About the draft 'DIRKS' Manual

The DIRKS methodology is an 8-step methodology to be used for the design or redesign of systems that create, capture and maintain records.

This draft manual seeks to expand on the methodology and explain how it can be used to design and implement best practice systems to ensure organizational efficiency and accountability. 'Systems' examined in this manual include the software and hardware components, but also policies, procedures, recordkeeping tools and strategies, and people.

The primary audiences for the manual are records managers, records management project teams and consultants responsible for designing recordkeeping systems or building recordkeeping functionality into existing systems.

Note: Supplementary material for the manual such as forms and appendices are still being revised and therefore are unavailable at present.

How to provide comments

This draft of the manual will be available for comment until .

We welcome feedback and comment from U.N offices and other interested parties. In particular, we would be grateful for tips, examples and case studies from practitioners with experience in implementing DIRKS or related IT projects.

Comments may be provided in any format and may be of any size, from a few words to many pages. You may wish to annotate printed sections and send them to us, or just write a short e-mail. It's up to you.

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Acknowledgement
This draft is based on an exposure draft released State Records Authority of New South Wales, Australia, in 2002, which was based on an earlier work developed by the State Records Authority of New South Wales, Australia and the National Archives of Australia. Permission to adapt their work is greatly appreciated.

**Introducing DIRKS**

Recordkeeping systems
Characteristics and functionality of recordkeeping systems
The DIRKS methodology and manual
Commencing a DIRKS project

**Recordkeeping systems**

Overview
What is DIRKS?
What is recordkeeping?
What are recordkeeping systems?
Many business information systems need to be recordkeeping systems

**Overview**

This section examines:
- what the DIRKS process is
- what recordkeeping is and how it should be achieved, and
- what recordkeeping systems are and why you need them in your organization.

**What is DIRKS?**

DIRKS is an acronym that stands for 'designing and implementing recordkeeping systems'. DIRKS is about building more efficient and accountable business practices through the design and encouragement of good recordkeeping across an organization.
The DIRKS methodology:
is a means of building good recordkeeping into your organization, through the design
and implementation of recordkeeping systems.

What is recordkeeping?
Recordkeeping is the making and maintaining of complete, accurate, reliable
evidence of business transactions.

Why is recordkeeping important?
Good business requires good recordkeeping. In complex business environments and
strict accountability structures, it is vital that the United Nations has the evidence
and information they need to drive and support its business operations.

What are recordkeeping systems?
Recordkeeping systems are business information systems capable of:
- capturing
- maintaining and
- providing access
to records over time.
Recordkeeping do not just have to manage records - they can perform other
business functions as well. Having the capacity to capture, maintain and provide
access to records is however crucial.

Components of recordkeeping systems
Recordkeeping systems are not simply software applications designed to manage
records. They are organised collections of:
- people
- policies
- procedures
- tools
- technology
- ongoing supporting education, and
- maintenance.
In combination, these combinations enable United Nations’ business to be adequately documented.

**Benefits of recordkeeping systems**

Recordkeeping systems that are based on a sound understanding of the United Nations’ business environment, legal needs and organizational requirements provide substantial benefits.

Recordkeeping systems:
- support better performance of business activities and better decision making throughout the United Nations
- enable the United Nations to comply with legal and regulatory requirements
- protect the interests the United Nations and the rights of its employees, clients and the public
- provide protection and support in litigation, including the better management of risks associated with the existence or lack of evidence of organizational activity
- support consistency, continuity, efficiency and productivity in service delivery, program management and administration
- produce dynamic, valuable information that can be fed back into business processes to continually improve, automate and facilitate these processes
- avoid the retention and clutter of ephemeral records, or the loss or inadvertent destruction of significant records, and
- enable management of records as an asset and information resource, rather than a liability. [1]

**Tip: Demonstrate tangible business benefits**

Using arguments that demonstrate tangible business benefits that can be obtained through better recordkeeping, may help to convince management and other staff about the importance of ensuring your office has the recordkeeping systems it needs to sustain its business activity.

**Many business information systems need to be recordkeeping systems**

There are a huge number of business information systems within the United Nations. Many of these systems will be used for information purposes only and these types of systems should not be the focus of your DIRKS initiatives.

Other business information systems, however, will be used to transact United Nations’ business. They will conduct significant transactions and your office will need a definitive record of these transactions. If your office needs to keep a record of its activities, it needs to ensure that the business systems that support these activities are capable of creating and keeping records.
Tip: Business systems can function as recordkeeping systems

It is important to ensure that relevant business information systems are actually able to function as recordkeeping systems - systems that are capable of producing and maintaining the information your department/section requires to sustain its business activities.

In many UN offices, business information systems that conduct significant business are not able to perform as recordkeeping systems. They have been introduced on an ad hoc basis, or without consideration of recordkeeping issues, and as a consequence do not manage, preserve and make accessible evidence of business operations.

Through not having recordkeeping systems, organizations can:

- place themselves at significant risk
- incur unnecessary expenditure, and
- deny themselves access to significant organizational information.

Example: Systems often do not include recordkeeping

The United Nations is increasingly doing business online. Many of the systems that are being developed include interfaces that allow clients to conduct business with UN electronically. Often recordkeeping is a neglected component of these systems. Systems are designed to allow easy access to UN services and to meet client needs, but frequently the recordkeeping requirements that should be incorporated into the systems are not accommodated.

As a result the systems may transact business, but they do not document or keep adequate records of this business.

The DIRKS methodology is a means of ensuring that business information systems are recordkeeping systems where appropriate or necessary.

Characteristics and functionality of recordkeeping systems

Overview
DIRKS builds recordkeeping systems
Characteristics of recordkeeping systems
Functions that should be performed by recordkeeping systems
What these qualities provide
Overview

This section examines:

- the qualities recordkeeping systems should have, and
- the types of operations they need to be able to perform.

DIRKS builds recordkeeping systems

The DIRKS methodology helps you to transform business information systems into recordkeeping systems that should be managing evidence of UN operations.

To operate effectively, recordkeeping systems have to meet a defined set of characteristics. These characteristics are summarized here to provide an overview of the types of qualities your recordkeeping systems should possess. These characteristics are revisited in Step D: Assessment of existing systems and Step E: Design recordkeeping systems, the sections of the methodology where you focus on transforming relevant business information systems into recordkeeping systems.

Characteristics of recordkeeping systems

Recordkeeping systems should possess the following characteristics, in order to produce and maintain authoritative records:

<table>
<thead>
<tr>
<th>The characteristic of...</th>
<th>Means that systems should...</th>
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</table>
| Reliability              | • routinely capture all records  
                          | • organise records appropriately  
                          | • provide adequate information about the records within them  
                          | • provide ready access to records and make records of system operation |
| Integrity                | • prevent unauthorised access, destruction, alteration or removal of records |
### Compliance
- be managed in compliance with all requirements that apply to the business documented within them

### Comprehensiveness
- manage all records resulting from the business activities that are documented or managed by the system

### Authenticity
- store records in ways that mean they cannot be tampered with, deleted inappropriately or altered

### Accessibility
- allow records to be shared as information resources across a work space, business unit or organization [2]

### Functions that should be performed by recordkeeping systems

In addition to having these characteristics, recordkeeping systems must be capable of performing a range of standard recordkeeping functions.

<table>
<thead>
<tr>
<th>The function of...</th>
<th>Means that systems should be capable of...</th>
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<tbody>
<tr>
<td>Registration</td>
<td>• capturing records by assigning them unique identities and attributing brief descriptive information to them, such as a title and date</td>
</tr>
<tr>
<td>Classification</td>
<td>• arranging records into categories based on the business activities they document, as a means of facilitating record control, retrieval, disposal and access</td>
</tr>
<tr>
<td>Indexing</td>
<td>• establishing access points to facilitate record retrieval</td>
</tr>
<tr>
<td>Access and security monitoring</td>
<td>• assigning and implementing rights or restrictions that protect records against unauthorized or inappropriate use or access</td>
</tr>
<tr>
<td>Tracking</td>
<td>• monitoring record use to ensure no inappropriate use occurs and an auditable record of use is maintained</td>
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</table>
### Disposal
- utilizing retention schedules, linking disposal periods to records, triggering any required disposal actions, reviewing any history of use to confirm or amend disposal status and maintaining an auditable record of disposal (retention, destruction or transfer) actions

### Storage
- appropriately maintaining records in consideration of their form, use and value for as long as they are legally required

### Searching, retrieval and rendering
- making records available as corporate information resources
- identifying and presenting records in response to user search requests and, where appropriate, enabling records to be printed on request

### Reporting
- generating any reports deemed necessary by the organization

### Additional requirements

<table>
<thead>
<tr>
<th>Recordkeeping systems should be capable of...</th>
<th>This involves...</th>
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</thead>
</table>
| Managing records in any form                  | • managing electronic records, scanned images, voice files, video clips, digital plans, databases, information from other applications etc.  
  • managing electronic signatures and encrypted records, where appropriate  
Some systems may only be required to manage records in one format, while others will need to be capable of managing multiple formats |
| Integration with electronic applications      | • integration with applications used for transaction of business (office utilities, e-mail, websites, database applications, workflow, etc) [3] |

### What these qualities provide
Developing systems that meet these criteria provides you with recordkeeping systems. These systems provide the structures and controls within which:

- accurate
- accountable and
- information-rich

records are created and maintained.

The DIRKS methodology and manual

Overview

What is the DIRKS methodology?
Where does DIRKS come from?
Implementing the DIRKS methodology
The DIRKS Manual

Overview

This section introduces the DIRKS methodology and the DIRKS Manual. It outlines the specific steps involved in the DIRKS methodology and explains where the methodology has come from. It also discusses the methodology’s flexibility and how it can be implemented in a variety of ways.

It describes the range of projects you can undertake using the DIRKS methodology and explains means by which you can implement DIRKS in your office.

What is the DIRKS methodology?

The DIRKS methodology is a structured process for designing and implementing recordkeeping systems.

DIRKS is not new. It is based on traditional system design methodologies, but has been adapted to meet recordkeeping objectives. DIRKS provides a structure for many of the traditional operations the United Nations has always conducted. It is not a new and daunting approach - it is a methodology based on traditional principles that is designed to help you achieve meaningful and applicable outcomes.

The DIRKS methodology:
Provides a comprehensive approach to system design that will help develop systems with adequate recordkeeping functionality that are specific to and that meet your particular business needs.

Steps in the DIRKS methodology
DIRKS is comprised of eight steps:

<table>
<thead>
<tr>
<th>Step A</th>
<th>Preliminary investigation</th>
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<tr>
<td>Step B</td>
<td>Analysis of business activity</td>
</tr>
<tr>
<td>Step C</td>
<td>Identification of recordkeeping requirements</td>
</tr>
<tr>
<td>Step D</td>
<td>Assessment of existing systems</td>
</tr>
<tr>
<td>Step E</td>
<td>Identification of strategies for recordkeeping</td>
</tr>
<tr>
<td>Step F</td>
<td>Design of a recordkeeping system</td>
</tr>
<tr>
<td>Step G</td>
<td>Implementation of a recordkeeping system</td>
</tr>
<tr>
<td>Step H</td>
<td>Post implementation review</td>
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</table>

**Summary of the steps in the DIRKS methodology**

The following table provides a summary of the activities involved in each step of the DIRKS methodology.

<table>
<thead>
<tr>
<th>In...</th>
<th>You...</th>
</tr>
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</table>
| Step A: Preliminary investigation | • collect information in order to identify the legal and structural characteristics of your department/section  
  • obtain an understanding of the factors that influence need to create and maintain records in your section  
  • establish an awareness of your organization’s business activities, technological infrastructure, major stakeholders and recordkeeping risks |
| Step B: Analysis of business activity | • identify and document your organization’s business functions |
| Step C: Identification of recordkeeping requirements | o activities and  
o transactions  
• determine how, when and where these are performed |
|---------------------------------------------------|------------------------------------------------|
| Step D: Assessment of existing systems             | • examine legal, business and other sources to identify  
the requirements for evidence and information (called  
‘recordkeeping requirements’) for your business |
| Step E: Identification of strategies for recordkeeping | • assess the systems currently used to perform business  
operations in your organization  
• identify where these systems are not meeting your  
recordkeeping requirements |
| Step F: Design of a recordkeeping system            | • determine strategies to enable your systems to meet  
recordkeeping requirements  
• choose strategies that fit with the culture and  
environment of your organization |
| Step G: Implementation of a recordkeeping system    | • design recordkeeping systems that incorporate your  
chosen strategies |
|                                                   | • ensure that all components of the new / redesigned  
systems function according to your requirements  
• educate staff about new systems  
• roll out technology  
• convert legacy data  
• manage change |
| Step H: Post implementation review                 | • gather information on the effectiveness of the  
recordkeeping system  
• survey or interview staff about the system  
• rectify any problems identified |
Where does DIRKS come from?


Implementing the DIRKS methodology

Flexibility of DIRKS

The DIRKS methodology is intended to be both scalable and flexible. In its implementation, DIRKS can be whatever you want it to be. Implementing the DIRKS methodology can be a multi-million dollar exercise, or it can involve a quiet afternoon's worth of reflection. DIRKS can also be used to fulfill a wide variety of business objectives.

For any DIRKS project, the methodology does not need to be done in a linear way, if this is not the most effective use of your time and resources.

Example: Non linear approaches

Although the steps are called A, B, C etc, you may choose to start with Step B: *Analysis of business activity* move on to Step C: *Identification of recordkeeping requirements* and then jump to Step F: *Design of recordkeeping systems*.

Depending on the nature of your project, it can also make more sense to work through some of the steps concurrently, rather than thinking of them as self contained, fixed points in a process.

Example: Some steps contribute to others

You may complete a lot of your Step C: *Identification of recordkeeping requirements* research during the course of your work on Step A: *Preliminary investigation* and Step B: *Analysis of business activity*.

You may find that DIRKS can be used to support a range of other business outcomes in department/section, in addition to the projects outlined above.

DIRKS and ARMS Requirements

The UN Archives and Records Management Section (ARMS) has not made the DIRKS process a mandatory requirement in the United Nations. It is rather a tool that can help you improve recordkeeping in your organization. This is an outcome that can
contribute significantly to business efficiency and accountability. In all, a wide range of business benefits can be obtained by implementing the DIRKS process.

**Skills and knowledge that will obtained by undertaking the DIRKS process**

DIRKS can be a challenging process, but its results can be incredibly rewarding, organizationally and personally.

Depending on the nature of your DIRKS project, people working through DIRKS will gain an excellent understanding of the business of your department/section, both in terms of its requirements and how it is conducted. They will gain experience in broad stakeholder consultation, become adept at listening to and responding to user requirements and will have concrete experience of change management. They will also have an excellent understanding of records management requirements and how these should be implemented to best meet organizational needs.

**Case studies and examples in the DIRKS Manual**

The DIRKS Manual has tried to incorporate a range of case studies and examples that illustrate how DIRKS can be applied in different ways to meet different objectives. Some of these are part of the text and some are provided on the Case studies page.

This manual provides a range of guidance about ways to follow the methodology. This advice is for guidance only - all recommendations provided can be adapted to suit particular projects or to help achieve specific outcomes.

A number of the case studies and tips provided are based on real life DIRKS implementations that have taken place internationally. A number of the organizations that have provided these case studies have been identified by name, while others remain unidentified at the request of the contributing organization. Other examples provided within the manual are fictitious, created to illustrate a particular point, or represent amalgamations of different stories.

**Commencing a DIRKS project**

Overview
Measure risk
Determine the scope of your project
Obtain senior management support
Plan for what you want to achieve
Establish a project team
Implement change management strategies

**Overview**
This section examines the different issues you need to consider when embarking on a project to improve recordkeeping in your department/section. It identifies:

- methods by which you can scope your project and determine what is attainable
- the importance of senior management support and means of attaining this
- the need for project planning
- the people you may need in a DIRKS project team, and
- the importance of change management.

Measure risk

Measuring the risks faced by your department/section as a result of poor recordkeeping is a useful way to commence your DIRKS project.

Risk management is a theme that runs through the DIRKS Manual. Risk management is ‘the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects’. [4]

DIRKS projects can be targeted and employed in your department/section based on the results of a risk assessment. For example, undertaking risk assessments may help your department/section to realize that recordkeeping is crucial to areas of your business that are subject to high degrees of risk and litigation. Other areas may have minimal amounts of risk associated with recordkeeping. You could therefore commence your DIRKS work in the areas that are subject to high degrees of risk and build good recordkeeping systems that will help you to manage and minimize this risk.

If you are measuring risk to help you determine where the DIRKS methodology can best be applied in your department/section, use the results of your assessment for a variety of purposes. For example, if you believe your department/section faces significant risks as a result of its current recordkeeping practices, your risks assessment results may make persuasive arguments for senior management and convince them to give support to your project.

Determine the scope of your project
Determine what it is that your DIRKS project needs to achieve. This objective will determine the scope of your project and the extent of the research you will need to undertake.

Are you seeking to build recordkeeping into an existing business information system? Do you want to build recordkeeping into a new business information system? Do you want to obtain disposal coverage for department/section? Knowing what you want to achieve will help you to decide whether you have to do research into:

- all areas of your department/section's operations
- a range of specific business activities, or
- one discrete area of business.

**Example: Proceed according to your scope**

If you want to improve or develop a specific system, you will need to analyze the business performed by this system and the requirements that come from this business. Your research is likely to be focused on one specific area.

If you want to develop an section-wide tool such as a retention and disposal authority, your assessment may need to cover your whole department/section to ensure that records generated by all areas of your operations are covered.

**Obtain senior management support**

A key component of successfully undertaking a DIRKS project is having senior management support for your initiative. This support will help to provide you with the staffing and financial resources you will need for your project and will also help you to obtain broader interest in and support for your project across the department/office.

It can, however, be difficult to convince senior management to allocate time to the consideration of records management issues, let alone fund the development of a new recordkeeping system.

If you are having difficulty communicating the importance of your recordkeeping project to your organization, you may choose to compile documentation which:

- demonstrates the interrelationship between recordkeeping and other strategic or politically important projects your organization is undertaking.

**Tip: Highlight interrelationships with other initiatives**

Many IT, e-commerce, digitization and knowledge or privacy management initiatives need to consider recordkeeping within their scope in order to be effective. Highlighting this, and the risks that may be faced if recordkeeping issues are not addressed may be useful for obtaining support.

- promotes the organizational efficiencies, in terms of staff time and financial benefits, that can be achieved through the implementation of a coordinated and effective recordkeeping system.
Tip: Promote organizational efficiencies
Efficient information retrieval, better availability of information to support business operations, appropriate and timely record destruction are key examples of improved efficiencies that you could highlight.

Tip: Develop a business case
Step A: Preliminary investigation discusses the development of business cases as a means of obtaining appropriate funding for your project. Developing a business case to promote your project even before it begins may be a useful means of ensuring you have adequate financial and organizational support.

Plan for what you want to achieve
Determine the specific objectives of your DIRKS project. Planning what you want to achieve will give you a model to follow during the course of your DIRKS project. Your planning documentation will change throughout your project, but it is important to establish and refine as you progress through.

Planning documentation can also be a means of selling your project to staff and management. Planning documentation can be in any form, depending on the requirements of your department/section or the nature of your project.

Example: Management plan
The Australian Broadcasting Authority, before it started its DIRKS project drafted planning documentation to identify exactly what it wanted to achieve. This was done as a means of gaining organizational support for the project. The officer coordinating this project said:

I found that I wanted to impress upon the organization at the start what they could realistically expect from me in 6 months. I also wanted to start winning a support base of my own within the organization and have a guide for prioritising my work. So I decided to do both a Management Plan and a Project Plan right at the start.

The Management Plan fulfilled the role of a business case in some ways. It gave the background of the project, described the methodology and detailed the aims, resources and milestones of the project as I envisaged them at that stage. I circulated it to senior management as a bit of a sales pitch and made a presentation to them based on its contents. I reported against the project plan on a weekly basis, and against the management plan at the end of each DIRKS step.

I did not stick to my plans entirely – in light of experience a number of things had to be revised and renegotiated. For example, I got involved
in a number of other records-related issues the organization was facing. However, it did give me a really good guide to ensure that I stayed on track and met deadlines. It did fulfil my other aim too, of exactly defining my role so people couldn’t expect unrealistic things of me.

The Management Plan from the Australian Broadcasting Authority is available as part of the Case studies to support DIRKS, available via the ARMS Intranet site. If you use any part of this plan please acknowledge the Australian Broadcasting Authority as the source.

**Establish a project team**

The nature of your DIRKS project, and the organizational resources that can be committed to it, will determine the number of people who will be involved in the project team.

Ideally DIRKS projects should be undertaken by recordkeeping and information management professionals with significant input from a range of other staff, whose make-up will depend on the size and nature of your organization.

**Use of internal staff or consultants**

It should be decided before you begin your DIRKS project whether your project team will be comprised of:

- internal staff
- consultants to the United Nations, or
- a combination of the above.

Anyone who undertakes DIRKS projects will require a good knowledge of how the United Nations functions and the business it undertakes. United Nations staff may already have much of this information or know where to access it. If consultants are undertaking a DIRKS project on your behalf, you will need to provide them with adequate background material to ensure they are able to quickly obtain an understanding of how your organization operates and the requirements it is subject to.

**Use of IT staff**

If your project will require the development of technological solutions for recordkeeping, it is important at the outset to include IT staff, system and network analysts and/or data administrators in your project team. You may have these staff internally or your department/office or you may choose to employ IT consultants to build the technical component of your recordkeeping system.
It is important that there is good communication between you and the IT staff working on your DIRKS project. The better the understanding between you, the better the systems that you will develop.

**Tip: Be realistic with people**

Let people who are part of your project team know what they are in for. Be honest about the situation and the work you will require them to do. Make sure they’re aware too of the benefits your project will bring to them directly in their specific role and the benefits it will bring to the United Nations as a whole.

IT staff may be able to help you to better understand the technical issues or concerns you come across in the course of your system assessments. IT staff may also be able to suggest useful technical solutions to problems you identify.

In return, you will be able to provide some valuable advice to IT staff during the course of your work together. Records and IT areas are working to resolve many similar issues and joint work is therefore of significant benefit to both parties.

**Tip: Develop initial training for the people you have chosen as part of your DIRKS team**

Provide members of your team, be they internal or contract staff, with a good understanding of your project and its desired outcomes.

Try to tailor the training you develop to the concerns and understandings of the people you will be working with on this project. For example, if you believe that your DIRKS project will involve detailed technical redesign of systems, tailor your consultation specifically to your IT staff, to try to ensure that you all share an understanding of the project and its desired outcomes from the start.

**Use of legal and auditing staff**

Internal legal and audit staff have a significant understanding of the legal and best practice requirements that affect your department/section. Establishing liaisons with these staff and including them on your project team could facilitate your analysis of legal and best practice requirements. It will also help to ensure that legal and best practice requirements are built into any recordkeeping systems you develop as part of your DIRKS project.

Legal and audit staff may also be able to promote your project and its benefits to other staff of the UN. As part of their brief to help ensure the appropriate transaction of organizational business, audit staff are frequently concerned with system specific issues, such as policy, procedures, back-up processes and data security. You may find that legal and audit staff share many of your concerns and may be key staff who
can help you achieve the goals you have set. Legal and audit staff may also be interested in any reports you generate and recommendations you make.

