for step G: implementation of a recordkeeping system

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
G1. Identify and select an appropriate implementation strategy • based on work done in step F and earlier steps decide what will be important for successful implementation, e.g. communication, training, regular review, support, documentation; • consult others involved in recent and successful implementation projects; • identify what has not worked well in the past and avoid using the same tactics; • consult system users.	
G2. Plan the implementation process • building on the initial plan from step F develop an appropriately detailed project plan for this phase including dates, resources, responsibilities and critical path.	
G3. Manage the implementation process • adopt standard project management techniques; • continue to communicate.	
G4. Develop a maintenance plan • identify an appropriate auditing and review process including frequency which is likely to be greater in the period immediately following implementation than later; • agree and document the process.	

Checklist for step H: post-implementation review

What needs to be done and how might it be done?	Assessment In place or completed/ in prep/to do
H1. Plan the evaluation and identify assessment criteria • determine what you need to evaluate, i.e. the scope of the evaluation – for example, will you evaluate both the solution (i.e. whether you 'did the right things') and the process (i.e. whether you 'did them right'); • decide which approach(es) to evaluation are appropriate based on in-house preferences, experience and suggestions in the literature (including Section H.4.1. of Part 2 of the DIRKS Manual [2] and BIP 0025-3:2003).	
H2. Collect and analyse performance data • agree the performance indicators and measures; • determine how the data will be analysed; • set up systems for collecting the data; • analyse the data.	
H3. Document findings for action and comparative purposes • present the analysis in an appropriate form; • share the evaluation with relevant parties; • identify actions; • compare evaluation at appropriate intervals.	
H4. Action any necessary improvements • determine how quickly action needs to be taken and resource implications; • implement high priority improvements and document; • record other improvements to be actioned at a later review date.	
H5. Arrange ongoing review • determine nature, frequency and responsibilities for review; • document the review process.	

Bibliography / References[11]

Standards publications

AS 4390-1/6:1996, *Records management*.

BS 7799-1:2000, *Information technology — Part 1: Code of practice for information security management*. [BS ISO/IEC 17799]

BS 7799-2:1999, *Information security management — Part 2: Specification for information security management systems*.

BS EN ISO 9000 (all parts), *Quality management systems*.

BS EN ISO 14001:1996, *Environmental management systems — Specification with guidance for use*.

BS ISO 15489-1:2001, *Information and documentation — Records management — Part 1: General*.

BIP 0025-1:2002, *Effective records management — Part 1: A management guide to the value of BS ISO 15489-1:2001*.

BIP 0025-3:2003, *Effective records management — Part 3: Performance management for BS ISO 15489-1*.

PD ISO/TR 15489-2:2001, *Information and documentation — Records management — Part 2: Guidelines*.

Other references

[1] National Archives of Australia. *DIRKS Manual*. Part 1. *The DIRKS methodology – a users guide*. http://www.naa.gov.au/recordkeeping/dirks/dirksman/dirks.html

[2] National Archives of Australia. *DIRKS Manual*. Part 2. *Step by step through the DIRKS methodology*. http://www.naa.gov.au/recordkeeping/dirks/dirksman/dirks.html

[11] Web addresses were correct at the date of publication.

[3] National Archives of Australia. *DIRKS Manual*. Part 3. *Appendixes*. http://www.naa.gov.au/recordkeeping/dirks/dirksman/dirks.html

[4] State Records New South Wales. *Strategies for documenting government business. The DIRKS manual*. State Records Authority of NSW, Sydney, Australia, 2003. http://www.records.nsw.gov.au/publicsector/DIRKS/final/title.htm

[5] National Archives of Australia. *DIRKS documentation database*. http://www.naa.gov.au/recordkeeping/dirks/database/database.html

[6] Handy, C. *Understanding organisations*. 4th ed. Penguin, London, 1993.

[7] The National Archives. *Records Management Standards. RMS 3.2 Business recovery plans*. PRO, London, 2000.

[8] The National Archives. *Developing an inventory of electronic records collections*. PRO, London, 2000.

[9] National Archives of Australia. *Keyword AAA: Thesaurus of general terms*. http://www.naa.gov.au/recordkeeping/control/keyAAA/summary.html

[10] Parker, E. *Managing your organisation's records*. Facet Publishing, London, 1999.

[11] Morelli, J. *Process-driven retention scheduling*. Records Management Bulletin, issue 94, 3-8, 1999.