**Tip: Remember the importance of communication**
Try to include a number of people on your project team who have good communication skills and are able to sell your project.

**Use business experts**
The participation of business area experts and system users is vital to the design process, to ensure you develop a system that is useful and useable. Be sure to include relevant business area experts in your project team.

**Tip: Follow guidance on establishing business partnerships**
One of the products of an Indiana University project to evaluate the recordkeeping capacities of its business information systems is a paper by Philip Bantin, *Strategies for developing partnerships in the management of electronic records*. It discusses how partnerships can and should be made with a range of stakeholders, including audit and IT staff. [5]

**Implement change management strategies**
You need to consider change management before your DIRKS project begins. If you are planning a large and complex project, you will need to encourage staff involvement. This involvement will provide you with the information you need to undertake your work and will also make users more accepting of the outcomes and products you deliver.

**Tip: Use existing guidance to plan your change management strategies**
The Office of Information Technology, New South Wales, Australia, has published a Change Management Guideline which provides useful guidance about planning for change management.

Remember to encourage change management throughout your DIRKS project, not just at its beginning and end. There are a number of ways you can encourage change management in your organization.

**Use champions**
Using 'champions' can help you to help promote your DIRKS project and its objectives in the workplace. A champion is a person who can explain and promote your project to colleagues and who can assist you by providing advice and other forms of guidance.

Champions could include:
- senior managers with broad responsibilities for the areas in which your work is taking place
- IT managers, or
- other staff with influence in the areas in which you are operating.

**Use committees**

Establishing a committee within your department/section to help guide your DIRKS project and provide ongoing feedback and promotion can be useful.

There may also exist committee structures that you can leverage for this purpose. If you have hired consultants to undertake your DIRKS project, you could arrange regular committee meetings at which the consultants can report upon their progress and obtain feedback from a range of staff.

Another option is to form an information management committee.

<table>
<thead>
<tr>
<th>Information management committee:</th>
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<tbody>
<tr>
<td><strong>Objectives</strong></td>
</tr>
<tr>
<td>- a forum for:</td>
</tr>
<tr>
<td>o progressing and gaining consensus for your DIRKS project</td>
</tr>
<tr>
<td>o promoting an understanding of the technical and other detailed issues associated with the project</td>
</tr>
<tr>
<td>o maintaining an awareness of related developments in the UN.</td>
</tr>
<tr>
<td>o obtaining knowledge of organizational requirements and practices</td>
</tr>
<tr>
<td><strong>Membership</strong></td>
</tr>
<tr>
<td>- comprised of key representatives from your department/section who have an interest in improving information resources</td>
</tr>
<tr>
<td>- business unit managers in areas affected by your DIRKS project</td>
</tr>
<tr>
<td>- senior managers, if possible, to assist with decision making and resource allocation</td>
</tr>
</tbody>
</table>
Meetings

- should meet regularly (say every four to six weeks) to provide you with the advice and guidance you need

Consult regularly with system users

User involvement in your DIRKS project increases the likelihood that the system you develop will be successfully implemented. Users should therefore be consulted throughout about their requirements and asked to test solutions developed as an ongoing part of your system development work.

Example: Ways of communicating with users

One organization needed to develop a new recordkeeping system to support the needs of a broad business area. They did the following as means to inform staff of the changes they wished to make and to encourage feedback:

- established a user group comprised of representatives from each business unit to feed ideas from other staff into the development and implementation process for their new system
- created an information management steering committee which included senior management and staff with a vested interest in the project such as IT staff
- held briefing sessions for general staff at the commencement of the project
- held monthly updates for general staff and more detailed talks for particular groups
- provided continuously updated information material on the intranet, and
- issued monthly e-mail bulletins.

Build your work on prior experiences

Talk to people both within your organization and beyond it who have undertaken similar projects. See what knowledge and experiences you can use or draw from. Ask people to summarize some of the lessons they have learned in the course of project development and implementation. Even very simple comments or reflections may provide you with useful guidance for your project.

Example: Build on experiences

'Lessons learnt along the way include the desirability of securing support from all technical staff, a willingness to experiment, knowing that perfection may not be achieved immediately, and a leap of faith in the future of...technology.' [6]
Building on prior knowledge will save you from 'reinventing the wheel' and may help foster relationships that will be of mutual benefit throughout your DIRKS project. Talking to people about previous experiences may also guide you towards a range of documentation or other resources that will be of benefit to your project. It will also help you to avoid mistakes that others may have made before you.

**Undertake pre-DIRKS training for your staff to initiate change management**

Irrespective of whether your DIRKS project is led by internal staff or consultants, it will require the involvement and commitment of a large number of people. It is important at the outset to explain the objectives of your DIRKS project to these people, as a means of outlining what the project means and what it will require of them.

Explaining your project and its goals clearly and early will help people to understand its objectives and will encourage them to be more willing to commit their time and expertise to it when you:

- ask to interview them
- require them to review some documentation
- ask them to be part of a focus group, or
- present them with a brand new system.

Early involvement of a range of staff will help to initiate the process of change management in your department/section.

**Tip: Communicate widely**

Try to talk to as many staff as you can about your project. The more people who are aware of it at the outset, the better. More information will be available to you and people will be more willing to participate if they already know about your project and its benefits. You will also save a lot of time and effort during the course of your project if you do not have to constantly repeat your project brief and a statement of its benefits each time you want to seek the advice of someone new.

You can tell people about your project:

- in newsletters
- at staff meetings
- via an email circular or
- in special meetings you convene to tell people about your project and the types of contributions you would like them to make.

**Be aware that you may upset some people**
Depending on the scale and type of your DIRKS project, be aware that when you are developing your project team and consulting people about your project, you may be seen as 'treading on toes' or as interfering in another manager's business domain. You may also be seen as pushing the boundaries of records management, and invading another staff member's turf. You may find that you need to convince managers why you can or should examine and redesign 'their' work processes or 'their' systems.

Records management cuts across your department/office and so proposed changes to it, particularly radical ones, can inspire this reaction. To try and avoid such confrontations:

- talk openly and work collaboratively with people
- obtain senior management support for your project, as this will help to convince others of its value
- repeat your message and your goals and work with people, rather than against them in order to initiate the types of changes you desire
- use a range of other change management techniques to encourage support for your project and to enable the best organizational outcome.

Footnotes


[2] Many of these requirements are derived from ISO 15489, Records Management - Part 1: General, Clause 8.2.


Step A - Preliminary investigation

Collect information from documentary sources and 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 recordkeeping.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step A
Focus of Step A assessment
Sources for Step A
Making your DIRKS project feasible
Documenting your Step A research

Content and scope of Step A

Overview
Aim of Step A
Summary of Step A
Undertaking Step A
Why should you do Step A?
Relationship to other steps

Overview

This section is an introduction to Step A: Preliminary investigation. It:

- outlines the aim of Step A, and what it can help you to achieve
- summarises the major elements of Step A
- explains why it is important to undertake Step A for particular DIRKS projects
- indicates how Step A is scalable and when it is necessary to complete, and
- shows how Step A relates to the other steps in the DIRKS methodology.

Aim of Step A
Step A of the methodology is all about context. It involves gaining an understanding of the organization’s role and operations and an awareness of how recordkeeping is conducted.

**Summary of Step A**

This part of the methodology is designed to help you to understand:
- how recordkeeping fits within your department/section
- how recordkeeping interrelates with other business areas
- business needs you have to consider in your DIRKS project
- your recordkeeping strengths and weaknesses
- concerns or barriers to improving recordkeeping
- the regulatory or other requirements you may need to accommodate, and
- the requirements of stakeholder and other broad interest groups

For your project to be successful, you will need to consider all these different factors and build them into your project planning.

**Undertaking Step A**

Step A can be quite flexible in its implementation. It can be done as:
- an independent scoping or exploratory exercise to determine the feasibility or boundaries of your proposed project, or
- as the first point in your project to develop a recordkeeping system and/or recordkeeping tools.

**Tip: Scale your research to your project requirements**

The amount of research you undertake in this step will depend on the nature of your project, your level of corporate knowledge and the availability and currency of pre-existing reports on relevant facets of the organization.

External consultants unfamiliar with the United Nations are likely to draw heavily on source material during the analysis phase while you may tend to rely more on your own knowledge.

**Why should you do Step A?**

It is good idea to complete Step A for any DIRKS project you undertake. It is the information discovery and scoping step of methodology that provides the context that can help you to understand:
• how your project should be structured
• the factors it must consider in order to be successful
• the strategies that will be most effective in the organization
• the staff, technology and other resources you can draw upon, and
• the business and legal realities and constraints you need to be aware of.

The processes outlined in Step A are particularly important if you are going to
develop a business classification scheme and a retention and disposal schedule for
your department/section. Much of the information you will need for the development
of these tools will be identified in the Step A analysis.

You do not need to do Step A if you have a good idea of:
• your department/section's structure and the business activities it performs
• the regulatory environment and other requirements to which your
department/section is subject
• your department/section's technical infrastructure and corporate culture, and
• the risks that the United Nations' business environment is subject to.

**Relationship to other steps**

As stated, Step A, *Preliminary investigation*, is a useful step to undertake as an
introductory component of all DIRKS projects.

In addition, you can do much of the research required within other steps as part of
your Step A investigations. For example you can:
• gather and assess information to assist with Step B: *Analysis of business
  activity*
• pinpoint recordkeeping requirements to assist with Step C: *Identification of
  recordkeeping requirements*, and
• identify systems currently used to conduct business in your
department/section, to assist with Step D: *Assessment of existing systems*.

**Tip: DIRKS can be tailored to meet your needs**

DIRKS can be a very flexible process. It can be tailored to meet the specific needs of
your department/section and implemented in ways that suit the business practices
and operations.

**Focus of Step A assessment**

Overview
Know the scope of your project
Examine your business environment
Examine your corporate culture
Examine your stakeholders and their requirements
Examine your technical infrastructure

Overview

This section identifies the particular areas you should examine in your Step A assessment. It highlights the importance of examining your:

- business environment
- corporate culture
- stakeholders, and
- technology

to obtain a good understanding of your department/section and how it operates.

Know the scope of your project

When undertaking Step A, it is useful to know the scope of your DIRKS project as this will help to give focus and structure to your Step A analysis.

For example, if you are doing a DIRKS project that is focused on improving recordkeeping in one specific area of business, your Step A analysis will only be concerned with assessing and understanding this area of business.

Alternatively, if you are doing a broad DIRKS project that requires knowledge of all your department/section's business operations, such as the development of a whole department/section retention and disposal schedule, your Step A analysis will need to provide you with a good understanding of the broad business environment.

Examine your business environment

Irrespective of the type of DIRKS project you are undertaking, in Step A you need to examine your business environment. This will enable you to understand the factors that influence your organization's need to create and maintain records to support and sustain its business activities.

To understand your business environment you can examine:

The role and structure of your department/section, or the relevant section of the organization

- the organizational or workgroup structure
- the business functions and activities performed by your department/section (these will be examined and defined more closely in Step B)
- how it performs this business
- why it performs this business
Legal and best practice requirements

- the regulations that govern or affect the operations of the organization
- the business, social and ethical standards the community expects the United Nations to meet

Stakeholder influences

- the internal and external stakeholders whose interests your department/section must take into account

Case histories

- litigation or legal disputes the organization has been subject to
- the business, social and ethical standards the community expects the United Nations to meet

Recordkeeping practice

- how recordkeeping is undertaken
- critical factors affecting recordkeeping (this could include audits, court cases, new administrative requirements to keep records, introduction of new ways of doing business)
- critical weaknesses associated with recordkeeping (including business inefficiencies or losses brought about by poor recordkeeping)

Relationship to other United Nations offices

- identify whether other agencies report to your department/section
- determine whether your department/section oversees the performance or operations of other offices

Example: A DIRKS project focused on a specific area of business

If your DIRKS project is focused on improving how a specific business activity is performed, your Step A analysis could focus on:

- what regulations affect this activity?
- how is the business currently transacted?
- what are current recordkeeping practices and how are these helping or hindering business objectives?
- what systems are staff using?
- is this area of business subject to significant risk?
These and a range of other issues may be important to identify in order to give you the context and understanding you need to progress with your project.

**The case of shared or decentralized business**

In assessing your business environment, you may identify, or need to consider, whether your business shares any of its business functions with other offices or if it conducts its activities in a decentralized way.

In devolved decentralized business structures, the same business function can be shared between a number of sections or be undertaken in a variety of business locations. These types of arrangements should be noted in your preliminary analysis as they will affect the strategies you choose to improve recordkeeping in the latter steps of the methodology.

**Tip: Focus on business activities**

If you want to improve business practices in one specific business unit, it is important to keep your focus on the business activities performed by this unit. Business functions frequently cross across sections or organizational structures. If you keep your focus on the work this unit is doing, the activities it performs and the systems it uses, you will ensure that you consider all relevant areas in your assessment.

**Defining the scope of your organization**

Depending on the nature of your DIRKS project, it may be necessary in your preliminary investigation to determine the functional and administrative boundaries of your department/section. These boundaries can sometimes be hard to determine, particularly if your office carries out secretariat activities for and maintains records of advisory councils, committees or boards. Although these councils, committees or boards can be closely linked to your department/section and may have other staff members carrying out tasks for them, they may need to be regarded as separate bodies for recordkeeping purposes. Depending on the nature of your project, you may therefore have to exclude these separate sections from your Step A analysis.

**Examine your corporate culture**

The UN corporate culture is the set of values, attitudes and beliefs that are shared by the members of the United Nations. It emerges from long-established practices, procedures, structures and systems. Corporate cultures could be described as:

- hierarchical, meaning that it is tightly structured and well defined
- laissez-faire, meaning that it is unstructured and autonomous
• regimented, meaning that it is strictly controlled, or
• democratic, meaning that everyone has their say and more freedom is allowed in processes.

The United Nations may have one defining corporate culture, but different sections of the organization may have their own distinct cultures.

It is important to identify what your corporate culture is, as it may be affecting your recordkeeping practices and could influence your choice of strategies later in your DIRKS project.

Tip: Corporate culture can affect technological aspects of your project

The United Nations has strong corporate views about technology. There may be support for it; resistance to it or existing technology may be ignored completely. Be aware of your corporate attitudes towards technology as they may have an impact on any DIRKS project you undertake that has a technical dimension to it.

Examine your stakeholders and their requirements

Stakeholders are ‘those people and organizations who may affect, be affected by or perceive themselves to be affected by a decision or activity’. [1]

Internal stakeholders may include business units and employees of the United Nations. External stakeholders include clients, customers, public lobby groups, business partners, NGOs, regulators and those regulated by the organization.

It is necessary to consider the needs of internal and external stakeholders in your project. Depending on the nature of your project, in Step A it may be necessary to get an overview of your stakeholders and their requirements, if you feel that these will have a significant impact on your project and its outcomes.

Examine your technical infrastructure

If a key objective of your DIRKS project is to develop or implement new technical components of organizational systems, or if you think this may end up being a key focus, it is useful to get an overview of the technology and standards the United Nations uses in your Step A assessment.

At this stage you may want to ascertain:
• what range of systems are used, or used to transact the specific area of business you are examining
• whether your department/section has a strong commitment to electronic service delivery and e-business
• the functionality provided by your website and intranet
• networking capacities within the organization and those that exist between your department/section and others (such as agencies performing similar functions or other offices in yours)
• software used in the business area you are assessing
• the extent to which e-mail is used to transact business
• broad data management practices
• disaster management strategies, or
• compatibilities between office applications or systems.

Sources for Step A

Overview

Documentary sources
Interviews
Assessments and surveys
Still confused?

Overview

This section identifies the range of sources you can use in your Step A research.

Documentary sources

A number of key sources can provide a good starting point to help you understand your business environment, corporate culture, stakeholders and technical infrastructure.

Tip: Look for sources immediately relevant to your project
Try to use sources that are immediately relevant to your intended project.
For example, if a key objective of your project is to develop a business classification scheme, or a retention schedule for your department/section, examine:
• superseded classification schemes
• previous retention schedules and
• risk assessment activities,
all of which could have immediate bearing on your project.

Internal sources
Sources generated by your department/section which may be useful include:

- annual reports
- organizational charts
- strategic plans (e.g., corporate plans, business plans and related planning documents)
- policies and procedures
- your existing records
- publications targeting the interests of particular stakeholders, and
- media releases regarding the establishment and operations of your department/section.

Many of these sources may be accessible online through your internet or intranet facilities.

**Tip: Use of vision, mission and value statements**

Vision, mission and value statements may also provide useful information for analyzing corporate culture. They will help you identify the organizational goals and strategies that your project will need to fulfill.

Some of these sources can supply you with a very large amount of information about your department/section.

**Example: Annual reports**

Depending on the nature of your project, annual reports can be very rich sources, providing information on a department/office’s:

- current structure and business activities
- mission statement defining the boundaries of the department/section
- corporate objectives that define broad functional areas and descriptions of major programs and their budgets
- enabling decisions, resolutions, or administrative instructions which the organization, or your department/section administers
- external (to your department/section) requirements, such as reporting arrangements
- statistics relating to business activities
- powers and functions as required under the United Nations Charter
- an organizational chart
- structure, as represented by an organizational chart, and
• information management and technology requirements and plans.

External sources

There are many different types of external sources that will provide important contextual information. Some of the more important sources are:

• reports and guidelines issued by audit, complaints-handling or other investigative bodies, and
• standards, codes of practice and protocols that are relevant to your department/section’s business.

Interviews

A complete analysis of your organizational context will not be possible only from documentary sources. One of the most effective ways to obtain information about how your department/section functions and the requirements it has to meet is through interviews or discussion groups with appropriate staff. Interviews, particularly with long-term staff, can be a way to validate aspects of your work or to gain information you cannot obtain from documentary sources. One major examination of business practices determined that, for their purposes, ‘Interviews constitute, by far, the most important source of information’. [2]

If your project has an IT focus, talking with system administrators or IT managers may give you the concrete information you need to understand how business is currently conducted. Talking to staff that actually use business systems on a daily basis will give you a very hands on understanding of current systems and practices and their possible shortcomings.

You can also use interviews to help determine the list of sources you will examine in your preliminary assessment. Other people will have a range of ideas you can incorporate into your research plans. It may also be important to confirm with other staff that the sources you are using are current and of continuing relevance to your organization.

Tip: Schedule interviews effectively

You may want to obtain a large amount of information through interviews during the course of your DIRKS analysis. Given that the people you wish to interview are likely to have busy schedules, it could be beneficial to have one or two longer interviews, and discuss a number of points that may come out of your Step A, B and C research, rather than scheduling a large number of smaller meetings.

Assessments and surveys
If your DIRKS project is focused on developing a better business system or systems, you may want to include a survey or assessment of your current technical infrastructure in your preliminary assessment.

This assessment or survey should be very general and aim to give you a good understanding of your technical environment, its capacities and limitations. This form of assessment should be teamed with a series of interviews that will enable you to talk to IT and other staff about how business systems function in your department/section.

Step D: Assessment of existing systems is concerned with undertaking a more detailed assessment of business systems, in order to identify whether they meet your recordkeeping requirements. If you go on to do Step D, you can use this early assessment to initiate your Step D work.

**Tip: Liaise with IT staff**

If your DIRKS project is likely to involve a significant technological component, it is important now to begin to liaise with IT staff and other management representatives about your ideas, if you have not already.

Redeveloping business applications requires significant organizational support and the commitment of individual managers. It is never too early to start fostering this commitment.

**Still confused?**

If you are really stuck and do not know where to begin your Step A analysis, you could:

- start with the *Organizational Context Document*, provided as part of the DIRKS Manual. This document asks a range of questions about your functional area and can be used to structure your research or give you an indication of some of the broad areas you may want to investigate in order to understand how your department/section operates.

- start by reading your annual report. You'll find it a very rich source of information that will provide a useful overview of your department/office and its business functions. Check the library or website for a copy.

It is important not to get overwhelmed with your Step A research. Be aware that one or two key sources may provide you with the bulk of the information you need. For example, a General Assembly resolution or decision may provide an adequate summary of your business functions, your corporate plan will help you identify goals and strategies, while external standards governing the business area you are examining may provide you with the remainder of the contextual information you require.

**Tip: Use existing research**
Where possible, particularly if you are looking for a place to start, use existing research. If business process reviews, system reviews, audits or workflow analysis have been undertaken in all or in parts of the organization, make use of this documentation as it may provide you with much of the detail you need.

Making your DIRKS project feasible

Overview
Scaling back or extending your DIRKS project

Overview

After your initial investigations, your intended DIRKS project may seem either too overwhelming or may need to be extended to meet the range of needs you've identified. This section identifies how you can scale back or extend your project by using risk management or feasibility assessments.

Scaling back or extending your DIRKS project

Your Step A analysis could reveal that the project you wish to undertake is larger than anticipated and that the initial project brief can not be fulfilled with existing resources. Alternatively, your Step A overview may show that there is much to do, and your planned project should be extended. Two methods you can use to limit or expand the extent of your project are:

- using risk management techniques, and
- undertaking feasibility assessments.

Risk management

Risk management is a theme that runs through the DIRKS methodology. Its particular application in Step A relates to its value in focusing your analysis to those areas that pose a significant organizational risk.

For example, your preliminary investigation, intended as part of a major DIRKS project aiming to completely review how business is undertaken and documented in your department/section, may show that your focus is too broad in that it will require too many resources to complete. You can use risk assessment methodologies to identify the areas of your department/section that could pose a significant risk if poorly performed, and focus your reviewing efforts on these specific areas or functions. This can help either to scale back your assessment, but identifying what are business critical areas, or scale it upwards; by identifying the range of risks your department section faces through poor recordkeeping practices.

Feasibility assessments
Feasibility assessments involve determining the feasibility or viability of your intended project. They generally involve assessing your project to determine its:

- operational need
- financial value, and
- technical practicality

Using these criteria will help you to determine whether your project is a realistic and viable option for your department/section.

**Operational feasibility**

To determine whether the scope of your intended project is operationally feasible, you should look at:

- timetabling and scheduling issues to determine whether staff have time to commit to the project
- corporate culture to identify whether the changes you wish to make will be adopted and adhered to by the United Nations
- management support for improved recordkeeping, to determine whether adequate resources will be made available to help you achieve all your planned outcomes, and
- potential improvements to the efficiency of current work / recordkeeping practices to determine whether improvements will be so significant that they will outweigh any other identified concerns.

**Financial feasibility**

To determine whether the scope of your intended project is financially feasible, you should look at:

- the cost of having staff members taken away from other work to participate in the project
- the cost of software purchase / upgrade that may result from the implementation of your planned changes
- costs of litigation which could potentially be avoided if your recommendations are implemented
- improvements in organizational efficiency that will potentially result from your system improvements, and
- potentially improved levels of compliance with regulatory requirements

**Technical feasibility**
To determine whether the scope of your intended project is technically feasible, you should look at:

- staff levels of technical expertise and whether all staff will be able to implement system changes you recommend, and
- availability of technical infrastructure for development and maintenance of new systems

A proposal may be regarded as feasible if it meets a number of these operational, financial and technical criteria.

**Documenting your Step A research**

**Overview**

Document what you have researched

Compile a report

Develop a business case

**Overview**

This section identifies the importance of documenting your research, and suggests different forms of documentation you may wish to compile.

**Document what you have researched**

During the course of your Step A analysis it is useful to compile:

- a list of all sources used, citing the name of the source and where it can be accessed
- copies of each documentary source or a set of notes which summarizes the key information you derived from the source, and
- a set of notes for each interview or other consultative forum.

**Tip: Document your work**

You may cite pre-existing reports or personal knowledge as sources where you consider that these are sufficient, but you should provide adequate information to enable every source to be identified and to retrace your steps and decisions where necessary.

Compiling documentation about your Step A research will enable you to:

- have a record of your research which you will refer to throughout your project
- facilitate future retrieval of the sources you have used. This is particularly important if you are undertaking major projects, such as the development of
a retention schedule, where you may need to check and cross check your work

• have data to feed into any reporting you are required to do for management, staff or other offices, and

• use as an information resource to share with other people and projects in the organization.

Documentation tools

The DIRKS Manual provides various tools to assist you with documenting your research. These tools can provide a useful framework for building up a comprehensive set of documentation of your research in Steps A-C of the methodology.

[Drafting note - will provide more detail about tools here when they have been finalised.]

Please note that none of the tools or forms provided in the DIRKS Manual is mandatory in the United Nations. You may therefore choose not to use the forms provided in the Manual and adopt a less structured approach, or one that fits better with your normal business practices. You can also customise the forms provided so that they better meet your business needs.

Compile a report

When you have finished Step A you may want to compile a report that includes:

• a summary of the issues you have identified in the course of your Step A research

• a statement on how these issues affect your intended project, and

• a project plan to guide you through the subsequent steps of the methodology that are relevant to your work.

The report could also be used as a reporting mechanism to keep management informed of your progress and findings.

Develop a business case

If you do not have financial support and management commitment to continue with your DIRKS project beyond the Step A analysis, or if your scoping has revealed that the project needs more time and resources than originally envisaged, you may want to compile a business case as a means to summarize the significance of what you want to achieve and to lobby for additional resources.

Business cases are documents or presentations that identify and justify an intended course of action. In the DIRKS methodology, the objective of a business case is to:

• secure commitment to and funding for your DIRKS project

• drive change management in your department/section
• secure broad commitment to and understanding of your project, and
• provide a means by which you can measure your project’s progress and viability.

### Components of a business case

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<td>An indication of the current costs associated with the way you currently do business. This could calculate:</td>
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<td>• 'lost time' spent doing tasks that could be avoided with a new recordkeeping system</td>
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<td>• specific costs, such as storage costs, that will be removed by the implementation of a new system.</td>
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<td>2</td>
<td>A discussion of the risks faced by your department/section if it continues with current systems and practices.</td>
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<td>3</td>
<td>A definition of a solution to the issues you have identified, including the:</td>
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<td>• infrastructure</td>
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<td>• staffing resources</td>
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<td>• timetable involved in developing and implementing the solution.</td>
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<td>4</td>
<td>A benefits analysis which:</td>
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<td>• identifies what the organization will receive as a result of this project and</td>
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<td>• clarifies exactly how the proposed solution will bring these benefits to the United Nations as a whole.</td>
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<tr>
<td>5</td>
<td>An acknowledgement of current business directions and priorities.</td>
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<td>Tie the project to other significant initiatives in the United Nations, or to current ‘hot topics’ or issues of concern within your environment. For example, if management is very concerned with information access, privacy management or knowledge sharing, a section of the business case could address how the project will contribute to these broader objectives.</td>
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### Business cases as promotional tools

If you do not need to develop a business case to gain additional resources for your project, you may still develop one to use as a communication device and promotional tool.
Your DIRKS analyses will require that you communicate to a number of staff across your department/section. It can be hard to get staff to focus on records management issues, as they often do not see the relevance of recordkeeping work to their daily business lives. If you specifically outline the benefits and objectives of your project in a short document, it could prove a useful and persuasive tool for obtaining staff cooperation. It will also keep all staff informed of what you hope to achieve.

**Tip: Do not duplicate effort**

If you already developed a business case for your DIRKS project before commencing on Step A, you don't have to develop a new business case once your Step A research is complete. You may however want to update or slightly alter your proposal, to accommodate any new priorities your Step A research has identified.

**Further guidance**

More information about the development of business cases can be found in an New South Wales, Australia, Office of Information Technology publication, *Business Case Development Guideline*, available via the 'Guidelines' section of Office of Information Technology website.

Other examples??

**Footnotes**

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.

ISO 15489.1, *Information and documentation - Records management*, Clause 8.4

Content and scope of Step B
Sources for Step B
Hierarchical analysis
Sequential analysis
Analysing risk
Documenting Step B

**Content and scope of Step B**

Overview
Aim of Step B
Summary of Step B
Why should you do Step B?
How is Step B scalable?
Relationship to other steps

**Overview**

This section is an introduction to *Step B: Analysis of business activity*. It:

- outlines the aim of Step B including what understanding the analysis will give you and what tools can be developed
- summarizes the major elements of Step B
- explains why it is important to undertake Step B for particular DIRKS projects
- indicates how Step B is scalable and when it is necessary to complete, and
- shows how Step B relates to the other steps in the DIRKS methodology.

**Aim of Step B**
The aim of Step B is analyze your business in order to gain a thorough understanding of the business activities and processes that are carried out. It also involves establishing a classification structure known as a **business classification scheme**. A business classification scheme is a hierarchy of functions, activities and transactions that can be used to support a variety of records management processes.[1]

**Summary of Step B**

In Step B you should analyze the documentary sources and interviews you have collected in order to identify:

- your department/section's goals and the strategies to achieve these goals
- the broad functions the organization undertakes to support its goals and strategies
- the activities which contribute to the fulfillment of the functions, and
- the groups of recurring transactions or processes which make up each of these activities.

Two types of analysis may be used:

- hierarchical analysis, a 'top down' approach where you start with the goals and strategies and gradually look deeper into how these are achieved, and/or
- sequential analysis, a 'bottom up' approach where you start by examining work processes and the transactions resulting from them, then gradually relate it to more broader levels of classification.

The analysis can be represented in a number of ways. The hierarchical model, known as a 'business classification scheme' is the method preferred by ARMS. This scheme can then be used to make a variety of decisions about the management of records.

**Why should you do Step B?**

Step B is a foundation step for many DIRKS projects. It helps you to:

- gain a greater understanding of your department/section both at a micro level and a macro level and the context in which records are being created (in this way it adds to Step A: **Preliminary investigation**)
- start identifying existing recordkeeping problems and issues, such as inadequate work processes
- establish a business framework for recordkeeping tools, such as thesauri and retention and retention and disposal schedules which can also be used to populate metadata fields
- establish a business framework to map recordkeeping requirements to, which will assist with the production of retention schedules, metadata strategies, the identification of vital records, gap analysis and system design or redesign.
How is Step B scalable?

Relate to the project scope

The scalability and relevance of Step B depends on the scope of your project and the outcomes you are looking for.

You may decide not to do Step B at all if you:

- do not need to conduct such a detailed examination of processes, transactions and records generated, and
- do not need to construct a business classification scheme based on functions and activities (used as a basis for recordkeeping tools or to map your recordkeeping requirement to).

See Doing your DIRKS project for how Step B specifically applies to particular projects.

Existing frameworks

Step B can be scaled down for particular projects if existing generic or organizational classification schemes, already exist and are suitable. You may have, for example, a retention schedule or classification scheme in place. If this is the case, you can easily scale down your project to examine a specific function in isolation (perhaps due to identification of a recordkeeping crisis or a recognised problem).

Example: Scaling down

Your project may be to do DIRKS to ensure the creation and capture of the necessary records to meet your recordkeeping requirements for a key, high risk function. You may already have a classification scheme that covers the majority of your business and which can provide a suitable classification framework. You can then choose to examine a particular function in detail using sequential analysis. Be careful however, as some schemes may exclude terminology for records not documented in files eg. databases.

Example: The Personnel function

One Australian Local Government council decided to undertake a DIRKS project where they needed to analyze the business conducted within their human resources function. Their aim was to improve their current practices and to identify their
recordkeeping requirements and determine their levels of compliance. They chose to use the function of PERSONNEL and related activities from the Keyword for Councils thesaurus as a basis for their business classification scheme. However, they still needed to analyze the way business was being conducted and the records produced (sequential analysis in Step B) and recordkeeping requirements (in Step C) to determine changes to their current practices.

**When to look more broadly**

If your department/section’s core functions are not covered by a classification scheme of any kind, it is not advisable to try to analyze a core function or system in isolation. You should at least roughly map your core business functions and activities in a business classification scheme and consider issues that may affect them before trying to concentrate on one function or system.

The reason for this is that:

- you need a broad perspective of the boundaries of the function or system and how it relates to, and impacts on, other business activities being performed
- you may discover when taking a broader view that there are other areas of high risk that may warrant priority in subsequent stages of the design and implementation process. These areas may correlate to particular recordkeeping systems, business activities or business units.
- if you analyze one function or system in isolation, without a broader map, you may inadvertently cross boundaries of other functions and may miss risk identification. These omissions may force you to revise your analysis later.

**Relationship to other steps**

**Step A**

Step A: Preliminary investigation and Step B both involve data collection. If you are doing Step A and are familiar with the requirements of Step B before you start, you may start identifying functions and activities while completing Step A. If this is the case, record your findings and refer back to them when you start Step B.

**Step C**

Step B may also be carried out concurrently with parts of Step C: Identification of recordkeeping requirements, as many of the same sources are used. You will often
find that you come across recordkeeping requirements when you are conducting research to identify functions, activities and transactions. All of these can be documented using the function source template.

**Step D**

It is also possible to gather information about the use, scale and operations of systems for Step D: *Assessment of existing systems* when you are undertaking Step B.

**Steps E and F**

If you are examining your processes, you may discover during the sequential analysis in Step B and assessment of how these are working in Step D: *Assessment of existing systems* that you need to redesign some processes. Redesign will occur in Step F: *Design of a recordkeeping system*.

You may also decide on other methods of representing the information from the business classification scheme for particular uses in Step E: *Identification of strategies for recordkeeping* and design these methods in Step F.

**Sources for Step B**

**Overview**

Use existing analysis tools
Use existing recordkeeping schemes and tools
Obtain recordkeeping tools
Check the analysis, schemes and tools of other organizations
Use sources from Step A
Conduct interviews

**Overview**

This section recommends the kinds of information, resources and tools you should locate and draw on in your analysis in Step B. These sources can be both internal and external.

**Use existing analysis tools**

If your department/section has been analyzed for other purposes it may be possible to draw on the results of such work. Projects which may involve an analysis of business activity include:

- business process re-engineering
- records security management strategies
- imaging and work flow automation
- activity-based costing or management
- quality accreditation, and
- systems implementation.

Likewise, if these projects have not been undertaken yet, the results of your analysis can be a valuable source for future projects of this nature.

If the analysis arising from such projects is available, you will need to consider how, why and when the projects were undertaken to determine whether their findings are applicable for recordkeeping purposes.

**Use existing recordkeeping schemes and tools**

If you have not already done so in Step A: *Preliminary investigation*, you should identify before embarking on Step B whether there are any existing classification schemes, or recordkeeping tools developed from those schemes, such as retention schedules or subject classifications being used in the office.

**Example: Existing classification schemes**

ARMS has produced:

- a range of retention schedules covering administrative functions and some specific functions relating to various U.N. functional areas.

Your department/section may have also produced classification schemes in the past, or they may have retention schedules covering core business.

These existing classification schemes or recordkeeping tools should be examined in detail to assess their currency and to see if the structure and content provide a valuable framework for the product you are now developing.

**Obtain recordkeeping tools**

If you do not have these tools, you may wish to obtain what is available from ARMS. Information is available on ARMS Intranet site at ?. The retention schedules are available on ARMS Intranet site.

If you use the structure and terminology from these products you can save considerable time in planning frameworks in Step B and can concentrate more on the analysis. Such analysis can actually help you to refine the applicability of generic recordkeeping tools by mapping your *specific* business needs to them.

**Check the analysis, schemes and tools of other U.N. offices**
Another useful source to check before the Step B analysis is to see if other UN offices that have similar functions or share parts of the same function have performed an analysis or have functional or subject classification schemes or recordkeeping tools. If these related offices or counterparts have existing schemes that are comprehensive and they are willing to share them, you may find them valuable to draw on. Alternatively, you may decide to share resources and undertake some joint development. Such consultation will reduce duplication and enhance consistency.

It is very important to remember, however, that even if classification schemes can be partially shared, each department/section will still have to perform its own analysis (Step B) and define its own recordkeeping requirements (Step C) as they will have different operating environments, with different cultures, risks and recordkeeping regimes.

**Use sources from Step A**

Many of the sources used in Step A: *Preliminary investigation* will be pertinent to the analysis of your department/section’s business activity. These include:

- internally generated sources such as mission statements, corporate plans, annual reports, organizational charts, policy statements, procedure manuals, information systems documentation, records and forms

For further information about documentary sources, see the *Guide to Documentary Sources*. Although you may refer to many of the same sources if you are doing Steps A, B and C, it is important to note that you are seeking different information from the sources and working towards different outcomes for each step.

**Conduct interviews**

Interviews are used in a number of DIRKS steps. For example, you may have interviewed people in Step A: *Preliminary investigation* to help you to get an overview of the organization and an understanding of their context. In Step B you can interview people to gain more information about their functions and activities, but also to give you process and transactional information and to verify your analysis. Staff are also aware of ad hoc practices that might go undocumented. An advantage of involving staff is that by contributing they feel they have some ownership of the project and are more likely to accept outcomes.

It can be useful to clarify ‘big picture’ functions with a group of staff from several parts of the organization and use smaller groups or one-to-one interviews for obtaining the detailed information about processes and transactions.

**Tip: Be prepared for interviews**

To ensure you do not waste staff time you should be prepared fully before interviews take place. This may involve preparing questions relating to a number of DIRKS.
Hierarchical analysis

Overview

What is hierarchical analysis?

Stages in hierarchical analysis

Overview

Once you have established the scope of your project and collected sources, you can apply two main types of analysis used to understand your business activity - hierarchical analysis and sequential analysis. There are several useful reference sources to assist you with the analysis. [2] You should then analyze the risks associated with your business activities.

This section describes what hierarchical analysis is and the steps in performing the analysis.

What is hierarchical analysis?

Hierarchical analysis involves taking a 'big picture' view of your department/section's business activity and then breaking it down into more detailed parts. You look first at the goals and strategies, then at component parts - the functions, activities and transactions. The boundaries of your analysis will be based on your project's scope.
Functions

A function is ‘a set of related and ongoing activities of the business.’ [3] Functions represent the major responsibilities that are managed by the organization to fulfill its goals. Functions are high-level aggregates of the organization’s activities.

Functions are generally not based on organizational structures because they are more stable than administrative units, which are often amalgamated or devolved when restructuring takes place. Functions can also be dispersed across structural components of an organization.

Example: Functions cut across organizational structures

Various UN departments and offices undertake a range of activities relating to finance and audit. Many different organizational units within the United Nations may be involved in performing aspects of this function.

In some units there may be multiple layers of functions. There can be very large functions that relate to a number of different UN departments or sections. Very high-level functions are too large to be useful in the Step B business analysis.
Example: Levels of functions
Peacekeeping is an example of a UN function. However, that level of function is too broad for a business analysis.

Even within a department/section there may be larger and smaller functions and you will need to decide which level you choose for your business analysis.

Example: Levels of functions
Human Resource Management is often considered to be too large a function when producing a record titling classification scheme, so it was broken down into smaller functions like Personnel, Staff Development etc.

Activities
Functions are then decomposed into smaller (sub) functions or into a discrete and related set of ongoing activities.
Activities are the major tasks performed by the department/section to accomplish each of its functions. An activity should be based on a cohesive grouping of transactions producing a singular outcome.

Example: Transactions making up an activity
Transactions under the activity of ‘drafting’ may be:
- write draft
- circulate for comments
- receive comments
- incorporate comments in new draft
- seek approval.
It is a cohesive group that results in the production of a draft.

Activities should not be based on how records are currently kept, for example as a case, project or event file. Such files might comprise many activities and represent a legitimate way to maintain the record, but the analysis of business activities should represent the component parts.
There may be several activities associated with each function. In some cases, the same activities may occur under a number of different functions.
Example: Recurring activities
Generic activities like giving advice or planning may recur under administrative and core functions.

Transactions

Transactions are 'the smallest unit of business activity'. [4] In the business classification scheme, they should be represented as tasks, not subjects or record types.

Example: Transactions within an activity
In the Indiana University Electronic Records Project they identified the activity of 'Student grades and credit maintenance.' The transactions were:

- Registrar's Office posts grade for students upon completion of course work, and
- Registrar's Office assigns credit for student work done at other academic institutions. [5]

Often transactions relate directly to recordkeeping requirements that are identified in Step C.
It depends very much on the scope of your project whether you will look at each transaction in depth. If you are doing DIRKS to create a classification scheme you may decide to classify more at the level of groups of transactions, subjects or record types than individual transactions.

Example: Transactions, subjects or record types
A transaction may be to 'complete an evaluation form for a training course.' The record type produced from this transaction is the 'evaluation form' and the subject may well be the name of the training course.

Transactions help you to define the scope of your activity. The identification of transactions will also help:

- to identify what records support the transactions and the recordkeeping requirements related to these (Step C)
- in the formulation of the records description part of a retention schedule.
Relationships between entities

Example: Relationships between entities

Function: Publication - the function of having works, irrespective of format, issued for sale or general distribution internally or to the public.

Activity: Drafting - the activities associated with preparing preliminary drafts or outlines of addresses, reports, plans, sketches etc prior to publication.

Transaction(s): Create draft copies of publications/website/intranet with associated metadata, distribute drafts for comment, file comments made on these drafts.

Stages in hierarchical analysis

The following table outlines one recommended approach to identifying your functions, activities and transactions. Each stage may be revisited many times as you refine your understanding.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Use the sources to identify broad statements of your department/section’s purpose, goals and strategies. Look at the organization’s charter, mission and objectives to gain an overview. Consider what it is that makes the department/section unique.</td>
</tr>
<tr>
<td>2</td>
<td>Conceptualize the broad functions of the department/section and write down some basic definitions about what each function covers. Check that they do not overlap in scope and test these against the organizational structure to ensure all aspects of the department/section’s business are covered.</td>
</tr>
<tr>
<td>3</td>
<td>Use the sources to identify the component activities within each function and write down some basic definitions about what each activity covers. Check that they do not overlap in scope.</td>
</tr>
<tr>
<td>4</td>
<td>Identify the transactions associated with each activity. This can be done through written sources, workshops and interviews or by analyzing work processes – examining in detail the process involved in carrying out work. Identifying the transactions will assist in testing and finalizing the</td>
</tr>
</tbody>
</table>
boundaries of activities.

5 Test your preliminary analysis in interviews and workshops with relevant staff members. Revisit the top-level functions and refine them and their scope notes in the light of subsequent analysis.

6 Revisit and refine the remaining levels of the hierarchy.

Although the hierarchical analysis involves a ‘top-down’ approach, it is not essential that you finalize the highest level of the hierarchy before moving on to its lower levels. Indeed, identifying transactions will help define the boundaries of activities and therefore the scope of functions. The examination of sources will often provide information that is relevant to a number of levels and you should expect to revisit each level several times in order to refine and enhance the model.

**Sequential analysis**

**Overview**

What is sequential analysis?

Stages in sequential analysis

**Overview**

This section describes the other type of analysis carried out to analyze your business activity - the sequential analysis.

**What is sequential analysis?**

Functions also consist of business processes that are responses to a business event. An event is 'a logical unit of work that must be completed as a whole. An event is triggered by a discrete input and is completed when the process has responded with appropriate outputs.' [6]

Sequential analysis is a ‘bottom-up’ approach - at a smaller scale than the hierarchical analysis. It involves identifying the sequence of steps or transactions and any variations that are currently undertaken to respond to a business event and achieve an outcome within the context of an organization's functions, systems and rules. This may involve identifying the linkages and dependencies between processes and it workplace and time specific. [7]

Sequential analysis should be carried out after, or as part of the hierarchical analysis, and the processes mapped to the hierarchy. The advantage of starting with hierarchical analysis is that it gives you the organizational context in which the activities and processes are taking place. Processes may straddle across a number of different functions or may be contained within one or two functions.
Stages in sequential analysis

Considering the boundaries of your project and the tasks on which your analysis will be focused, you need to begin by investigating the process to find out:

- the standard sequence of steps within the process. Each transaction should be a separate step
- the inputs or dependencies from other systems (such as the need for authorization, records etc)
- critical actions which need to be completed before steps can occur
- the people managing the process and what accountabilities they have
- where the process is being carried out
- what rules affect the process
- what records are currently being generated as a by-product of transactions and why, and
- any needs for generating records that are not currently being created.

Not all processes are step by step. There may be different paths contingent on certain decisions or actions and these should also be examined.

You can identify at these by:

- observing work flows
- reviewing regulatory and other requirements that impact on the process
- reviewing local operational manuals, business rules and organizational policies and related documentation that impact on the process, and/or
- interviewing staff members involved in performing the processes and managers who have accountabilities.

Example: Sequential analysis of training authorization process

This is the sequence of steps in a process to authorize training for a staff member:

- a staff member expresses interest in a training course
- a training application form is completed by the applicant
- the form is authorized by the supervisor along with details of the course applied for
- the form is sent to the Human Resource Manager who checks for conformity with internal training policy and records details in database
- the form is authorized by the Human Resource Manager and recorded in their training database
- notice of the authorization is confirmed to the supervisor and applicant.

A variation to this process may be that the form is rejected and notice is given to the supervisor and applicant of the rejection. Another possible variation may be an appeal about the rejection.
A related process would be the process of enrolling and paying for a training course that has been approved. The process of enrolling is contingent on the authorization process.

Like hierarchical modeling, you should expect to revisit your business process models several times in order to refine and enhance them. You should document your analysis and seek validation of the information from participants in the process. If you find problems or issues with your processes during sequential analysis you should note them and consider whether you want to redesign them in Step F.

### Analysing risk

**Overview**

**Risks in Step B**

**Link to functions and activities**

#### Overview

Once the hierarchical analysis and process analysis has been performed, the risk connected to functions and activities should be analyzed. How detailed the process will be will depend on your department/section’s culture with respect to risk, whether recent organizational risk assessments have been done and whether research indicates there is likely to be a high level of risk.

Assessing risk at the functional level in Step B assists in:

- prioritizing areas for future analysis, and
- identifying areas that perform the function as requiring more stringent recordkeeping practices and training.

#### Risks in Step B

If you have conducted the analysis in Step A: *Preliminary investigation* you may have already identified some areas of risk in your department/section. Source analysis during Step B may have revealed other areas of risk, for example, legislation may carry strong penalties for non-compliance in particular areas, or risks may have been identified in workshops with staff.

You also need to consider the consequences of these risks, such as financial loss, public embarrassment or unacceptable delays. The degree of analysis will be dependent on your organization’s culture and experiences with respect to risk.

#### Link to functions and activities
If you have identified areas of risk in Step A: Preliminary investigation or Step B you should link them to the analysis you have performed. For example, the risk can be noted next to the functions - activity - transaction it relates to. This will assist you to see what functions and activities constitute the most risk for the organization and help you if you wish to prioritize your DIRKS process based on levels of risk.