[12] Hamer, A. C. *A short guide to the retention of documents*. 2nd ed. Institute of Chartered Secretaries and Administrators (ICSA), London, 1996.

[13] Orna, E. *Practical information policies*. 2nd ed. Gower, London, 1999.

[14] The National Archives. *Information surveys*. PRO, London, 1999.

[15] Thornton, S. Information audits. In: *Scammell, A (ed). Handbook of information management*. Aslib, London, 2001.

[16] New South Wales Office of Information Technology. *Inventory guideline*. http://www.oit.nsw.gov.au/pdf/4.4.15.IM_Inventory.pdf

Further information

Societies and organizations

ARMA (Association of Records Managers and Administrators) International, 4200 Somerset Drive, Suite 215, Prairie Village, KS 66208 USA. http://www.arma.org

National Archives of Australia. http://www.naa.gov.au

Office of the e-Envoy (Part of the Cabinet Office and supporting UK Government Online). http://www.e-envoy.gov.uk

The National Archives (Records Management Department), Kew, Richmond, Surrey, TW9 4DU, United Kingdom. http://www.nationalarchives.gov.uk

Records Management Society of Great Britain, Administration Secretary, Woodside, Coleheath Bottom, Speen, Princes Risborough, Bucks, HP27 0SZ, United Kingdom. http://www.rms-gb.org.uk

Society of Archivists, Office Administrator, 40 Northampton Road, London, EC1R 0HB, United Kingdom. http://www.archives.org.uk

UK GovTalk (Part of the Cabinet Office aiming to set standards for seamless e-government). http://www.govtalk.gov.uk

For legal requirements and regulations see for example:

BOPCAS (British Official Publications Current Awareness Service). http://www.soton.ac.uk/~bopcas

The Stationery Office website. http://www.hmso.gov.uk

UK OP (UK Official Publications). http://www.ukop.co.uk

For British Standards see the BSI website. http://www.bsi-global.com

Other web resources

National Archives of Australia. *Recordkeeping metadata standard for Commonwealth Agencies*. http://www.naa.gov.au/recordkeeping/control/rkms/summary.htm

University of Pittsburgh, School of Information Sciences. *Functional requirements for evidence in recordkeeping*. http://www.archimuse.com/papers/nhprc

InterPARES project. *International Research on Permanent Authentic Records in Electronic Systems*. http://www.interpares.org

Journals and other publications

Information Management Journal. Published monthly by ARMA International (see above).

Records Management Bulletin. Published bi-monthly by the Records Management Society of Great Britain (see above).

Records Management Journal. Published three times per year by Emerald, 60/62 Toller Lane, Bradford BD8 9BY. http://www.emeraldinsight.com

Asprey, L and M. Middleton. *Integrative document and content management: strategies for exploiting enterprise knowledge*. IGP, Hershey, PA, USA, 2003.

Hare, C. and J. McLeod. *How to manage records in the e-environment*. Europa, London, 2004.

Modell, M. E. *A professional's guide to systems analysis*. 2nd ed. McGraw Hill, London, 1996.

Shepherd, E and G. Yeo. *Managing records: a handbook of principles and practice*. Facet Publishing, London, 2003.

Sommerville, I. and P. Sawyer. *Requirements engineering: a good practice guide*. Wiley, New York & Chichester, 1998.

Sutton, M. J. D. *Document management for the enterprise: principles, techniques and applications*. Wiley, New York & Chichester, 1996.

About the author

Dr Julie McLeod, BSc, MSc, PhD, PG Cert University Teaching and Learning, MCLIP

Julie McLeod is a Senior Lecturer in the School of Informatics at Northumbria University, Newcastle. She joined the School in 1994 after a career in industry-based information, library and records management services, culminating with a management position in the pharmaceutical sector. Her teaching, research and consultancy interests are in records management and information storage and retrieval. She is also involved in a range of innovative training and education initiatives for records management, including the Lifelong Learning Award pioneered with BBC staff, the MSc in Records Management by distance learning, the rm^3 partnership delivering records management training and education to government and the AIIM IMUniversity programme. She has been a member of the BSI Committee which worked on ISO 15489, the first international standard on records management, since its inception and is a member of the associated ISO committee. She is co-author of *Developing a records management programme (Aslib Know How Guide)* and joint editor of the *Records Management Journal* and is currently conducting AHRB funded research into the impact of the standard.