**Documenting Step B**

**Overview**

Business classification scheme
Document details regarding functions, processes and sources
Assign terms to functions and activities
Describe functions and activities
Assign dates to functions and activities
Link stakeholders
Validate schemes
Keep your analysis up to date

**Overview**

It is at your discretion regarding how you wish to document the business analysis and how detailed this documentation needs to be. Decisions may be made based on the aims of your project.

**Example: Check existing requirements**

ARMS has certain requirements regarding the structure of a retention schedule. The hierarchical business classification scheme described below provides the basis for this structure. Therefore, if your project is to create a retention schedule you will save time if you document your Step B analysis in this way.

**Example: Merging with record titling classification schemes**

If you are using an alphabetic representation of a hierarchical classification scheme customized for records titling and if the aim of your project is to create a thesaurus, you should consider documenting your analysis in Step B using the hierarchical business classification scheme described below.

Documentation should be kept on functions, activities, transactions, processes and sources analyzed. This section gives further advice on what should be documented.
Business classification scheme

The business classification scheme is a hierarchy of functions, activities and transactions. A business classification scheme helps you to make decisions about the management of records at an aggregate level.

The layout of the business classification scheme can make it easier to see if there are any inconsistencies or overlaps in your analysis. You can check that:

- the combined functions account for all of the business the department/section carries out
- each function and activity and transaction is described using meaningful terms
- each function and activity has a definition and date ranges if they can be found (and if they are relevant to the project)
- the boundaries of each function mutually excludes the other functions, and
- the boundaries of each activity mutually excludes the other activities.

Example of a business classification scheme

An example of one way you might represent a hierarchical business classification scheme is shown below. In this example, the definitions have been turned into scope notes in preparation for a file titling thesaurus. The organization is a fictitious one that monitors food production.

<table>
<thead>
<tr>
<th>Function</th>
<th>Activity</th>
<th>Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Compliance</td>
<td><strong>Complaints management</strong></td>
<td>Receive complaints</td>
</tr>
<tr>
<td><strong>Date range:</strong></td>
<td><strong>Date range:</strong></td>
<td>Assess complaints and possible solutions</td>
</tr>
<tr>
<td>1998 -</td>
<td>1998 –</td>
<td>Refer complaints to other programs</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td><strong>Description:</strong></td>
<td>Respond to complainants</td>
</tr>
<tr>
<td>of monitoring the</td>
<td>of receiving and responding to</td>
<td></td>
</tr>
<tr>
<td>observance of quality</td>
<td>complaints. Includes ensuring</td>
<td></td>
</tr>
<tr>
<td>assurance standards and</td>
<td>that any necessary corrective</td>
<td></td>
</tr>
<tr>
<td>licence conditions by food</td>
<td>action is taken.</td>
<td></td>
</tr>
<tr>
<td>producers. Includes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>managing complaints,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inspecting facilities and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>taking enforcement action where the health and safety of consumers is at risk.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Inspection</strong></td>
<td><strong>Inspect and assess food</strong></td>
</tr>
</tbody>
</table>
**Date range:** 1998 –

Description: The activity of inspecting food producer production methods and facilities. Inspections may be in response to complaints or as a part of licence allocation or monitoring processes. Includes reporting on the inspection, issuing notices, re-inspection and referrals to other Departments for action.

- production processes and facility
- Issue Direction or Improvement Notices where applicable
- Report on inspection
- Reinspect and assess where notices have been issued
- Report on re-inspection
- Refer breaches to other Departments

**Investigation**

**Date range:** 1998 –

Description: The activity of investigating and reporting on breaches of quality standards and licence conditions with regard to food production methods and facilities. Includes interviewing and observing production and facilities, reporting and referrals.

- Interview food production staff
- Observe food production and facilities
- Refer breaches to other Departments where further action is required
- Report to the Quality Food Board
- Inform producer of results of investigation
- Include summary of breaches in annual report

[Drafting note: ARMS would like to include a template and a more detailed example of a U.N. business classification scheme as appendices. If anyone has one they consider suitable, and are willing to share it, it would be greatly appreciated].

**Document details regarding functions, processes and sources**

Aside from your business classification scheme, it can be useful to record your more detailed findings regarding the functions. This information can be picked up in later steps or projects. For example, you could record information on:

- regulations or other sources that underpin the functions and activities
- risks associated with each function and activities
- stakeholders that have an interest in the function or activity
- business sections that are responsible for or carry out aspects of the function, and
- changes to the function through time (if found), and
- more details regarding the dates of functions (if found).

In addition, you should keep documentation of the information collected in your sequential analysis. Diagrams, known as 'logical models' are often a suitable way to record the analysis of business process information. [9]

Textual information should also be recorded about processes, such as the name of the process, transactions within it, records created or that need to be created as part of transactions, responsibilities, recommendations regarding changes and what functions and activities they have been mapped to. Dates when the processes were analyzed should be recorded.

If you established a register of all sources in Step A: Preliminary investigation you may also want to keep notes for each documentary source summarizing the key information and location of the source.

[Drafting note: ARMS would like to include a more detailed model of process analysis. If anyone has one they consider suitable, and are willing to share it, it would be greatly appreciated].

**Assign terms to functions and activities**

As part of your analysis it will be necessary to choose terms that can provide labels for the functions and activities you have identified. The terms chosen should reflect the terms used in your department/section and in current files.

At this stage the terms do not need to be too controlled - they simply act as a 'handle' on the concepts. They can be phrases, for example, rather than one or two terms. If you are going to develop a classification scheme you can refine them at a later stage.

**Tip: Using controlled vocabulary**

Some people do set up a controlled vocabulary in their business classification scheme as it enables them to clarify the document and make it suitable for viewing by staff. If you have an existing thesaurus or retention and disposal authority, you may decide to use that terminology in your business classification scheme. If you are going to develop a thesaurus anyway, you may find it useful to include the controlled vocabulary in the business classification scheme. You should refer to ARMS Guidelines for Developing and Implementing a Records Classification Scheme for more information.

**Tip: Terms that reflect administrative areas**

If you choose terms that relate to administrative areas you may have difficulty in
convincing staff of the differences between the function and the administrative area. If the terms are also in the classification scheme, staff will need to be instructed in their use or they tend to assume the terms refer to the administrative area.

Describe functions and activities

You will also need to include descriptions for functions and activities in the business classification scheme. The main reason to define the boundaries or breadth of each function or activity is so you can ensure that their meaning is understood, that entities at the same level do not overlap and that the relationship between entities is clear.

The definition of the function or activity will start as quite tentative statements or even dot points, and then can be revised as you refine your business classification scheme. If you are intending to compile a thesaurus these definitions can be turned into scope notes.

Assign dates to functions and activities

If your project involves creating a retention schedule, it is valuable to note down details of changes in the ways functions and activities are performed when you come across them. Sources for this information should also be noted in case you wish to go back and check the information.

Date ranges are particularly valuable for compiling retention schedules. Information about changes over time will help you to assess whether additional disposal classes and actions are required in the disposal authority to reflect the changes.

Tip: Note changes

If you suspect or know changes have taken place but you cannot find authoritative sources to support this, note the changes and inform ARMS when you submit your retention schedule.

Link stakeholders

As part of analyzing the broad legal and social context in the preliminary investigation (Step A), you may have identified organizational stakeholders and you may come across more during this step.

Example: Identify stakeholders

- external stakeholders that participate in the work of the organization, like
individual clients, NGOs or other member states will be obvious when you analyze activities and transactions

- particular areas or individuals in the organization may also have an interest in the function. They will include those areas responsible for carrying out the function and activities, but may include other areas and individuals.

Stakeholders in processes will include those involved and those managing the processes or those requiring the process to take place in order to complete other processes.

These stakeholders should be linked to the relevant function or activity as their interests may be a source of recordkeeping requirements in Step C: Identification of recordkeeping requirements.

**Validate schemes**

It is important that you consult widely during your functional and sequential analysis of business activity. It is also important that you validate what you have found and documented in your business classification scheme. This will involve asking questions of managers and operational staff to confirm that your analysis and representation is accurate and complete. It is essential that your models are meaningful to the department/section as they have the potential to inform key recordkeeping activities (including intellectual control and appraisal).

The hierarchical and sequential analysis and business classification scheme should also be validated with senior management. You may, for example, compile a report on your findings to show senior management that can also serve as a progress report on your project.

**Keep your analysis up to date**

Analysis of business activity can provide an effective and powerful tool for managing records. To ensure that your analysis and business classification scheme remains relevant to your needs it is prudent to periodically review its currency, particularly when there is:

- administrative change within the department/section
- a change in organizational responsibilities.

**Footnotes**

[2] For example:
Standards Australia IT-021, *Australian Technical Report: Work Process Analysis*. This document is known as AS 5090 and will be available for purchase from [Standards](#).
Australia in April 2003. This document provides guidance on undertaking work process analysis for recordkeeping purposes and includes both hierarchical and sequential analysis methods. This document provides guidance on undertaking work process analysis for recordkeeping purposes and includes both hierarchical and sequential analysis methods.


Step C - Identification of recordkeeping requirements

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.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step C

Sources for Step C

Identifying recordkeeping requirements

Linking requirements to functions and activities

Analyzing risk

Documenting Step C

Content and scope of Step C

Overview

Aim of Step C

Summary of Step C

Why should you do Step C?

How is Step C scalable?

Relationship to other steps

Overview

This section in an introduction to Step C: Identification of recordkeeping requirements. It:

- outlines the aim of Step C
- summarizes the major elements of Step C
- explains why it is important to undertake Step C for particular DIRKS projects
• indicates how Step C is scalable and when it is necessary to complete, and
• shows how Step C relates to the other steps in the DIRKS methodology.

Aim of Step C

The aim of Step C is to identify and document your recordkeeping requirements. *Recordkeeping requirements* are requirements arising from regulatory sources, business needs and community expectations. Many DIRKS projects require knowledge of your recordkeeping requirements, so that you can address them in recordkeeping systems and tools to ensure you are accountable and make and keep evidence of your business activities.

Summary of Step C

Step C is concerned with finding and documenting the recordkeeping requirements that exist either for your whole department/section, or in relation to particular functions, activities, processes or business systems. These may be broad requirements relating to the jurisdiction or environment your department/section operates within, or may be specific to your particular business. Such requirements may be explicit or implicit.

Documentary sources and interviews provide information on recordkeeping requirements. You need to collect and analyze these sources so you can identify your:

• business needs
• regulatory obligations, and
• community expectations.

You also need to:

• define the type of requirement (ie what it is requiring you to do in terms of creation, capture, disposal, access, form, content and/or quality) so that you can plan whether and how to satisfy it
• map requirements to your functions and activities (your BCS if you have completed Step B) so the business context of the requirements is clear.

If there are recordkeeping requirements your department/section does not wish to satisfy, perhaps due to cost or other difficulties they impose, you will need to identify the exposure to risk if these evidential requirements are not addressed. The main product of Step C, then, is set of requirements the department/section has agreed to meet (which may be limited according to the scope of your project).

Why should you do Step C?

**Opportunities from knowing your requirements**
Step C is a crucial step in designing a recordkeeping system. If you know exactly what your recordkeeping requirements are you can ensure:

- you make effective use of records management resources
- your department/section is meeting its requirements and conducting business in line with best practice.

Step C can assist you to obtain:

- an understanding of the requirements to create and keep records as evidence in relation to specific business activities
- an appreciation of the level of exposure to evidence-related risks (such as failures in accountability, legal action)
- a basis for designing tools that can facilitate good recordkeeping
- a benchmark for assessing your current systems (Step D)
- a basis for determining the range of recordkeeping strategies which best enable your department/section to meet their recordkeeping requirements (Step E), and
- the basis for developing functional specifications for recordkeeping systems, including software products (Step F).

Consequences of not knowing your requirements

If your department/section is not aware of its recordkeeping requirements it might:

- unnecessarily keep records it doesn’t need to maintain, which is inefficient and costly
- fail to create records that it is required to keep, or
- keep records for insufficient periods of time, which will expose the office to certain risks and prevent business being conducted effectively.

**Example: Consequences of not keeping records**

If a corrective services agency did not keep records of prisoners, they would be compromising their ability to meet their core functions and would expose themselves to significant adverse community reaction, as well as compromising public safety.

**How is Step C scalable?**

**Relate to the project scope**

Step C is essential to most DIRKS projects because it provides the benchmark to measure systems against. The only time it need not be completed is if you already know your department/section’s recordkeeping requirements in detail and know the risks of not meeting them. However, Step C can be scaled down for particular
Existing frameworks to map requirements to

You may already have frameworks in existence derived from Step B: Analysis of business activity or from existing recordkeeping tools such as classification schemes or retention schedules. These will give you the structure to map your recordkeeping requirements to, so you can scale down your examination of recordkeeping requirements to a particular function.

Example: The Personnel function

In Step B: Analysis of business activity there was reference to the Australian Local Government council that had decided to analyze the business conducted within their human resources function. Their aim was to improve their current practices and to identify their recordkeeping requirements and determine their levels of compliance. They chose to use the function of PERSONNEL and related activities from the Keyword for Councils thesaurus as a basis for their business classification scheme.

In Step C they could focus on finding recordkeeping requirements relating directly to the personnel function, or broadly affecting it, and exclude the requirements that did not have implications for this function.

When frameworks do not exist

As discussed in Step B: Analysis of business activity, if your department/section’s core functions are not covered by a classification scheme of any kind, it is not advisable to try to analyze a core function or system in isolation. You should at least roughly map your core business functions and activities and consider issues that may affect them before trying to concentrate on the recordkeeping requirements relating to one function or system.

The reason for this is that:

- you need a broad perspective of the boundaries of the function or system and how it relates to, and impacts on, other business activities being performed
- you may discover when taking a broader view that there are other areas of high risk that may warrant priority in subsequent stages of the design and implementation process. These areas may correlate to particular recordkeeping systems, business activities or business units.
- if you analyze one function or system in isolation, without a broader map, you may inadvertently cross boundaries of other functions and may miss requirement and risk identification. These omissions may force you to revise your analysis later.

See Sources for Step C for more information about other sources that can save you time and effort in your project.
**Relationships to other steps**

**Steps A and B**

You may have completed either all or parts of Step A: *Preliminary investigation* and Step B: *Analysis of business activity* before undertaking Step C. The earlier steps contribute to Step C in the following ways:

- the investigation in Step A and analysis in Step B allow you to understand your department/section and the context in which it operates, including areas of risk
- the business analysis and scheme produced in Step B provides a workable structure that you can link recordkeeping requirements to in order to understand their context
- the sources you examine in Steps A and B will contain a range of recordkeeping requirements.

If you have not conducted the earlier steps, you will need to have a good knowledge of the department/section and its functions and practices and be prepared to do some research into sources for Step C. You will also need to develop or have in place a suitable way of mapping your recordkeeping requirements to their business context.

**Step D**

The recordkeeping requirements identified and agreed to in Step C provide a benchmark for assessing the operation of your existing systems in Step D: *Assessment of existing systems*.

While the identification of current recordkeeping systems is carried out in Step D, some initial work can also be done during Step C.

**Example: Identifying systems that keep records**

During the process of identifying records currently created in your office you may discover that records are kept in a variety of formal systems such as the centralized registry system, human resource management system, the financial management system, as well as ad hoc systems maintained by individual officers at their desks. Document this information as you come across it, rather than duplicating your effort at a later stage.

**Step E**

The strategies for meeting recordkeeping requirements that you select in Step E: *Identification of strategies for recordkeeping* will be chosen to suit the nature of the recordkeeping requirements identified in Step C.
Sources for Step C

Overview
What sources are relevant?
Draw on other recordkeeping projects
Internal documentary sources
External documentary sources
Interviews

Overview

This section discusses the range of sources that can assist you with your Step C analysis.

What sources are relevant?

To identify recordkeeping requirements you need to find relevant internal and external sources. There are a wide variety of sources available and you will need to consider which of those is most relevant to the scope of your project. Different types of requirements will generally come from different sources.

Example: Sources of recordkeeping requirements

A regulatory requirement for the creation of evidence may be found in a documentary source, whereas the business need to retain evidence may come from an interview with staff and a community expectation from a discussion with an external stakeholder group.

Draw on other recordkeeping projects

If an identification of broad requirements has already been completed for your department/section, and it is still current, you may be able to draw on this for your analysis.

However, it is important to remember that it is the specific nature of your department/section and the context in which it operates that dictates:

- whether it needs to create evidence of its activities
- what type of evidence it needs to create
- what form that evidence takes
- how long the evidence should be retained, and
• what access should be provided to that evidence over time.

Therefore, you need to complete your own analysis of broad and specific requirements.

**Internal documentary sources**

**Previous analysis of system specifications**

You should investigate any previous research into recordkeeping requirements carried out in your department/section. You may be able to use or tailor this information for your current purposes.

Analysis carried out in preparation for the design and implementation of other information systems within your department/section may have examined requirements for recordkeeping in specific functional areas. This is particularly likely in core functional areas that require high levels of reporting and/or financial accountability.

It may be worth looking at the requirements documentation compiled for these other systems or procedural guidelines that support particular business processes. Your information systems or business systems unit should be able to provide you with copies of any requirements documentation relating to in-house electronic information systems.

**Records retention schedule**

If your department/section has a current retention schedule you should look at this and the research that sits behind it to find previously identified requirements.

However, remember that in some cases the recordkeeping requirements listed here may not be comprehensive. Some requirements may have been superseded, while new requirements may come into effect at any time. They should be seen as a starting point only.

**Corporate policies, guidelines, procedure manuals etc**

Requirements for evidence may be found (or corroborated) in corporate policies, internal guidelines, procedure manuals, reporting structures (such as those between managers and staff), and quality assurance programs.

**Consumer comments**

To ascertain community needs or expectations you might also examine complaints received or comments made by consumer groups or customer councils and written reports addressing customer concerns.

**External documentary sources**
Codes of practice, policies, guidelines, reports etc

You will also need to consider codes of practice, policies, guidelines, reports or directives arising from:

- complaints handling bodies such as the U.N. Ombudsman
- audit authorities such as the Office of Internal Oversight Services (OIOS)
- administrative or judicial reviews
- committees of inquiry
- investigative bodies, General Assembly committees
- Archives and Records Management Services (ARMS).

Industry and best practice standards

Various industry standards and best practice standards and guidelines are also relevant, and include:

- the International Organization for Standardization (ISO) 15489 standard on records management and the accompanying technical report;
- the International Organization for Standardization (ISO) 9000 series of quality management standards;
- software development standards; and
- documentation standards which specify how data or records should be captured within your system. Documentation standards include recordkeeping metadata standards such as the ARMS Standard on Recordkeeping Metadata.

Media reports

Examining media reports, including newspaper and magazine articles and radio and television coverage that focus on your department/section may also provide valuable information, particularly on accountability or business failures and future risk areas.

Interviews

In addition to documentary sources, key personnel in your department/section can be interviewed to obtain detailed information on business activities and processes and provide useful perspectives on why particular records need to be created and kept.

The following table indicates whom you might interview and the information you might obtain:

<table>
<thead>
<tr>
<th>Person to</th>
<th>What might they provide?</th>
</tr>
</thead>
</table>

Version June 2006
### Identifying recordkeeping requirements

**Overview**

Broad or specific?

Explicit or implicit?

Regulatory, business or community requirements

Identify types of recordkeeping requirements

Required recordkeeping functionality

This section explores how to use the sources you have collected to find the recordkeeping requirements that are likely to apply to your department/section. These could be broad or specific, implicit or explicit, and could be regulatory, business or community requirements. The process of identifying recordkeeping requirements also involves identifying the types of requirement they are so that you can build mechanisms to meet these requirements into your recordkeeping systems.
**Broad or specific?**

Requirements may be:
- specific, with applicability to a particular record or group of records, or
- very broad, applying to whole functions, types of records or the United Nations as a whole.

Regulatory requirements that apply across a broad range of public offices can also contain broad recordkeeping requirements.

Likewise best practice standards or whole of organization policies may introduce a range of broad recordkeeping requirements.

In the United Nations the broad requirements for 'full and accurate' records are articulated in the ARMS Standard on Full and Accurate Records. See also Introducing DIRKS – Characteristics and functionality of recordkeeping systems for an outline of some general requirements for recordkeeping systems.

**Explicit or implicit?**

Requirements can be explicit, but are more often implicit.

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**Example: Explicit or implicit requirements**

An explicit requirement for creation and access might be that 'the organization must create a register of licences and members of the public must be given access to it.'

Implicit in this statement is that the records within the register must be captured and maintained for a certain period of time, so that access is possible.

**Identify regulatory, business or community requirements**

Business needs, accountability requirements and community expectations all contribute to the requirements for organizational recordkeeping. Some requirements may arise from a combination of these.

**Regulatory requirements**

**What are regulatory requirements?**

Decisions, resolutions, regulations, whole-of-UN policy, standards or similar instruments impose regulatory requirements upon the organization.

**Determine regulatory requirements**
Determining *regulatory requirements* for recordkeeping involves looking at the regulatory environment and whole of organization policy, and locating where there are requirements for the creation or management of records.

Performing online searches of sources, using terms such as ‘records’, ‘evidence’ ‘writing’ ‘keep’ and ‘documents’, can provide an efficient way of finding the more explicit references to recordkeeping pertaining to your department/section's functions.

Implicit regulatory requirements will be more difficult to ascertain. While it is a time-consuming exercise, searching manually through formal directives and standards for implicit references to recordkeeping requirements is beneficial to the identification process. It provides a means of acquiring much of the contextual information you need to fully understand your department/section's regulatory environment.

Of course, this approach can also be supplemented by an examination of corporate policies and procedures, and by interviewing personnel who are familiar with the relevant formal directives and industry standards, such as accountants, senior officers and legal staff.

**Business requirements**

**What is a business requirement?**

A business requirement supports the efficient and effective performance of an organization’s day-to-day work and ongoing activities. These are the records the organization needs to carry out its business.

**Example: Business requirement**

The United Nations International School creates and maintains records of student enrolments and progress so it can allocate and manage resources for delivering courses and determining student eligibility for graduation and awards.

**Most relevant sources**

Recordkeeping requirements that support business needs are likely to be identified through resolutions and administrative instructions or other instruments of authority (business requirements reflected in regulatory sources), or as a routine part of establishing and maintaining its operations.

**Example: Form and content often a business requirement**

UN offices that manage funds will automatically identify a business requirement to make and keep evidence of the receipt and expenditure of those funds as this is a routine part of conducting financial affairs and they need the records for accountability. This is likely to be in regulatory sources anyway. However, the *form*
and content of evidence will vary depending on an office's functions, corporate culture and external environment.

**Example: Business requirement derived from interview**

You may interview someone in the department/section responsible for managing training course enrolments. In the interview you may discover that they have had a number of complaints about how slow staff are in responding to telephone enquiries about enrolments.

They may identify the need for keeping a list of participants enrolled as it takes less time in referring to the list than going through individual registration forms. This record is required for business reasons as it makes the process of answering enquiries more efficient.

**Determine business requirements**

A useful way to identify business requirements is to consider the chain of evidence an organization or individual needs to substantiate a sequence of decisions or actions, that is, processes. You may have considered this to some extent in Step B.

**Example: Chain of evidence required**

Copies of invoices sent provide evidence of income due in return for goods or services rendered.

During Step C, you will also need to closely examine existing policies, guidelines, work procedure manuals and standard operating procedures to identify when records relating to organizational functions and activities are created. You will then need to interview business area experts within the relevant functional areas to determine why these records are created and retained.

**Community expectations**

**What is a community expectation?**

A community expectation for records creation, management and disposal refers to a requirement from the member states, the general public or an external stakeholder group. It indicates what records they expect you to create and maintain. Expectations reflect either an interest in the records themselves as sources for research, or the desire for the UN to account for its administrative affairs.
**Example: Community expectation**

It is a well-recognised member state expectation that the UN will create and keep records of all financial expenditure and commitment of expenditure. The member states, as financial contributors, reasonably have this expectation.

**Most relevant sources**

Documentary sources that may give expression to the community's interests in records include:

- minutes of consultative meetings
- proceedings of advisory board or council meetings (where impressions of community expectations are reported)
- representations
- General Assembly debates
- media monitoring exercises, or
- the United Nations' website (visitor logs or users questionnaires).

You may also obtain further guidance from staff in the business areas who are aware of community expectations that should be considered in relation to their activities. Consultation with stakeholder representatives should be conducted if sufficient information on their expectations is not available internally, and to foster understanding with the stakeholders.

**Determine community expectations**

Community expectations expressed by a wide range of external stakeholders can give rise to recordkeeping requirements that may or may not be reflected in business and regulatory requirements.

There are times where there is concern in the community about the interpretation and/or application of particular resolutions or the administrative actions taken by the UN. Both existing community bodies, or new advocacy or interest groups will express their views and concerns to the United Nations. Individuals and groups from the media can also be part of this process. You may consult and with and form an ongoing relationship with these groups to provide briefings and receive feedback in return.

Some departments, such as Public Information also have established relationships with researchers, historical groups, or enthusiasts who take a particular interest in the organization’s archives. Community views may affect UN policy informally. Alternatively, the activities of these groups may impact more formally on the process of administration and eventually their views can be transformed into formal accountability requirements.

Nonetheless, it is often difficult to discern what evidence the United Nations should create and keep to satisfy community expectations until it fails to anticipate or recognize an interest in some way and attracts public criticism. Evidence of potential
value will include policy documents and general correspondence that reveal UN’s changing stance on a particular issue or a community’s shifting response over time. The value of such records becomes obvious when the histories of particular organizations, functions or activities are commissioned.

**Identify types of recordkeeping requirements**

You also need to recognize different types of recordkeeping requirements so that you can plan how to satisfy them. The following table shows a range of types of recordkeeping requirements and examples of each.

<table>
<thead>
<tr>
<th>Type of recordkeeping requirement</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Creation of a record</em></td>
<td>'An invoice must be created.'</td>
</tr>
<tr>
<td><em>Capture and maintenance of a record</em></td>
<td>'Submissions received by the organization must be registered.'</td>
</tr>
<tr>
<td></td>
<td>'A record of the conversation must be kept.'</td>
</tr>
<tr>
<td><em>Retention and disposal of a record</em> (could be expressed in a number of ways as shown below)</td>
<td></td>
</tr>
<tr>
<td>- in terms of the record's retention for a set period</td>
<td>'Leave records must be kept for at least 6 years.'</td>
</tr>
<tr>
<td>- in terms of the record's retention for an extended period</td>
<td>'These records should be retained permanently.'</td>
</tr>
<tr>
<td></td>
<td>'The records must be retained as archives.'</td>
</tr>
<tr>
<td>- in terms of the record's destruction</td>
<td>Receipt dockets must be destroyed within X months.'</td>
</tr>
<tr>
<td><em>Access to a record</em></td>
<td>'Licensees should not be given access to the records of other licensees.'</td>
</tr>
<tr>
<td><em>The form a record should take</em></td>
<td>'An invoice should be created'</td>
</tr>
<tr>
<td></td>
<td>'A register must be kept'</td>
</tr>
<tr>
<td><em>The content a record should contain</em></td>
<td>'The Register must contain details of the person’s name, current address,'</td>
</tr>
</tbody>
</table>
The quality of the record

'Details in the register should be accurate and authenticated by a senior officer.'

**Required recordkeeping functionality**

There are also recordkeeping requirements that relate to the functionality a system should have to support good recordkeeping. These requirements are just as important, as they ensure that records are created and maintained in appropriate ways to ensure they function as evidence. For more information about required recordkeeping system functionality, see *Introducing DIRKS - Characteristics and functionality of recordkeeping systems*. Step D - Sources for Step D assessment also contains additional information on these system requirements.

**Linking requirements to functions and activities**

Once you have identified your recordkeeping requirements in relation to the area of business you are investigating, you need to be able to link them to the function/activity to which they relate. If you are only concentrating on one particular function you will only need to focus on:

- what specific requirements you have found in relation to that function, and
- the broad recordkeeping requirements you have that relate to every function.

The advantage of linking recordkeeping requirements to functions and activities is that you can place them in context. You can then see where responsibility lies for ensuring requirements are met and you can assess if and how the recordkeeping requirement is being met. If you are doing Step D: *Assessment of existing systems* it will also assist you to assess systems supporting those functions and activities.

With requirements that apply to the activities of the organization as a whole, you will also need to consider how these requirements are being met across the organization in Step D.

**Analysing risk**

Overview
Types of risk examined in Step C
When to analyse risk
How to analyse risk
Consequences of risk
Results of risk analysis
Overview

Once recordkeeping requirements are identified and linked to functions and activities, you should analyze the risks associated with the requirements. This section explains the types of risk you examine in Step C, and gives further information on when and how to analyze risk and what to do with the results of your risk analysis.

Types of risk examined in Step C

The risk assessment in Step C is a different approach than that used in other steps. In Step A: Preliminary investigation and Step B: Analysis of business activity you examine the risks related to the business activity, that is, the risk involved in performing the work. In this step, you examine recordkeeping risks.

Recordkeeping risks are the risks that result from:

- creating and maintaining records
- not creating records at all, or
- not having appropriate or adequate records of the work to meet your recordkeeping requirements.

There are links between the two types of risks.

<table>
<thead>
<tr>
<th>Example: Links between types of risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>The high risk related to a particular area of business could be reduced by good recordkeeping. Therefore the risks of not creating records relating to this area may be high.</td>
</tr>
</tbody>
</table>

When to analyze risk

You do not need to perform a risk analysis for all of your records. Rather, you should look at your list of recordkeeping requirements and determine if:

- it may not be in the UN's best interests to meet a requirement fully or in part, or
- there is a conflict between requirements.

In these cases, a risk assessment of the likely consequences of not meeting the risk is necessary.

<table>
<thead>
<tr>
<th>Example: Requirement not in the organization's interests to meet</th>
</tr>
</thead>
<tbody>
<tr>
<td>You may have identified that there is no legislative or business need, but there is a community expectation that a certain series of records is available for research. Yet, it is extremely costly to store these records, and expensive and difficult to</td>
</tr>
</tbody>
</table>
continually migrate them so that they remain accessible.

You need to assess the risk to the organization if it destroys the records in a shorter period of time. If the result of the risk analysis is that the risk is 'low' the organization may choose not to meet the community expectation.

In the majority of cases, regulatory requirements are essential for organizational accountability and you should meet them. However, implied requirements or the level of quality to which the requirements are met might be questioned.

The level of risk associated with maintaining records may influence the length of time they are retained, particularly if the risk of disposing of them is moderate to low. Risks associated with maintaining records include:

- costs of preservation, storage and security
- costs of setting up programs, policies, procedures and systems to manage the records effectively, and
- risks of improper access leading to breaches of privacy or confidentiality.

### Tip: Risks of discovery or access do not justify non-creation or disposal

The risks of discovery action or legitimate access to records should not be used to justify the non-creation or premature disposal of records that it would otherwise be desirable to have.

### How to analyze risk

If there are requirements your department/section is considering not meeting, or if there is a conflict between requirements, you can determine through risk assessment an appropriate course of action.

You need to establish clear definitions of what constitutes different levels of risk to your department/section (including 'unacceptable risk' as a benchmark), and then prioritize the identified recordkeeping requirements according to this scale. You may already have in place its own risk management policy that defines such benchmarks.

### Consequences of risk

#### Consequences of not meeting requirements

Decisions not to meet requirements may:

- compromise current or future business activity
- compromise the organization’s capacity to defend or prosecute claims
- result in loss of amenity for the organization
- attract adverse publicity or community reaction
• compromise rights and entitlements of other parties affected by UN decisions and actions
• compromise wider UN interests, and
• diminish archival resources.

**Example: Consequences of not keeping adequate records - out of court settlements**

The Audit Office of New South Wales (NSW), Australia, did an investigation into out of court settlements made by government agencies in 1999-2000. They sampled 85 agencies of all types and sizes. 163 out of court settlements were made in this period, costing $19.2 million in awards and costs.

The Audit Office reported that "in some instances, settlement was recommended because agency records were deficient and defending the action in court would therefore be much harder. Agencies should be reminded of the need to maintain full and complete records in accordance with the (NSW) State Records Act 1998." [1]

**Consequences of meeting requirements**

Decisions to meet recordkeeping requirements will also have consequences such as:
• costs of preservation, storage and security
• costs of setting up programs, policies, procedures and systems to manage the records effectively, and
• risks of improper access leading to breaches of privacy or confidentiality.

**Results of risk analysis**

The results of this risk assessment, and risks linked to particular functions (Step B: *Analysis of business activity*) can help determine what recordkeeping requirements should be met. The various tables, matrices and other techniques used in risk and feasibility analysis will help you to:
• identify specific areas of recordkeeping risk in your department/section
• quantify and prioritise those risks in terms of the cost to, or impact on, your department/section (ie operational, financial and technical feasibility factors), and
• make, justify and document recommendations for meeting recordkeeping requirements.

**Documenting Step C**

**Overview**
Document recordkeeping requirements
Overview

This section outlines the type of documentation you should keep about sources, recordkeeping requirements and findings in Step C. It also explains when you should maintain and update that documentation.

Documenting recordkeeping requirements

Importance of documentation

It is important to document what sources you have used for the Step C analysis, as you may need to justify your findings or refer to the sources again. A simple list of sources is sufficient to record the location of sources.

You will need to document each of the business, regulatory and community-related recordkeeping requirements that you have identified in relation to your project. If you are continuing with DIRKS these can be used to assess your existing systems and work processes (Step D), develop recordkeeping strategies (Step E) and design new systems and work processes (Step F).

You should use a format that is easily maintainable as requirements are prone to change and will need to be amended or updated from time to time.

Tip: It is a recordkeeping requirement to document changes to recordkeeping requirements

The need for evidence of changes to recordkeeping requirements is in itself a recordkeeping requirement, because it enables your department/section to account for past recordkeeping actions and decisions.

Documentation options

There are a number of possible options for documenting recordkeeping requirements, depending on your department/section’s needs and the number and complexity of its requirements. For example, you may choose:

- tables/templates in a series of word-processed documents
- spreadsheets, or
- databases.

Templates
The following table illustrates how full information on a recordkeeping requirement may be documented in a simple template format. The requirements are grouped together as they relate to the one record and come from one source.

| Name of Department/Section | Department of Management  
|                           | Archives and Records Management Section |
| Source name               | ST/AI/326 |
| Effective date            | 28 December 1984 |
| Source type               | GA Resolution |
| Reference                 | Section II.8 |
| Function/activity          | Disposal |

**Citation**

S.II.8 "Secretariat units shall not dispose of records in their possession without the written authorization of the Chief of the Archives Section. The latter may require that samples of the records proposed for disposal be sent to him for review prior to authorizing disposal" 

**Requirement(s) derived from the citation**

- Disposal: ARMS approval is required be records can be disposed.
- Form: Approval for disposal form must be completed and authorized.
- Capture and maintenance: Information about records destroyed must be maintained in a destruction register in the records management system
- Retention and disposal: The register will be retained permanently.
- Access: Information in the register can be released when it is 20 years old

**Risk assessment**

Medium

[Drafting note: ARMS would like to develop a suitable template for documenting recordkeeping requirements. Ideas are welcome].

**Spreadsheets**

Spreadsheets offer more functionality than word-processed document and need not be complex. Benefits of spreadsheets include being able to sort by different
elements, for example function or requirement type, making your research more useable for different purposes.

**Databases**

In instances where there are many recordkeeping requirements, or where requirements are likely to change frequently, it may be appropriate to place information about your recordkeeping requirements into a database. The advantages of a database over other options are:

- only having to record information, including changes, about a particular requirement, function, activity or function-activity pair once
- being able to produce tailored views of the information in the database to meet different needs.

This option will involve more work at the outset, because a database needs to be properly specified, designed and documented for it to be useful and maintainable.

**Information to include**

Regardless of the format that you choose, you will need to decide what data to compile about your recordkeeping requirements. You should consider the number and complexity of your recordkeeping requirements, the project scope, and exactly what information is essential, and create documentation that suits your needs. Documentation of the requirements could include all or a selection of the following:

- the name of the source including reference number (ie resolution title and number, publication title and details)
- the date the source came into effect (ie publication or issue date and superseded or decommissioned date)
- a description of the source (eg resolution, regulation, directive, industry standard, best-practice standard, internal policy, community expectation)
- the specific paragraph, clause, section or page in the source that contains the requirement
- a statement outlining how the requirement relates to the organization’s specific situation (ie the recordkeeping requirement). Remember requirements relate to records and the statement should also identify the record involved, eg a register, minutes of meetings etc
- the stakeholder that has their interest met by the requirement eg. a community group or a particular section of the organization
- the evidential need the requirement relates to (eg the content, form or quality of the record or its creation, retention, disposal or access)
- the business function, activity or function-activity pair the requirement applies to (ie drawn from the analysis of business activity in Step B)
- the citation of the precise text in source which specifies (or implies) the requirement
• the organizational position responsible for ensuring that the requirement is met, and
• results of any risk assessments.

[Drafting note: ARMS would like to provide a detailed example of recordkeeping requirements for a whole function or section. If anyone has examples they consider suitable, and are willing to share them, they would be greatly appreciated].

**Report to management**

For most DIRKS projects, your prioritized recordkeeping requirements should be formally submitted to management for endorsement. It is also particularly important to justify your recommendations if you are not meeting certain recordkeeping requirements. These management-endorsed recordkeeping requirements will provide a mandate/specification for the creation of records in the department/section and for the design of systems to meet those requirements.

You may also wish to draw on the generic characteristics of systems that keep records to inform management about the structures necessary to support these recordkeeping requirements (see *Introducing DIRKS – Characteristics and functionality of recordkeeping systems*). This report can also be used as an opportunity to gain management support for future steps.

If you are developing a retention schedule, you may wish to postpone seeking management approval until after you have completed disposal recommendations. However, it is important that management endorses the full set of recordkeeping requirements including creation, access, content and form, not just those relating to retention or disposal.

[Drafting note: ARMS would like to provide a model report to management on agreed recordkeeping requirements. If anyone has examples they consider suitable, and are willing to share them, they would be greatly appreciated].

**Maintain and update documentation**

Recordkeeping requirements will form the agreed benchmark against which your recordkeeping practices will be judged, therefore it is important to track changes to recordkeeping requirements over time. Records about past and current requirements should be maintained, because such information provides context for the evidence that your department/section chooses to keep.

Changes to recordkeeping requirements could occur as a result of:

• changes to business practices or needs
• changes to the regulatory environment
• changes in perceptions of risk or priorities
• the department/section losing or gaining functions
• tests in Steps E, F or G that expose flaws or inconsistencies in the requirements
• the discovery, during systems design and implementation, that a particular requirement cannot reasonably be met due to financial, personnel, design, equipment or other considerations, or
• the results of a post implementation review of a recordkeeping system (Step H) or ongoing monitoring.

In these cases, you will need to review your analysis of recordkeeping requirements and risks and document the changes.

Footnotes

Step D - Assessment of existing systems

Identify and analyze existing recordkeeping systems and other information systems to measure their performance against the requirements for records.
ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step D
Identifying systems for Step D assessment
Sources for Step D assessment
Assessing and documenting systems

Content and scope of Step D

Overview
Aim of Step D
Summary of Step D
Why should you do Step D?
Case study - issues identified in Step D assessment
Relationship to other steps

Overview

This section is an introduction to Step D: Assessment of existing systems. It:
- outlines the aim of Step D, and what it can help you to achieve
- summarizes the major elements of Step D
- explains why it is important to undertake Step D for particular DIRKS projects, and
- shows how Step D relates to the other steps in the DIRKS methodology.

Aim of Step D

The objective of Step D is to determine how well systems in your department/section are meeting your recordkeeping requirements.

Summary of Step D
Step D is the benchmarking step of the methodology.

In Step D you:

- assess all relevant business information systems
- determine whether these systems are in fact recordkeeping systems, capable of meeting your department/section's requirements for record creation and management
- identify the gaps that may exist between your desired or required practice and your actual system operations

This requires you to have a good understanding of your department/section's recordkeeping requirements and to be able to identify and examine current business information systems.

**Example: System assessment**

In your department/section you have identified that it is necessary for your system to:

- maintain a history of past transactions that can be accessed as evidence of its business activities
- employ recordkeeping controls to facilitate management of this evidence through time.

If your system is not designed to do this, or cannot be modified to do so, you may be exposed to business and accountability risks. You need to assess this system to ensure it is capable of meeting your recordkeeping requirements.

**Why should you do Step D?**

Step D is the step where you get a concrete understanding of how business is transacted in your department/section and where you determine whether documentation of business transaction is adequate to meet your recordkeeping requirements.

By completing an assessment of your existing business information systems you will develop:

- an understanding of the strengths and weaknesses of your department/section's existing business information systems in terms of their recordkeeping capacities
- an appreciation of your department/section's potential exposure to business and accountability risks (in relation to the performance of your existing systems), and
- an informed basis for developing strategies to address your agreed recordkeeping requirements.
Using this knowledge, Step D will help you to determine whether existing business information systems, as whole or in part, need replacement or redevelopment to help you achieve your business needs.

**Case study**

The following information comes from an Australian Independent Commission Against Corruption (ICAC) report, *Investigation into the conduct of officers and students at University of Technology, Sydney, Australia*. It helps to illustrate the types of issues you may identify in your Step D research.

ICAC was investigating alleged improper use of a computerized student record system. A key business requirement in the university environment identified by ICAC is to ensure the integrity of university academic results. This means that records must provide an accurate representation of student results and be protected against alteration or unauthorised deletion. ICAC's investigations revealed that the business information system used to manage student results was not able to meet these key recordkeeping requirements.

Although not an example of a full DIRKS analysis, ICAC used system analysis techniques, similar to those outlined in Step D, to determine weaknesses or gaps in student record systems used across universities in NSW. The weaknesses included:

- absence of full audit trails
- infrequent checks that access levels are appropriate
- exception reports, which alert administrators to system breaches, are not being generated or used adequately
- too many staff with access to 'modify/create' records
- failure to check for and remove 'modify/create' access following staff resignation/changed duties
- failure to automatically remove 'modify/create' access when casual/temporary employment ceases
- students employed by the university having 'modify/create' access to student records

These gaps in the system meant that record integrity could not be assured and therefore this business system was not meeting one of the University's key objectives. The gaps also meant that significant fraud could, and in some instances did, occur. Undertaking a system analysis, based on knowledge of what you know systems should be capable of, will allow you to prevent similar inappropriate action in your department/section and will enable you to ensure that records and the systems that create and manage them, are actually meeting your business requirements and needs.

The example provided in the ICAC report also demonstrates the different types of issues you may identify in the course of your Step D analysis. Some may identify issues applying to the technical applications that are being used, but others will apply to the policy and procedural framework that support the system. For example, ensuring that business rules to remove the rights of former employees from the
system are policed would have circumvented many of the issues identified in the ICAC report. [1]

**Relationship to other steps**

**Steps A and B**

You may have completed all or parts of Steps A, B and C before undertaking your Step D research. If you have completed these earlier steps they will help you to:

- understand how your department/section operates, and
- understand your business operations

This is important context for your assessment of business information systems.

**Step C and an understanding of recordkeeping requirements**

Having an understanding of your department/section's recordkeeping requirements is crucial to your Step D analysis. Recordkeeping requirements, as discussed in Step C, are identified needs for evidence and information, derived from internal and/or external sources. Recordkeeping requirements can be satisfied through recordkeeping actions, such as record creation, capture, management and use.

If you have not conducted the earlier steps, you will need to have a good knowledge of your department/section's business needs and the requirements for evidence and information that are derived from this business.

If you have a good idea of the recordkeeping requirements in your department/section, you can use this step as the initial starting point of your DIRKS project, to help you establish a business case for a more extensive recordkeeping project that will result in the redesign of business systems.

**Steps E, F and G**

Step D is a crucial step if you wish to redesign business systems or develop new recordkeeping systems. You should undertake Step D to have an awareness of your current capacities or issues that relate to your current recordkeeping practices, before you embark upon Steps E, F and G of the methodology.

**Undertaking Step D in conjunction with other steps**

As has been stated, the DIRKS methodology does not need to be undertaken in a linear way. Therefore it may be feasible for you to undertake Step D in conjunction with your Step A preliminary analysis and organizational assessment. If you are doing a small-scale DIRKS project, you may also wish to merge your Step D and E analysis and combine your system assessment with an identification of appropriate strategies for remediation.
Identifying systems for Step D analysis

Overview
What type of systems should be assessed?
Determine the specific systems to assess
Business systems exist in a variety of forms
Focus on all systems performing the business you are analysing
Assess all components of a system
Keep your focus on the business you are examining

Overview
This section discusses the specific types of systems you will be examining in Step D: *Assessment of systems*. It is intended to help you identify the systems you need to focus on and examines the specific components of those systems that you need to consider.

What type of systems should be assessed?

The types of systems you are assessing in this step are those used to perform organizational business operations and which are required to keep evidence of those operations as records. They may be systems that we think of as traditional records management systems, or could be business applications, such as databases or web content management systems and their supporting infrastructure.

In reality, a business system can be anything from an Excel spreadsheet on someone’s hard drive to a system dedicated to a particular activity such as HR or financial management, to a million dollar database accessible via your website. It is also important that you evaluate every system involves processes that may have evidential requirements. This includes familiar automated systems such as accounting, human resource and client information applications that may not function as recordkeeping systems.

Any system which conducts organizational business activities and from which you require evidence of its operations should be included in the scope of your assessment.

Tip: Seek advice

If you are having trouble identifying all relevant systems, or want to ensure that you have examined all relevant systems, seek the advice of staff who perform the business activity you are assessing to make sure you have got everything covered.
Determine the specific systems to assess

When undertaking Step D, you will generally be focused on a specific area of business. You therefore need to target the system or systems that perform that business. When identifying the systems upon which you are to perform your assessment, you should bear a number of points in mind:

- business systems exist in a variety of forms
- focus on all systems performing the business you are examining, and
- assess all components of a system.

Tip: Focus on systems
The focus of your assessment of existing systems should be the broad systems used to manage records created in your department/section. Do not focus too much on the individual records that are managed within the system - your focus should be on how these records are managed and the qualities of the system within which they are kept.

Business systems exist in a variety of forms

Be aware that business systems can exist in any form – they can be purely electronic, they can be paper based or they can be hybrid systems. Hybrid systems represent a mixture of electronic and paper based components. Systems can be also small, discrete and located in one specific area of your business, or they can be large and diverse structures that span a number of geographically diverse business areas.

Tip: Only assess systems from which you require evidence
You may have systems which are managed for their information value only – they transact no business and no evidence is required of their operations. Such systems generally contain timely, manipulable information. A database containing name and address details of your clients is an example of such a system. You don’t need to include these in your system assessment. Remember, you only need to include in your assessment those systems from which you require evidence of their operations.

Focus on all systems performing the business you are examining

Whether you are doing DIRKS as a whole-of-organization exercise or whether you are focussing on a specific area of business, you will need to assess ALL systems in the functional areas you are focussing on, not just those which are known to be operating as recordkeeping systems.
Example: Poor information systems contribute to collapse of national banks in Jamaica

In the late 1990s, a number of large national banks collapsed in Jamaica, precipitating a national financial crisis. In the years since the collapse, research has been done into some of the recordkeeping-related causes of the crisis. Poor business information systems, and the number of ad-hoc and uncontrolled systems adopted to circumvent these, created a number of problems.

Since the banks’ existing computer systems lacked the functionality to produce the types of reports that managers required, managers tended to create and use ad hoc reports using popular spreadsheet software (e.g., Excel)...

Many of these spreadsheets provided what could be viewed as important evidence of decisions concerning critical bank business functions such as asset and liability management, budgeting and loan loss provisioning, however, the informal way in which managers created and kept these spreadsheets often led to dissolution of the meaning in these records over time...the spreadsheet software had no features that automatically linked spreadsheet documents...to the business transactions and processes from which these records had been created...

Over time, the context in which the Jamaican bank managers had created these records became more distant and the significance of the records and their meaning became more obscure...Moreover, the records’ meaning and significance often were lost completely because of the ease with which the technology for storing spreadsheets permitted alterations and deletions of computer files, a characteristic which also undermined accounting and accountability for the banks’ financial transactions. [2]

Talking to action officers and drawing on your analysis conducted in previous steps of the methodology will help you to be aware of all possible systems that should be incorporated into your assessments, including those ad hoc ones that way have been created as ways around existing problems.

Tip: Systems can span business units

Be aware that systems may cut across business units - not all systems that perform a particular function will be located in the one section of your department/section. If you undertook process analysis in Step B: Analysis of business activity, you can refer to this documentation to identify the disparate business areas and systems that you need to examine.

Assess all components of a system
Remember, when you are assessing your organizational business information systems you are not just looking at the technical components of these, but also the broader framework of:

- the people who use the system
- the people who manage the system
- policies and procedures that support system maintenance and use
- recordkeeping tools used in the system
- business rules applied within the system, and
- training programs that support system use.

Step D will provide guidance about how to assess each of these different system components.

**Keep your focus on the business you are examining**

To identify systems for your Step D assessment, you need to keep your focus on the business activity or activities you are examining, as this will help you to identify the systems that are relevant to your assessments. In Step B you identifies business activities and processes, in Step D you are assessing the capacity of the systems that perform these processes.

Remember that the business activity you are examining may cut across more than one system, so be sure to think broadly and include all relevant components when assessing your existing systems.

**Example: Assessing the personnel function**

As has been discussed, one organization wanted to improve the way personnel management was documented. In Step D, the focus of their system assessment had to be quite broad as, as they had identified in Steps A and B, aspects of personnel management were performed across the organization. The Staffing Section obviously had a coordinating role, but section managers also administered a range of personnel activities. To determine whether existing systems were adequate, they needed to look at:

- the personnel database administered by the Staffing Section
- the hard copy personnel files maintained by the Staffing Section
- the staff files and work planning documentation maintained by section managers, and
- the policies, procedures and training that applied in each of these environments.

Therefore not one, but a range of systems needed to be examined to ensure that the adequacy of their personnel records could be assessed.
Sources for Step D assessment

Overview
Determine the requirements or benchmarks specific systems must meet
Use appropriate benchmarks
Other sources

Overview
This section outlines the different sources you will need to conduct a system assessment. These include:

- recordkeeping requirements, identified in Step C: Identification of recordkeeping requirements
- required recordkeeping functionality, as outlined in Introducing DIRKS, Characteristics and functionality of recordkeeping systems, and
- all relevant system components, including policies, procedures and training materials.

Determine the requirements or benchmarks specific systems must meet

Once you have identified the system or systems that should be the focus of your assessment, you need to determine their adequacy.
To do this it is necessary to establish measures or benchmarks against which your systems can be assessed.
The benchmarks that should be used to assess your systems are:
  - identified recordkeeping requirements and
  - required recordkeeping functionality.
You should measure the systems you need to assess against both of these types of requirements.

Identified recordkeeping requirements

Recordkeeping requirements pertaining to your department/section’s business activities can be identified using Step C of the DIRKS analysis. If you have not undertaken Step C but are aware of the recordkeeping requirements that relate to the area of your business requiring assessment, be sure to document these. You should have some documentation of recordkeeping requirements to ensure the consistency and comprehensiveness of your analysis.
Tip: Pose questions

It may be helpful to reframe the requirements for evidence as a series of questions. The answers to these questions should help to determine whether the requirement is satisfied or not.

For example, in doing its Step C: Identification of recordkeeping requirements assessment, one organization identified that the following requirement applied to the management of its licence records: 'Licensees should not be given access to the records of other licensees.'

To determine whether the system they use for managing their licencing operations is meets this requirement, they could ask:

- is the system capable of restricting access to designated users?
- does system user training make it clear that access restrictions apply to licensee records?
- do the policies that are part of this system inform staff of these access rules?

If the response to each of these questions is yes, then it is likely that the recordkeeping requirement has been met.

Tip: Remember all components of a requirement

Remember that recordkeeping requirements may have several components to them. Be sure to read your requirements thoroughly and measure whether all its requirements have been fulfilled.

For example, for a licensing activity, a recordkeeping requirement could be:

   'When a licence is revoked, a record of the reasons for revoking the licence will be created and retained with the licence records.'

This requirement contains a number of parts. Firstly it states that records must be created. In your system assessment you would firstly need to ensure that records documenting the licensing process are in fact being created, including records of licence revocation. You would then need to determine that the system is capable of linking all related records in ways that meet your identified business requirement.

It is also important to realise that the sources that you used in step C contained implicit and explicit references regarding the form, content and quality of evidence your organization should satisfy. It is important that the survey techniques that you use in step D are flexible enough to assess the variety of recordkeeping requirements identified in the earlier step.

Required recordkeeping functionality

Required recordkeeping functionality refers to the recordkeeping controls and business rules that are necessary to ensure your system operates effectively as a recordkeeping system.
The range of qualities a system should possess in order to be a recordkeeping system is outlined within the section of *Introducing DIRKS, Characteristics and functionality of recordkeeping systems*. Review this section to help identify the range of recordkeeping functionality your business systems may need to possess. You can turn these requirements into benchmarks for your system assessment.

**Example: Assessing the recordkeeping functionality in a system**

In the NSW (Australia) public sector, all records of government business must only be disposed of in accordance with authorized records retention and disposal schedules. General recordkeeping rules (outlined in *Characteristics and functionality of recordkeeping systems*) also specify that records must reside in a system where they cannot be tampered with or altered. In your system assessment, you may decide to assess whether your systems are capable of providing this recordkeeping functionality.

Questions you may want to use to assess this functionality in a system could include:

- is the system capturing business records?
- is the system ensuring that all necessary metadata is captured?
- are records protected against alteration/deletion?
- is the system implementing disposal decisions?
- are strategies for the long term preservation of records in place?
- can records be easily accessed and retrieved?
- can the system track record use and management?
- is information duplicated?

Note, that depending on the business it documents, the system you are assessing may need to meet these and a range of other requirements.

**Use appropriate benchmarks**

If you undertook Step C of the methodology, you may have identified a range of recordkeeping requirements relating to numerous business activities your department/section performs. When undertaking specific system assessment in Step D, you need to make sure you identify the recordkeeping requirements that pertain specifically to the system or systems you are assessing. That is, you need to identify the recordkeeping requirements that are relevant to the area of business you are focusing on.

The same requirement applies to the recordkeeping functionality you are assessing. Make sure you assess a system only against the functionality you need it to have in order to meet your business requirements, and the recordkeeping functionality outlined in *Characteristics and functionality of recordkeeping systems*. Only compare a system to the recordkeeping requirements that relate to it.
Tip: Use others' experience

If you have access to the research of other UN offices that have undertaken the DIRKS methodology and compared their recordkeeping requirements against the current functionality of their systems, this data should provide some useful models for you.

Be aware, however, that you cannot replicate the recommendations of another office’s research in your own environment, even if the office performs very similar functions. Each business environment is unique and while you can certainly learn from the experience of others, it is very important to ensure that your DIRKS work is specific to and helps resolves the issues facing your own department/section.

Other sources

To assist with your system assessment, you may want to examine a range of other sources to ensure you have a good understanding of the system’s role, operation and structure and to ensure you are measuring the full functionality and capacity of the system against your recordkeeping requirements.

Given systems are comprised of people, policies, procedures, tools and technology, you will want to include all these components in your assessment.

There is a range of sources you can use to provide you with the information you will need, and to ensure you cover all relevant aspects of your system.

Interviews with system users and managers

The best means to understand how a system works is to talk to the people who use the system and the people who manage the system. These staff can summarise the role and functionality of the system for you and answer any specific questions you have.

If possible, try to talk to a range of staff. Include operational staff as well as managers to get a good understanding of the system’s operation and desired functionality.

Tip: Realise that you may be invading someone else's turf

It is important to realize that when examining a business system in depth, you may upset the manager with responsibility for that system. They may see the system as being their’s, and not a recordkeeping system that you should be concerned with. It is essential to get their support and advice for your assessment. Discuss your objectives with them and work with them to try and improve the system in ways that will meet both of your requirements.
Remember, DIRKS is intended to be a flexible methodology. Therefore you can include questions about system operation and functionality as a part of the interviews you may conduct in Step C to help identify recordkeeping requirements.

**Tip: Explain your project clearly**

Clearly explain to staff the types of information you are seeking in your system assessment. Clearly explaining your objectives will save time for all participants and will ensure you obtain the type of information you are seeking.

**System policy and procedure**

In the course of your system assessment you must examine the policies and procedures that support system maintenance and use. Remember that policy and procedure are a key component of any system and must be included in your assessment.

**Example: Lack of clear and consistent procedure contributed to the Jamaican banking collapse**

In the Jamaican banking collapse, lack of clear and consistent procedure was identified as a major system failing, and one of the significant contributing factors to the collapse:

- While deliberate failure to create and keep accurate and complete records of financial transactions did contribute to the problems experienced by the banks, the failed banks’ routine practices of records creation and recordkeeping were an equally, if not more, significant problem. As a result of these practices, managers and directors in these financial institutions and bank supervisory authorities lacked the trustworthy and timely and accounting and management information they needed to maintain effective control of the banks’ operations, to assess and manage their financial positions and risk exposures, and to prevent fraud. [3]

This assessment also identified that:

- The problems created by weak enforcement of any existing controls permitted the banks’ officers to record transactions according to their own motivations, preferences, and personal standards. [4]

Consequently poor evidence and information was created. This significant problem could have been avoided if clear procedural documentation had been in place.

All systems that need to operate as recordkeeping systems must be supported by policies and procedures. If the systems you are examining are not sustained by this type of documentation, be sure to make note of this. Steps E, F and G of the
methodology outline how you can develop policies and procedures as part of the process of transforming business systems into recordkeeping systems.

**Recordkeeping tools operating within the system**

If they exist, recordkeeping tools, such as retention schedules and business classification schemes, are key system components. In your system analysis you will need to examine these, if you have not done so already, to determine their currency and effectiveness.

When looking at tools you will also want to assess whether and how they are implemented within the system. You may want to ask:

- Are they employed systematically?
- Is their use automatic?
- Could their use be made easier?
- Are they supporting or hindering the satisfaction of recordkeeping requirements?

**Educational programs supporting the system**

Given the crucial role that staff has in a system's effective operation, your Step D analysis may also include an assessment of the training or communication programs that explain to staff how to use the system. Your department/section may not have such programs in place, but if courses, brochures or other resources exist, you should examine these to get an understanding of how the system operates, what users are required to do and other training frameworks that may be required.

Talk to key staff about the training they have received to help them perform their roles. Document any training programs you identify, and also document when they do not exist.

**Example: Lack of training contributed to the Jamaican banking collapse**

Lack of training in recordkeeping system operation was a problem that contributed to the Jamaican financial collapse:

In many of the failed banks, responsibility for the management of records stores was assigned to low-level clerical staff. For example, one person in charge of the registry for the credit files was untrained in recordkeeping principles and techniques. Neither had this person received any training in the basics of credit administration. Thus, this clerical officer was ill equipped to appreciate the information retrieval requirements of the bank's credit administrators and risk analysts and had little, if any, understanding of the value of, and techniques for, creating indexes [searching tools] to support managers' information requirements. [5]
Technical documentation describing the system

Obtaining a good, basic knowledge of how the technical components of your systems work - how they process and manage information - may be crucial to this assessment. In implementing Step D it is crucial to know your recordkeeping requirements, but also to understand how your online transaction processing system or decision support system fares in terms of its recordkeeping functionality. [6]

You may be able to gain a lot of information about your existing systems by reading relevant documentation on system functionality, requirements and operations. This documentation could include procedure manuals, disposal schedules, business rules specifying access rights, standards that need to be complied with, training materials etc.

If documentation is poor or non-existent, talk to staff that use the system and examine the system in operation to gain an understanding of its technical infrastructure.

You may also want to examine the business rules applied within the system - any rules built into it that specify how the system should function and manage data - and see how these correspond with or relate to the recordkeeping tools, such as retention and disposal schedules, that should be employed within the system.

Assessing and documenting systems

Overview

How is the analysis performed?
Tools to facilitate system assessment
Sample system assessment
Case studies and tips
Prepare a report

Overview

This section outlines the ways in which you can perform system analysis. It also provides examples of system analysis that can be used to guide your own assessment exercises.

How is the analysis performed?

Assessing systems in your department/section is best achieved by approaching each system with a specific set of questions in mind. These questions should relate to:

- the recordkeeping requirements this system should meet
- the recordkeeping functionality it should employ, and
any other relevant issues you've identified in the course of your Step A-C analysis.

It is likely that a number of these questions will be standard across the types of systems you assess, while those relating to recordkeeping requirements will of course change from system to system.

You may also want to prioritize responses. That is, you may want to say that a system is 'poor', 'inadequate', 'adequate' or 'good' when it comes to meeting requirements. Make comments or notes as you go. This will simplify your reporting down the track.

**Tip: What about big, complex systems?**

You may have large systems that perform a range of activities for your department/section. The analysis of this type of system is necessarily more complex than simple systems that only administer one discrete transaction.

In complex systems you should first identify the range of different activities and transactions they support. Assess the performance of each of these individually, to help avoid confusion. Document your analysis well, clearly differentiating between transactions, to provide a good basis to your final recommendations.

**Tools to facilitate system assessment**

**System inventory**

If you are assessing all systems that need to function as recordkeeping systems, or if you are examining a number of systems that are used to conduct a specific business activity, it can be useful to prepare a system inventory to help guide your assessment. A system inventory can just be a simple list of systems, or it can be a document that identifies your systems and provides you with a comprehensive overview of their functionality.

**Tip: Use OIT guidance**

The NSW (Australia) Office of Information Technology has developed an *Inventory Guideline* that explains how to compile a physical inventory and produce an 'information directory' of an organization. The guideline describes how to plan, perform and document the inventory. Attributes for each collection of information are listed as part of the inventory, including the type, source and custodian.

If you have completed Step A: Preliminary investigation, you may have already prepared a basic system inventory, when undertaking a broad assessment of your
department/section and its operations. See Focus of Step A assessment for more advice.

**Template for system assessment**

A template for system assessment is a tool that outlines the specific questions or issues you want to know or identify about the specific systems you are assessing. Developing a template to guide your system assessment will give structure to your system examination and will also help you to document your assessment. If you know your assessment is going to involve more than one system, the template is also a means of ensuring you apply a consistent approach to each individual assessment you conduct.

A template may include a range of fields that should be very specific to the needs of your department/section. A range of generic fields could include:

- name of system
- function/activity performed or supported by system
- transactions performed within system
- recordkeeping requirements system is subject to
- location of system
- system administrator
- identified system risks
- size of system
- system controls/business rules implemented
- system users - number and location (business unit, external users)
- system interfaces - is the technology employed stand-alone or linked to other applications
- type of data stored within system
- frequency with which the information is collected/stored, accessed/used/disposed
- business rules are employed within the system
- metadata employed
- identified constraints or problems affecting system use
- physical form of information within system
- physical location of system and the information it contains
- budget allocation used for collection/storage/access/use/disposal of information within the system
• privacy management implications of information within the system
• standards applicable to the system
• how are records created in the system?
• how are they described?
• how are they used?
• how are they maintained? [7]

Please note that this list provides a very extensive range of issues, templates you develop need not be so extensive.

You should also include fields that enable you to test the specific recordkeeping requirements you have developed for the system. The list of questions or the template you develop can be as large or small as is appropriate to your requirements.

Response form for system assessment

Based on the system assessment template you develop, you should consider a means of documenting the systems you assess. This form will need to note the variety of questions you’ve asked about a system, and flag your responses to these questions.

Note that in your response form you will possibly want to leave space to make notes about the ‘gaps’ that your system assessment has identified. Please see the sample system assessment below for more information.

Sample system assessment

The following example illustrates how a system assessment or ‘gap analysis’ may be undertaken with respect to a sample business activity, grant management, using a recordkeeping requirement derived from an Independent Commission Against Corruption (ICAC, NSW, Australia) guideline.

The assessment is divided into various stages, in accordance with the methodology that has been outlined above.

Step 1 - Check the recordkeeping requirement/s

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number</td>
</tr>
<tr>
<td>Source name</td>
</tr>
<tr>
<td>Source type</td>
</tr>
</tbody>
</table>
**Step 2 - Identify the system to which the recordkeeping requirement applies**

Identify the relevant system or systems, basing your assessment on the business activity the systems perform. In this example, the analysis would be focused on the system or systems that are used to administer grant management. Remember to identify all components of a system - people, policy, procedure, tool and training.

**Step 3 - Translate recordkeeping requirements into questions you can use to interrogate the system**

The following questions will help test whether requirements for evidence are met by the existing system(s):

- are records of funding recommendations and decisions made?
- are these records captured in the system?
- are these records available for external scrutiny?
- are such decisions supported with explanatory notes?
- are the Minister's decisions documented?
Step 4 - Undertake system assessment

Such findings may be documented in the following manner:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Response</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendations and decisions are made?</td>
<td>Yes</td>
<td>Nil</td>
</tr>
<tr>
<td>Records are captured into recordkeeping system?</td>
<td>No</td>
<td>Decisions kept by individual, or CEO</td>
</tr>
<tr>
<td>Records are available for external scrutiny?</td>
<td>No</td>
<td>Kept in hard copy form by individual, not in recordkeeping system</td>
</tr>
</tbody>
</table>

Such a methodical means of assessment will enable you to identify exactly how your systems are meeting, or in this case not meeting, your recordkeeping requirements. You can use the results of this assessment to identify strategies for rectifying these gaps in Step E: Identification of strategies for recordkeeping.

Case studies and tips

Example: Common issues you may identify
Indiana University recently undertook a project to assess major business systems operating across the university. Common issues that arose in the University's assessments of its systems included:

- staff not sure of what records are being retained or how to access older records
- duplicate files managed within systems
- inadequate naming conventions
- no policy or procedures explaining what records should be captured or how they should be captured. As a result there is no routine or systematic capture of records
- no clear retention strategies - staff tend to keep everything because there are no clear rules, or destroy records without appropriate authorization
- some systems do not allow older records to be saved, instead they overwrite old data
- some systems do not capture important metadata
- some systems do not maintain the relationship between a record and its metadata
- some systems do not maintain a logical or physical relationship between
records generated by the same or related business processes

- staff are creating paper versions of electronic records, or creating personal electronic databases because they fear they will not be able to retrieve information from central systems. [8]

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**Example: Results of Step D analysis**

One organization had a requirement to keep records of its licence agreements for fifty years after the issue of the licence. These records must be securely maintained for the duration of their existence. The organization has a number of offices across the state, each performing the licence management function.

After undertaking their Step D analysis, it was concluded that:

- the long term accessibility and evidentiality of the records was not assured. Licence records have to survive for upwards of fifty years and currently no strategies are in place to ensure this long-term objective is achieved.

- records are not stored in appropriately secure ways. System controls prevent unauthorized personnel from accessing and changing the records, but they do not prevent authorized staff from accidentally or intentionally modifying or deleting licences.

- policies and procedures for system use are widely available at central office. Training in system use and access is often frequently conducted in this office. In the regional offices, however, little policy or procedural documentation exists and that which does exist is frequently different to that used in central office. Regional office staff have also not been trained in system use. [9]

This case study is discussed again in Step E, to illustrate how the strategies outlined in the DIRKS Manual can enable you to remedy these types of system problems.

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**Tip: Duplicate systems and duplicated information**

Your assessment may reveal that information is duplicated across your department/section, in formal or informal systems. While removing duplicated information may increase organizational efficiency, it could also be a sign that something is wrong with current systems and practices. By asking staff why they retain their own copies of records or operate their own personal systems, you may discover:

- poor response times from existing recordkeeping staff or systems hamper work
- lack of trust in current systems
- no knowledge of official systems, or
- inaccessibility of official systems.

These problems should be included in your analysis and strategies to address them can be identified in Step E.
How long does system assessment take?

Unfortunately there is no easy answer to the question of how long it will take to assess a system or systems in your department/section. This issue will depend on the amount of staff you are able to devote to the project, the size of the system or systems you are assessing and the extent of support you have for your investigations.

Example: How long does system assessment take?

Indiana University calculated how long it took them to assess one of the largest systems in their organization, the Financial Aid Information System. This system processes data for an eight-campus system with over 90,000 students. It was calculated that it took 7.5 working weeks to identify all the functions, activities and transactions performed within this system, assess how the different records created in the course of these activities are managed, describe the general rules and operations of the system, and provide a series of recommendations as to how the system could be improved. Project staff said that as this system was the first they assessed, subsequent analysis would be faster. Note too that this was a very large and complex system and this explains the length of time required to assess it. [10]

Tips for improving your system assessment

The following advice may help you with your system assessment:

- you will notice similarities between systems. Once you have assessed your first system, this assessment will provide you with relevant pointers or areas to look out for in subsequent analyses.
- do not over-describe systems. It is hard to strike a balance and when you are uncertain you should document more about a system rather than less, as this will save you repeating your efforts down the track. Based on their experiences, staff at Indiana University decided that in future they would spend less time describing how the technical components of systems manage a transaction and less time actually describing functions, activities and transactions.
- use risk assessment strategies to pinpoint functions and activities that have the greatest importance to your department/section, or that are subject to the greatest risk.
- employ staff with system assessment skills and with a good awareness of your recordkeeping requirements to undertake your system assessment. [11]

Prepare a report
No further action is warranted if your assessment reveals that your department/section's existing systems are fully functional and satisfying requirements for evidence, but it may be worth compiling a report of your assessments and findings for future reference.

If however you did identify some flaws in your system analysis that you want to rectify, it is important to prepare a status report on your department/section's existing systems before starting to design or redesign business information systems. Depending on the nature of your recordkeeping project, the report may include:

- a brief summary of the gap analysis, an outline of the strengths and weaknesses of your business information systems
- detailed documentation highlighting the extent to which systems satisfy each recordkeeping requirement, and/or
- an assessment of the operational, technical and economic feasibility of addressing the system's deficiencies.

While the processes of documentation and assessment are resource intensive, they will provide a sound basis for developing functional specifications for any new or enhanced recordkeeping systems (Steps E and F).

**Tip: Prioritize your recommendations**

Not all the issues you identify in your assessment will have the same degree of importance or seriousness attached to them. Be sure then to prioritize your recommendations to ensure that those of key importance are addressed by your future DIRKS work.

You may also decide to categorize your findings. Indiana University used the following to categorize their findings:

- highest priority recommendations
- concerns
- for your information [12]

In this way you can make clear to decision makers in your department/section what the key concerns are that need to be addressed, but flag another range of issues as well.

**Footnotes**


[3] Ibid., p.86.


Step E - Identification of strategies for recordkeeping

Identify strategies for satisfying recordkeeping requirements, which may include adopting policies, procedures and practices, designing new systems, implementing systems in a way which satisfies a recordkeeping requirement, or adopting standards. Strategies may be applied to each recordkeeping requirement separately or in combination. Strategies should be selected on the basis of the degree of risk involved in failure to satisfy a requirement within the business function that the recordkeeping system is intended to support, the existing systems environment and the corporate culture in which the strategy should succeed.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step E
Policy strategy
Design strategy
Standards strategy
Implementation strategy
Selecting appropriate strategies

Content and scope of Step E

Overview
Aim of Step E
Summary of Step E
Why should you do Step E?
Relationship to other steps

Overview

This section is an introduction to Step E: Identification of strategies for recordkeeping. It:

- outlines the aim of Step E, and what it can help you to achieve
- summarizes the major elements of Step E
- explains why it is important to undertake Step E for particular DIRKS projects, and
shows how Step E relates to the other steps in the DIRKS methodology.

**Aim of Step E**

Step E is the point in the DIRKS methodology when you identify strategies to transform your business systems into recordkeeping systems. By applying the range of tactics it outlines, you will specify the changes necessary to:

- meet the recordkeeping requirements identified in Step C and
- redesign the systems assessed in Step D so that they are fully able to meet your recordkeeping needs.

**Tip: Focus of Step E**

Step E is about determining the right approach to your system design or redesign. In Step E you choose a mix of strategies to apply to meet your identified recordkeeping requirements. In Step F you commence the actual process of system design and develop means by which you can actually implement the strategies you have chosen.

**Summary of Step E**

The international standard ISO 15489 recommends four strategies that can be used to improve recordkeeping in your organization:

- policy
- design
- implementation, and
- standards.

A mix of strategies should generally be selected. The choice should be based on knowledge of how your department/section functions (see Step A: Preliminary investigation) and the specific recordkeeping gaps (identified in Step D: Assessment of existing systems) you are trying to remedy.

The standard also provides you with scope to devise your own strategies for meeting recordkeeping requirements.

Step E is focused on making improvements to all components of a system in order to meet recordkeeping requirements. The recommended tactics may be applied separately or in combination, to help you meet your recordkeeping requirements. Implementing these strategies will help you to ensure your department/section has the recordkeeping systems necessary to sustain its business activity. You can select from between them to determine the most effective combination of strategies that will enable you to meet your range of business needs.
Why should you do Step E?

In Step E you brainstorm ideas and solutions for the problems that have been hampering your recordkeeping.
You will transform a number of these ideas into tangible recordkeeping improvements in Step F: Design recordkeeping systems.

Relationship to other steps

Step D

Step E has a close relationship with Step D. In Step D you assess business information systems and determine if they are a liability because they do not meet recordkeeping requirements. In Step E, you should take this assessment as the starting point to begin to identify how to rectify these problems. As a result of their close relationship, Steps D and E - identification of problems and determination of solutions - will often be undertaken in parallel.

Step F

If the objective of your DIRKS project is to develop or redevelop systems for recordkeeping, undertaking Step E will provide you with a clear outline of the directions you want your system design to take and a good understanding of the problems you need it to address. Step E will also help you to ensure that the system you develop in Step F is comprehensive and adequately addresses all the issues identified in your Step D analysis. Again, Steps E and F can be undertaken in parallel, so that you can actually build solutions as you develop your strategies.

Policy strategy

Overview
What is the policy strategy?
When should the policy strategy be used?
Examples of the policy strategy
Compliance issues

Overview

This section examines what the policy strategy is and explains how it can be used to help you meet your recordkeeping requirements. It provides a number of examples of uses of the policy strategy.
What is the policy strategy?

The policy strategy involves using policy or other forms of organizational rules as a means to meet recordkeeping requirements. Employing the policy strategy involves developing:

- policies
- procedures
- practices
- guidelines
- business rules, or
- other instruments, to specify what recordkeeping is, how it should be undertaken and the specific rules that apply to your recordkeeping system.

Establishing these rules is a means to educate staff about recordkeeping, make them aware of their recordkeeping responsibilities and ensure that they meet these responsibilities in their day-to-day activities. Clearly specifying these rules and responsibilities is a means of enabling your department/section to meet its recordkeeping requirements.

Example: Policy and procedure could have helped avoid Jamaican banking collapse

In an investigation following a major banking collapse in Jamaica it was determined that: 'Lack of clear corporate definitions of `records' led to confusion in the organization and meant consistent documentation was not made and managed.' As a result, the institution did not have the records it needed to identify its precarious position and save itself from collapse. Having a clear policy and procedural framework in place can help to avoid such problems. [1]

Policy requirements can be broad statements that specify general records management rules for your department/section, to ensure staff are aware of these rules and their responsibilities. Alternatively, if you are aware that a specific area of your business is a concern, you can use the policy strategy to target a specific issue, such as e-mail management, or target a specific business area, such as complaints management.

Tip: Use policy to encourage your organization to adopt best practice standards

If you have decided that, based on your assessments, adoption of best practice standards such as the international records management standard ISO 15489 would help your organization to better meet its recordkeeping requirements, use the policy strategy to make this happen.

Issue a policy which explains what the records management benchmarks for your
organization are - for example, ISO 15489 - and develop procedures that will enable people to meet this benchmark in their daily practices.

**When should the policy strategy be used?**

The policy strategy should be used when you want to:

- set rules and guidelines for the operation of recordkeeping systems
- establish a framework for consistent and accountable recordkeeping practices
- emphasize corporate ownership of records
- establish an official position on recordkeeping issues, and
- demonstrate how recordkeeping fits within information management and corporate programs.

Generally, the policy strategy should not be employed in isolation. Just having a policy in place will not ensure that people are making and managing records appropriately, in ways that meet your recordkeeping requirements.

Policy should be supported by other strategy when:

- a recordkeeping requirement must be satisfied
- there is likely to be resistance to the policy, or
- it introduces significant new responsibilities to employees.

**Tip: Policy and implementation strategies work in combination**

Policy and implementation strategies will usually work in combination. Policy statements often need to be supported by extensive training and education (this is part of the implementation tactic) to ensure employees are well informed about their recordkeeping responsibilities. It is important, however, to have a high level framework of rules in place, and this is what employing the policy tactic provides.

**Examples of the policy strategy**

Examples of rules you may wish to codify using the policy strategy could include:

- records must be classified according to the corporate classification scheme before they are saved within a corporate data store or filed in the paper-based recordkeeping system
- employees must save electronic records into shared directory folders instead of personal files
- the appropriate disposal status must be linked to records at the time of creation or receipt
- all papers attached to files must be folio numbered
- employees must not destroy records unless such action is authorized by approved disposal procedures, or
• metadata must be captured during business transactions to describe the content, context and structure of records in both paper and electronic recordkeeping systems.

These types of rules would generally be codified in policies or procedures that support your recordkeeping system operation.

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**Example: Development of corporate policy to meet recordkeeping requirement**

An organization has determined it has a requirement to create and capture records documenting business conducted in monthly business meetings. It is currently not meeting this requirement.

A corporate policy is developed that stipulates employees must create records that document decisions made at business meetings, and that these records must be captured into relevant recordkeeping systems.

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**Example: Development of procedure statement to meet recordkeeping requirement**

In the course of evaluating their existing systems (Step D of the DIRKS methodology), an agency identified that many staff were not using a recordkeeping system correctly.

They therefore developed a procedure statement that identified the specific records that must be made and registered in the system, who should make and register these records and the process by which these records should be registered into the system.

By specifying the system rules in this way they were able to resolve the problems previously identified with the system.

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**Example: Development of corporate policy and disposal project to meet recordkeeping requirements**

Your Step D research has revealed that record disposal is being poorly managed within current systems. The department/section has no functional retention schedule, there are no policies concerning record destruction or maintenance and staff are unaware of what their responsibilities are.

In Step E you therefore decide to develop a corporate policy which will tell all staff that they must not destroy any records without the approval of the ARMS.

You also initiate a new DIRKS project, with the objective of developing full disposal coverage for your records. This will involve doing Steps A, B and C and producing a retention schedule.
Example: Value of creating policies

According to Indiana University which undertook a major assessment of university business systems:

“working more intensively on policies turned out to be a real plus in moving the records management agenda forward. One of the real deficiencies at [the university] is the lack of a solid foundation for recordkeeping, beginning with basic policies. Once I began writing the electronic records policy, I recognized how necessary it was to develop a whole suite of related policies. This meant actually stepping back from electronic records management and creating more fundamental documents on records management in general...I [also] needed to develop a group of related policies on imaging and e-mail.” [2]

Compliance issues

Developing policies and procedures for your department/section will help with a range of compliance requirements you may be subject to, including ARMS requirements.

The International standard on records management, ISO 15489

This standard says that all organizations must develop and implement policies and procedures, as a means of ensuring its recordkeeping requirements are met.

Quality management standards

Organizations seeking to comply with international quality management standards need to be aware that the production of policy documentation is a requirement for certification. The current ISO 9000 family of standards, particularly, ISO 9001: Quality Management Systems - Requirements, highlight the importance of policy and procedure to quality management frameworks.

Design strategy

Overview
What is the design strategy?
When should the design strategy be used?
Examples of the design strategy
How far can you take the design strategy?

Overview
This section examines what the design strategy is and explains how it can be used to help you meet your recordkeeping requirements. It provides a number of examples of uses of the design strategy.

**What is the design strategy?**

The design strategy enables you to design or redevelop recordkeeping systems in ways that enable your department/section to automatically meet its recordkeeping requirements.

Design strategy applies to the technical components of recordkeeping systems and to business processes. Using the design strategy makes recordkeeping less obvious or intrusive to employees by rendering it a routine or automatic part of doing business using the systems and technology available. An employee’s direct involvement in recordkeeping tasks is thereby removed or reduced.

**When should the design strategy be used?**

Design should be used when:

- it is critical that recordkeeping requirements are satisfied, and
- users do not need to be aware of recordkeeping functionality.

As it frequently involves technical design work, implementation of the design strategy can be costly. Application of the design strategy will often require the involvement of IT specialists, working together with records staff to build the necessary technological components. It is therefore effective to employ the design strategy when:

- new business information systems are being developed
- business information systems are being redesigned, or
- business processes are being reengineered.

**Tip: Not all design work has to be expensive**

Remember that design can also be about using existing technology in different ways. For example, if you already have records management software, you could decide to adopt the design strategy and configure the software in a different way so that certain fields are displayed to all users and others are not.

This form of design work is not expensive, if you already have the records management software.

**Examples of the design strategy**

Examples of the design strategy include:

- designing a system that will prohibit users from completing an electronic business transaction until a record has been registered
• deciding to purchase an off-the-shelf records management software package
• making certain fields mandatory in a database or registration box
• ensuring that audit trails are activated in systems
• prescribing 'read-only' access to electronic records retrieved from a corporate data store
• maintain a history of authorized system users
• link disposal decisions to records to assist data storage and migration
• preventing the deletion of records without authorization, and
• configuring e-mail systems so that copies of outgoing messages are automatically saved into a shared corporate data store rather than personal e-mail folders.

**Example: Using the design strategy to integrate systems**

Your Step D assessments may have revealed that systems cannot communicate, contain duplicate information or that efficiency is hampered because data cannot be inherited between systems.

You can flag this as an issue and in Step E develop an integration strategy that you can begin to develop in Step F of the methodology.

The integration strategy could be to build interfaces between systems, or could involve the development of a business portal that brings together all relevant business applications.

**Example: Using the design strategy to improve metadata**

In your Step C analysis you identified that, in order to efficiently manage the complaints management process you need to:

- document the complaint
- record name of complainant, date of receipt, nature of complaint, action taken

In Step D you determined that you current complaints management system does not provide you with the capacity to create or manage this metadata. The system does not:

- allow for documentation of nature of complaint
- track action undertaken in response to complaint.

In Step E you decide to utilize the design strategy, and redesign the complaints management system so that it has the capacity to capture and manage metadata describing the complaint and the action undertaken.

**Example: Using the design strategy to improve information security**
In your Step D assessment, you may have had concerns about the security of information and may have recommended that stronger security controls and audit logs be captured to document system use.

In Step E, you would decide to implement a design strategy and redesign the system to capture when, how and by whom records have been accessed. You could also ensure that user logins are utilized to make sure that only persons with appropriate authority can access records within the system.

### How far can you take the design strategy?

Potentially, the sky is the limit with the design strategy, but you have to remember that technical solutions to problems can come at a significant cost. If you have a large budget, however or significant technical expertise at hand, what you can achieve with the design strategy need only be limited by your imagination.

For example, a way to solve your problems may be to adopt a graphical user interface based on its business activities rather than software applications and documents so that when an employee selects the activity they are undertaking, the necessary applications are launched and resulting records are automatically tagged with information applicable to that activity. [3]

### Standards strategy

**Overview**

- What is the standards strategy?
- Why use technical standards?
- When should the standards strategy be used?
- Examples of the standards strategy
- Need for ongoing maintenance when using the standards strategy
- Further information

**Overview**

This section examines what the standards strategy is and explains how it can be used to help you meet your recordkeeping requirements. It provides a number of examples of uses of the standards strategy.

**What is the standards strategy?**

This strategy concerns the use of technical standards as means of ensuring that recordkeeping requirements are met.
Technical standards usually apply to the creation and management of electronic records or to the design of electronic systems, although they can also be applied in paper based environments. Different areas that can be governed by technical standards include:

- technical system and communication protocols
- computer, personnel and/or physical security
- documentation
- record formats, and
- record storage.

Note that the standards strategy has a strong relationship with the design strategy. To incorporate technical standards within systems, you will need to consider elements of technical design.

**Why use technical standards?**

The use of open technical standards for the creation and management of records will serve to improve their chances of being accessible over time. This is not only because the systems they are kept in will be more compatible with new systems, making migration easier, but also because many technical standards are non-proprietary and consequently have published codes which will allow formats and information to be re-constructed later on if the records and/or the recordkeeping systems become obsolete.

Technical standards, particularly when they are non-proprietary are also less subject to change. Storing records in these formats can therefore lessen the need for system migration. The adoption of a standard format may occur at the creation of a record, or the record may be converted to a standard format.

Using standards for the design and development of the software and hardware that will be used in your system may also help to address some of your recordkeeping requirements. Use of such standards can facilitate:

- interoperability with other U.N. systems (e.g. departmental systems, systems of other offices)
- maintainability (these standards are subject to less change and have published codes)
- portability (enables systems to run on a new platform or work with new languages, business rules and other controls)
- modularity (minimal disruption to other components of a system when a change is made to one particular component), and
- reuseability (one approach can be used in multiple applications within your organization, thereby promoting data inheritance and flexibility).

**Tip: Standards require little of users**

The standards strategy generally requires little user involvement. If you have issues with system interoperability and know you need to maintain records for long periods
of time, consider the standards strategy as a means by which you can achieve these objectives with little user involvement.

**When should the standards strategy be used?**

Standards are a useful strategy to:

- manage software and hardware dependencies
- ensure electronic systems' interoperability, and
- foster the creation of electronic records that will be useable, understandable and available over time.

Given it may involve technical issues, the standards and design strategies are often used in combination.

**Tip: This strategy is not about 'best practice' standards**

The standards discussed in this strategy should not be confused with the records management standards issued by ARMS, or with best practice requirements such as ISO 15489 or sector specific standards. The standards referenced in this tactic relate to record format, display or networking capacities of systems. These standards relate to technical capacities, not to broad best practice requirements.

**Examples of the standards strategy**

**Examples of technical standards used for record formatting**

Non-proprietary technical standards which are widely used for text and image formatting include:

- HTML (Hyper Text Markup Language)
- SGML (Standard Generalized Markup Language)
- XML (eXtensible Markup Language)
- ASCII (American Standard Code for Information Interchange)
- JPEG (Joint Photographic Experts Group)

Some proprietary standards are widely used and accepted. If non-proprietary standards cannot be used, widely used and supported proprietary technical standards should be selected, as these have a better chance of being supported and maintained through time. Examples of these types of standards include:

- formats employed within the Microsoft Office suite of applications, by Microsoft Corporation (including Word, Excel, Powerpoint, Outlook and FrontPage)
- GIF (Graphics Interchange Format)
• TIFF (Tagged Image File Format), and
• PDF (Portable Document Format by Adobe Systems Inc)

**Example: Use of standards for records creation**

Organization X has a requirement to keep all its Board records as archives (i.e. forever). They therefore need to be sure the format in which they create these records enables them to do this.

Applying the standards strategy, they decide to use archival quality paper for Board record creation that complies with technical standards issued for paper production, as this paper is manufactured to survive for the long term.

It is important for Organization X to apply this strategy in relation to its Board records, as some paper, such as many recycled papers, may not survive longer than 20 years. Using the standards strategy will enable them to ensure that this recordkeeping requirement concerning record retention will be met.

**Example: Use of standards for records management**

In Agency Y, license records, created and maintained electronically, need to be kept indefinitely. XML is used to encode these records after their creation. A Word version is also maintained on the agency's network.

Encoding records in XML facilitates their long-term maintenance as it means the records will be easier to migrate, are subject to fewer migrations and can be accessed and read using a number of different hardware and software combinations.

**Example: Use of standards for system development**

In Enterprise Z, Board records are generated in three different systems. Currently these systems cannot communicate and so compiling Board reports is a laborious, paper based process.

To facilitate their requirement to maintain Board records indefinitely, Enterprise Z is going to redevelop the systems used to create and manage Board records.

It will use a variety of technical standards in its system design process to ensure the different systems can communicate and data can be exchanged between them. This will help them to ensure that their recordkeeping requirement to manage their Board records is easier to achieve.

**Tip: Conduct conversion appropriately**

If part of your Step E strategy is to convert existing records to standard formats, be sure to conduct this conversion process in a controlled, tested and documented way, that ensures the integrity of your records is not compromised.
Tip: Apply standards in your Step F: Design recordkeeping systems work
If you decide to use technical standards in Step E to facilitate system integration and extensibility, you would determine exactly how you want these standards to be applied in the course of your Step F design strategies.

Need for ongoing maintenance when using the standards strategy

Remember, if you use the standards strategy to manage the long-term accessibility of your electronic records, you will need to continue to monitor your electronic records and systems, to ensure they continue remain accessible and continue to support the functionality you require.

Electronic records management needs to be an ongoing process, so do not forget to regularly monitor the ongoing accessibility and interoperability of your records and systems.

Implementation strategy

Overview

What is the implementation strategy?
When should the implementation strategy be used?
Examples of the implementation strategy

Overview

This section examines what the implementation strategy is and explains how it can be used to help you meet your recordkeeping requirements. It provides a number of examples of uses of the implementation strategy.

What is the implementation strategy?

The implementation strategy involves considering the way in which you implement recordkeeping systems in your department/section. If systems are implemented in a particular way, you can ensure that recordkeeping requirements are met.

Example: The implementation strategy for accessibility
An organization may have a requirement to ensure that all records are accessible to all staff. To ensure this requirement is met, the organization may adopt the implementation tactic and choose to remove the hard drives from networked
computers and rely on file servers, under the control of a data administrator, for online storage of corporate records and information. In this case, the way the system is implemented is a means of ensuring its ability to meet stated recordkeeping requirements.

When should the implementation strategy be used?

Implementation strategies are particularly useful when:

- there is user resistance to change, or
- design is not cost effective.

Examples of the implementation strategy

Examples of the implementation strategy include:

- provide department/section-wide recordkeeping training
- design or redesign business processes to better facilitate recordkeeping
- provide folio numbering sheets for all paper-based files to provide protection against record removal
- require employees to complete a 'request for file' form before gaining access to files and maintain this information in the department/section records management system
- lock records storage areas (e.g. room, compactus, safe) to ensure only authorized access to paper-based records
- assign access permissions to ensure records are appropriately protected and secure
- remove hard and floppy drives from personal computers so that records cannot be saved outside the corporate records store, and
- ensure agency-wide data management practices are carried out, to assist with record preservation and information security management

Example: Implementation and policy strategies determined by data management survey

If you have undertaken it, your Step D research will help you to identify whether implementation strategies are required in your department/section.

In the course of its analysis, Indiana University undertook a data management survey to determine how data was being used and managed across the university. This information was used to provide an understanding of how the university’s electronic records are regarded and managed. It also helped to reveal what types of strategies would need to be employed to improve University recordkeeping:

In general, I found that personnel in units wanted to do the right thing, but they did not have the information or skills to meet the
challenges. They tended to:
- have too many files
- convert electronic records to paper documents and
- duplicate data files to ensure that they would have access to
data and could produce the reports they need.

The most important needs are for retention schedules, for education in
managing digital objects, and for instilling in managers a better sense
of how information flows through the University. [4]

Through its survey, Indiana was therefore able to determine that staff need more
training in various aspects of records administration, and need rules such as
retention and disposal schedules.

In Step E, the University would therefore decide to adopt the policy and
implementation strategies, to ensure staff have the disposal rules they require and
have the knowledge to implement these and other requirements that would enable
them to improve their daily business arrangements.

**Selecting appropriate strategies**

**Overview**

Assess factors that will support or inhibit use
Make sure strategies meet your range of needs
Be pragmatic
Case study

**Overview**

This section highlights the importance of selecting tactics that meet your
requirements and that can be applied easily in your department/section. It provides
a number of examples and a case study to help illustrate the various factors you
should consider.

**Assess factors that will support or inhibit use**

Be sure you choose strategies that will work in your department/section and that will
enable you to address and resolve the gaps or issues you have identified.

To do this, make sure you consider:
- the corporate culture
- the systems and technological environment
- the geographic spread, and
- risks and implications.
The organization's corporate culture

Choose strategies that will work with and be accepted by your organizational culture and business practices.

Examples: Aligning strategies to organizational culture

- an organization that displays a culture in which recordkeeping is taken seriously and staff understand their recordkeeping responsibilities is likely to embrace policy and implementation strategies
- an organization that is enthusiastic about information technology may be particularly receptive to design solutions involving the capture and maintenance of electronic records
- an organization with a high degree of risk sensitivity, an aversion to change, and fear of losing control over its records may willingly adopt design and standards strategies that enable it to meet its recordkeeping requirements.
- a corporate culture where people do not worry or do not care about recordkeeping may need to be coupled with strong policy and design strategies. Lack of a strong policy framework was a significant factor in the Jamaican banking collapse:

  Where documentation was poor it was the cultural predilection not to document coupled with an organizational absence of accountability for the making of records that led to failures to account. [5]

Step A: Preliminary investigation provides more information that you can use to determine the type of corporate culture or cultures that operate in your organization, and the importance of considering corporate culture in the course of your DIRKS activities.

The department/section's systems and technological environment

Consider your systems and realistically assess what is possible in relation to them. Make sure you also assess financial or personnel issues that may support or inhibit your ability to utilize certain strategies.

Example: If one strategy has proven to be unsuccessful, try a mixture of strategies

If an assessment of your existing systems (Step D) demonstrates poor compliance with a corporate policy that states that employees should capture electronic messages as records, continued reliance upon the policy strategy alone would be futile. Instead, the policy strategy should be supported by design or implementation strategies to ensure that recordkeeping occurs and that it takes place with minimal...
As another example, your technology may have the capacity to enable you to link
existing document management applications and the thesaurus and disposal modules
of records management software to assist with the classification and sentencing of
text-based electronic records, but this capacity has not been adopted. You could
therefore use the design strategy to make sure recordkeeping requirements that
specify mandatory disposal requirements are met.

**The United Nations geographic spread**

Many U.N. departments/offices are comprised of a range of offices that can be
located in the one city, across the state or country or be located across a range of
international environments. Using your knowledge of the organization, or research
you conducted in Step A, you need to consider geographic spread when considering
strategies to employ in your systems.

Depending on the geography you could ask:

- can common software and procedures be deployed across all offices?
- is it possible or financially feasible to establish network connections that
  enable all offices to utilize one cross-organizational system?
- can standard retention rules apply across all offices?
- can the one range of strategies be applied across the geographical spread or
do separate decisions need to be made for specific offices?

**Cost, risk and other factors**

Other factors affecting your choice of tactics can include:

- the costs, in terms of money, human resources and time, incurred by each
  proposed strategy
- the tangible and intangible benefits to the organization offered by each
  proposed strategy
- the risks to which the organization will be exposed if it adopts particular
  strategies, and
- the amount of user support and training that will be required to support the
  strategies you have selected.

The appropriate mix of strategies likely to work best should:

- score well across the criteria judged by your department/section to be the
  most important, and
- pose little risk, or an 'acceptable' level of risk, to the organization in terms of
cost, commitment of resources, interruption to core business, and level of
organizational change required.
Make sure strategies meet your needs

Once you have selected the strategies you wish to employ, you need to confirm that the recordkeeping requirements you arrived at in Step C and the gaps you identified in Step D have been addressed.

To do this you need to:

- revisit the requirements that relate to the system you are assessing
- look at the gaps you identified in this system, and
- ensure that your chosen strategies are capable of resolving all identified issues and meeting the requirements you specified.

This will enable you to determine the extent to which requirements are being met by the broad strategies you have selected, and to identify any glaring gaps or omissions in the system’s coverage.

The mapping between system components and requirements will not be ‘one-to-one’. Some strategies will address more than one major requirement; some major requirements will be met using a combination of different strategies.

Tip: Keep a broad focus

You should keep in mind that this tool is meant to provide a check of the initial high-level solutions you are proposing against your major recordkeeping requirements. You should not get bogged down at this stage with very particular requirements. These will be addressed by the more detailed and precise design specifications produced in the systems development process in Step F.

Document your decisions

Once you have selected a range of strategies and ensured that they enable you to meet your recordkeeping requirements, you should document your decisions. These can be documented in a plan that outlines how you want to proceed with your design work, based on your work and assessments to date.

Your plan may need to receive managerial endorsement before you can proceed to implement your recommendations.

Tip: Reconfirm organizational commitment

Step E can be a useful point at which your department/section can make or reconfirm a high-level commitment regarding the remaining design and implementation process. This may involve using in-house staff, external consultants, system vendors or a combined project team to bring some or all of the strategies to fruition.
Be pragmatic

You may have significant objectives that you wish to achieve following from your research to date. However, given business considerations and financial constraints, it may not be possible to achieve all that you have identified, or actually implement the strategies you've proposed. Depending on the nature of your department/section, it may also not be possible for the records management area to set organization-wide information management practices and priorities.

To help your objectives to be achieved, it may be possible to use other organizational initiatives to help leverage your project. That is, if knowledge management, work process re-engineering, business system redesign or other initiatives are current hot topics in your organization, it is worthwhile trying to use these projects as means by which your work can be initiated.

**Tip: Other pragmatic approaches**
- implement part of the strategy to address essential needs
- opt for no further action at this time
- revisit the preferred solution when its circumstances have changed, or
- take a staged approach to the implementation of your solution.

Case study

The following case study was discussed in Step D: Assessment of existing systems as the results of a gap analysis. The following identifies how Step E can be used to identify strategies to help resolve the issues identified in Step D.

**Example: Strategies for licence agreements**

One organization had a requirement to keep records of its licence agreements for fifty years after the issue of the licence. Their legislation stated that these records must be securely maintained for the duration of their existence. The organization has a number of offices across the state, each performing the licence management function.

After undertaking their Step D analysis, it was concluded that:
- the long term accessibility and evidentiality of the records was not assured. Licence records have to survive for upwards of fifty years and currently no strategies are in place to ensure this long term objective is achieved.
- records are not stored in appropriately secure ways. System controls prevent unauthorized personnel from accessing and changing the records, but they do not prevent authorized staff from accidentally or intentionally modifying or deleting licences.
- policies and procedures for system use are widely available at central office.
Training in system use and access is often frequently conducted in this office. In the regional offices, however, little policy or procedural documentation exists and that which does exist is frequently different to that used in central office. Regional office staff have also not been trained in system use.

In Step E, the following strategies to remedy these gaps were decided upon.

**Long term accessibility**

The organization is to employ the policy strategy. It will develop procedures, aimed at both records and IT staff, that will require that licence records are securely and accountably migrated through system change. Back-up procedures operate over the records, but these do not enable the full record to be preserved in a secure and evidential manner over time.

Again in conjunction with IT, use of the standards strategy will be investigated. The agency knows it has to keep its records for long periods of time and believes that adoption of a standard, non-proprietary format will be a more secure and cost effective solution in the long term.

**Record security**

The security of its licence records is of key business importance to the organization. It will therefore use the design strategy to limit user activities within the system and to make all records subject to read only access after their creation. To deal with security issues, the organization will also again employ the policy strategy to alter work processes to ensure that two staff have to authorize and validate any changes made by the administrator to licence records within the system.

**Training in regional offices**

The organization will use the implementation strategy to make sure training is conducted on an annual basis in all regional offices. Using the implementation strategy, the organization will also distribute up to date policy and procedure manuals to ensure all staff are following the same processes. Again using the implementation strategy, the organization is researching alternative training mechanisms for regional staff and is particularly examining online training mechanisms.

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**Footnotes**


site in January 2003 at:

Step F - Design of recordkeeping a system

Design a recordkeeping system that incorporates the strategies, processes and practices endorsed by AS ISO 15489; ensure that the system supports, and does not hinder, business processes; assess and, if necessary, redesign business processes and operational business and communication systems to incorporate recordkeeping.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step F
Designing a recordkeeping system
Applying the policy strategy
Applying the design and standards strategy
Applying the implementation strategy

Content and scope of Step F

Overview
Aim of Step F
Summary of Step F
Why should you do Step F?
Relationship to other steps

Overview

This section is an introduction to Step F: Design of recordkeeping systems. It:

- outlines the aim of Step F, and what it can help you to achieve
- summarizes the major elements of Step F
- explains why it is important to undertake Step F for particular DIRKS projects, and
- shows how Step F relates to the other steps in the DIRKS methodology.

Aim of Step F

Step F is where you turn the strategies identified in Step E into actual system components. Step F is intended to help you turn:
• an awareness of the requirements your department/section is subject to
• an understanding of problems with current systems and practices, and
• an understanding of possible strategies
into an actual blueprint or program for putting together or redeveloping your systems to transform them into recordkeeping systems.

**Tip: Focus of Step F**
Step F involves putting all your knowledge and research together and turning it into a range of viable and workable strategies and products for your department/section. It’s where you determine how strategies you’ve identified in Step E can be put together to create the most effective recordkeeping system for your office.

**Summary of Step F**
Step F involves system design, the actual process of developing the components of your recordkeeping system.
Step F, like the other steps in the DIRKS methodology, adopts a broad definition of systems, encompassing people, policy and processes as well as tools and technology. Therefore this step is likely to involve:
• designing changes to current polices, processes, practices and tools, and
• adapting or designing and integrating technological solutions.

**Why should you do Step F?**
Step F is where you actually start to design tangible solutions for your department/section. This step will enable you to:
• address issues that have hindered good recordkeeping
• design a recordkeeping system that meets a range of business needs, and
• liaise with a range of stakeholders to ensure good recordkeeping is conducted in your department/section.

**Example:**
Step F will help to consistently work through the problems affecting your systems and design appropriate and thorough responses to them. Rushing through design work is a common problem, but it can have significant negative effects. An investigation into banking collapses in Jamaica identified rushed and inappropriate system design as a problem that contributed to the problematic business environment that lead to the collapse of the banks:

Many managers seized on digitisation and electronic recordkeeping as the solution to their information retrieval difficulties. However while digitisation did lead to faster information retrieval, systems were
inadequately designed and did not incorporate appropriate metadata fields or database structures to assist with information retrieval issues. [1]

Working through Step F will enable you to design the systems that are the most efficient, useable and appropriate for your organization.

**Relationship to other steps**

**Steps C, D and E**

It is very difficult to design a successful recordkeeping system if you do not know and understand your recordkeeping requirements and organizational constraints. Without this knowledge, you will potentially waste a lot of time unnecessarily backtracking and re-doing tasks before you accomplish a successful implementation.

To ensure you have adequate knowledge to progress with system design, your work in this step should ideally have as its basis:

- the recordkeeping requirements identified and documented during Step C and
- any recordkeeping inadequacies or gaps identified during Step D, and
- the strategies for improving recordkeeping identified in Step E

to ensure your system design encompasses all requirements.

**Step G**

In Step F you design and develop your recordkeeping system. Step G involves implementing your revised or new system. There is therefore a close relationship between Steps F and G - in one you develop your solution and in the other you unleash it. If you are undertaking Step F it is important to consider Step G and ensure that the system you have developed is effectively implemented and used across your department/section.

**Designing a recordkeeping system**

Overview
Steps in recordkeeping system design
Principles of recordkeeping system design
Recordkeeping system design may require a mix of skills
Managing recordkeeping system design
Documenting recordkeeping system design
Overview

This section summarizes the major issues you will need to bear in mind when designing your recordkeeping system. This introductory session flags these issues, while the remainder of Step F provides practical guidance as to how specific aspects of recordkeeping system design can be completed.

Steps in recordkeeping system design

System design in Step F is concerned with implementing strategies identified in Step E, to help you build systems that meet your recordkeeping requirements. System design is therefore based around implementing the Step E strategies:

• policy
• design
• standards, and
• implementation.

Your work in this step will involve designing or structuring all components of your system so that it:

• is useable and understood by staff
• accommodates all recordkeeping tools it needs to support
• is sustained by adequate policy and procedure, and
• is technically adequate and has the necessary functionality to support recordkeeping requirements.

When you have designed a system that meets all these requirements, you will have established an effective recordkeeping system for your organization.

Tip: See system design in the context of the organization and its requirements

The DIRKS methodology is intended to be a very scalable and flexible one. See system design in the context of your own department/section and its requirements and develop a design strategy that is appropriate to these. You do not need to develop all system components listed in this step - keep your focus based on the research you have done, the specific requirements you have identified and the strategies you've selected in the previous steps of the DIRKS methodology.

Principles of recordkeeping system design

Throughout the system design activities you will undertake in this step, it is important to bear two key principles in mind:

• taking an iterative approach, and
• involving users in the process.

This approach will break your system design approach down into the following activities:

• design a bit of the system (e.g. a new procedure, a training package, a piece of software, a paper-based template, or a screen interface)
• test it against the requirements, deficiencies and strategies documented during steps C to E
• review it with users and other stakeholders
• depending on the outcome of the review, either redesign that bit of the system to better meet recordkeeping requirements and incorporate user feedback, or modify the requirement if it is inconsistent with user needs or recordkeeping requirements or infeasible, and
• document any changes to the design or the requirements, indicating reasons for the change, and the authority under which the change was made.

The extent to which you can involve users and take an iterative approach during the design phase will depend on time and cost constraints. However, adopting such practices will help ensure that:

• a useful, viable system is developed
• users develop a sense of system ownership through their involvement, and
• users understand the system and use it as it is intended to be used.

Tip: Remember the importance of integration and the long term maintenance of records

When considering your recordkeeping system design, it is important to bear system integration in mind. If you are developing a new technical application to support better recordkeeping, you will need to ensure that this integrates well with other systems currently in place in your department office.

Remember too that some records in the system you are designing will need to be kept for long periods of time. Consider any such long-term requirements during your system design phase. You may have already decided in Step E: Identification of strategies for recordkeeping to use technical standards as a means of improving the long term accessibility of your records, but it is worth considering your longer term requirements at other points through the system design process.

For example, you may want to consider at the outset the system migration strategies that are necessary to sustain the records in the system and the strategies that will be necessary to sustain the security or other management controls that you apply in the system.

Recordkeeping system design may require a mix of skills
System design involves recordkeeping professionals and other experts working with users to produce specifications that best meet:

- recordkeeping requirements (identified needs to create, capture, maintain and dispose of records)
- organizational technical, economic and cultural constraints, and
- user requirements.

Given that in the contemporary business environment many business activities are conducted electronically, your system design initiatives may require significant IT involvement to ensure that the technical components of systems are adequately designed and implemented, to ensure you are able to meet your recordkeeping requirements.

**Tip: Do not use jargon**

Do not forget that if you are employing additional staff members to undertake system design and development and if these staff are unfamiliar with recordkeeping words and concepts, you will need to provide these staff with a good overview of your project and its recommendations to date. Particularly, make sure all staff understand the recordkeeping 'language' you use. Quite a bit of this terminology may be confusing to other staff or they may misinterpret its meaning. Providing a clear, concise overview will help to avoid any such confusion.

**Example: Communicate well with IT colleagues**

Be sure to communicate your ideas and requirements clearly to IT colleagues, as their support is crucial to any design projects you may want to undertake. Inadequate systems contributed to the Jamaican banking collapse in the late 1990s and inadequate communication with IT staff meant problems were not rectified when they should have been:

One respondent observed that, having identified the need for a different view of the bank’s accounting information, managers experienced difficulties in negotiating the necessary systems changes with information technology staff. Interview subjects suggested that information technology experts’ own assumptions about the significance and meaning and the information being requested made them reluctant to make systems changes. In other words, they simply did not share line management’s understanding of why this information should be needed for accountability purposes. [2]

Clear discussions with your IT staff will enable all parties to understand project requirements and constraints and will contribute to the better development or redevelopment of systems.

**Managing recordkeeping system design**
At this stage of your project, your DIRKS work may become a multi-team initiative, with staff from IT, training and other areas participating. If you are in this situation, be aware that unanticipated delays and changes may affect your project, as a result of the larger numbers of staff and potentially consultants involved. Other staff will have competing demands and requirements and these may affect your project timetables.

**Example: Reliance on partners**
The University of Indiana which undertook a major multi system assessment project noted that:

> In almost every initiative undertaken in this project, we were relying on other partners to meet their obligations and maintain the original timetable. We simply could not control our own fate in the same way one can in a processing or scanning project. [3]

Try to be flexible, but also stress your own project's specific timeframes and deliverables. Talk to other project staff about the importance of your work and the importance to the organization of having it completed.

**Documenting recordkeeping system design**

In Step F you are designing your new or revised system. As you progress with its development, you need to fully document the decisions you are making and the type of system you are designing.

In Step F, some of your documentation will be created as a part of completing the step - for example drafting a policy or developing a training implementation plan. You will also need to create other documentation, such as decisions made about the logical structure of your technical components or revised work processes.

If you do take an iterative, consultative approach to your system design, be sure to fully document any changes to requirements and design components that arise from your consultation.

Creating documentation of recordkeeping system policies, procedures and practices as well as the documentation of the system implementation process is good business practice. It is also a requirement for certification against the ISO 9000 quality standards.

**Applying the policy strategy**

**Overview**
Establish and maintain recordkeeping policy and procedural documentation
What should policy and procedural documentation say?
Use policy to assign recordkeeping roles and responsibilities

Overview

If in Step E: Identification of strategies for recordkeeping, you selected policy as a strategy that would be of use to your department/section, this section examines how you can deploy policy as a means to improve recordkeeping. It looks at compiling policy and procedural documentation and provides guidance about what these types of documents should say and do.

Establish and maintain recordkeeping policy and procedural documentation

If, in Step E, you decided that implementing policies, procedures or other business rules would help meet your recordkeeping requirements, Step F is the point in the methodology where you start to develop these tools. These documents will specify exactly how recordkeeping should be undertaken within a specific business environment.

What to do with existing policy documentation?

Your department/section may already have a policy framework in place. If so, old recordkeeping documents should be reviewed and updated as necessary.

If your systems are going to change radically, it may be worthwhile officially withdrawing your old policy documentation and releasing new documents that better describe how your new system will operate.

Your section may also be expected to operate under policies that have been promulgated by another section within the same department or office. Subject to your recordkeeping requirements, you may need to take into account the existence of such policies to help ensure a consistent approach to recordkeeping within your environment.

What should policy or procedural documentation say?

Policy documentation

A policy is a high level plan of action. Therefore policy documents should contain high level rules and requirements - more practical detail should be included in procedural and guideline documents.

When developing a policy statement to help address recordkeeping issues in your department/section, you may want it to include some of the following components:
Purpose
It is customary to start a policy statement with a brief introduction to the document and its objectives. This purpose section can also be used to discuss records and their value to an organization or business unit.

Description of recordkeeping system
Provide details of the system or systems staff should use for the capture and management of records. Briefly describe the system/s and identify the staff with responsibility for operating and maintaining it. This will provide high-level guidance for staff about their recordkeeping requirements.

Records management rules
It is important to outline at a high level the rules that staff are expected to follow in relation to record creation and management. These rules should be brief, but can be elaborated on in procedure documents, if this is required in your.

Responsibilities
A key component of a policy statement is the identification of responsibilities for recordkeeping. Outlining the responsibilities allows each person to be aware of what they must do in relation to records management.

References
It is useful to outline the regulatory and other requirements that exist in your organization for the creation and management of records. It is useful to also include these in the references section.

Issued by
If it is department or office wide, it is important to have your policy authorised and issued by your Director, Chief Executive or General Manager. If your policy applies in a specific business unit, it needs to be signed off by the head of that unit. The policy needs this level of approval and authority to be appropriately adopted. The policy also needs to be dated to enable it to be regularly reviewed.

Glossary
Providing a glossary is a means of ensuring the requirements of your policy statement, and all the terminology used, are fully understood by all appropriate staff. Define any terms you may think will not be consistently understood across your department/section. A full Glossary of Recordkeeping Terms can be accessed via the ARMS Intranet site.

Procedures and guidelines
Procedures and guidelines should give clear instruction about how a specific activity, task or process should be conducted. When deciding to use procedural documentation to help address recordkeeping gaps, ensure that procedures or
guidelines adequately specify how and when records should be made, and specific staff responsibilities for their capture and management.

You need to develop guidelines and procedures from scratch if:

- there were previously none in place
- those in place are out of date
- changes to business rules, processes and responsibilities are extensive, or
- your office is moving from a wholly paper-based to an electronic recordkeeping system.

As with the other components that are designed for use by people, you need to gain user feedback on the layout and clarity of the guidelines and procedures as they are being developed.

**Tip: Support your policy development with use of the implementation strategy**

As was flagged in Step E, *Identification of strategies for recordkeeping*, if you are developing policy or procedure to help meet your recordkeeping requirements, try to support the actual use and understanding of these documents with training, or with revisions to business processes. See *Applying the implementation strategy* below for more advice.

**Use policy to assign recordkeeping roles and responsibilities**

To ensure recordkeeping requirements are met and to ensure that your recordkeeping system operates effectively, it is important to ensure that responsibility allocation is included as part of your system design.

You can use the policy you are developing to assign responsibility for recordkeeping tasks.

**What responsibilities should be assigned and to whom?**

In previous steps you will have determined what recordkeeping tasks need to be performed in your department/section. You can use policy to assign responsibility for these recordkeeping tasks.

You can also use policy to assign responsibilities for quality control. Someone must be responsible for ensuring that recordkeeping tasks are not only performed, but also performed correctly, so make sure you allocate this responsibility.

In some cases, you may use policy to assign responsibilities to a particular individual or staff position, such as the Corporate Records Manager. In other cases, you may assign responsibilities to particular work groups or sections, or to all staff across the...
Regardless of the persons, positions or sections to which you assign particular responsibilities, you must ensure that all recordkeeping roles and responsibilities are clearly documented. This will help ensure accountability for recordkeeping actions (or inaction). Responsibilities should usually be documented in policy and procedure documentation, or position descriptions.

The activity of assigning roles and responsibilities should be conducted in conjunction with any workflow or business process design or redesign being undertaken. New or redesigned processes will result in the creation of new roles and responsibilities across the business area concerned.

### Applying the design and standards strategies

**Overview**

Design technical components of systems to enable better record creation, capture and management

Responsibilities for technical design

Steps involved in technical design

Conduct regular design reviews

Develop a migration and/or conversion strategy

Documenting technical design

**Overview**

If in Step E: *Identification of strategies for recordkeeping*, you selected design and standards as strategies that would be of use to your department/office, this section examines how you can develop and use technical solutions as a means to improve recordkeeping.

This section looks at issues associated with technical design, including the skills required to undertake it, the steps that need to be considered as part of technical design and the documentation of technical design.

**Design technical components of systems to enable better record creation, capture and management**

Depending on the strategies selected in Step E, or the nature of the systems with which you are working, it may be necessary to design significant electronic components for your recordkeeping system, or to integrate some automation into existing paper-based systems.
Responsibilities for technical design

The technical design of your recordkeeping system may be conducted by:

- the IT and business analysis staff on your project team
- external consultants
- system vendors, or
- a combination of the above.

The range of staff you may want to include in your DIRKS project is outlined in the Introduction to DIRKS.

**Tip: Staff with recordkeeping responsibilities should be involved in technical design**

Staff with recordkeeping responsibilities have a key role to play in technical design. Even if you have no interest or expertise in technical design you must be prepared to provide a professional opinion on the recordkeeping functionality of the electronic system as it is being designed. Ask questions or speak out if it appears that the recordkeeping functionality of the system is being compromised, or if your requirements are being misinterpreted.

Obtaining IT involvement

If you are having trouble in convincing your IT staff that they should be involved in your system redesign projects, there are a number of points you can emphasize to demonstrate the utility of your project to both organizational and IT objectives.

**Example: 'Sell it' the project your IT staff**

To demonstrate your project's relevance, objectives and validity to IT personnel, discuss it using IT terms and concepts. You could emphasize that your project is:

- concerned with better management of organizational data - its implementation will help IT deal with this key objective
- identifying and rectifying data redundancies, another key IT objective
- seeking to establish better control over corporate information
- developing more comprehensive disposal coverage to enable the authorized destruction of inactive records
- improving metadata capture to better document the use of records
- improving record accessibility, including those records that have been 'archived'
- improving information accessibility rates, or
- concerned with the better management of organizational e-mail.
Your project will have many synergies with organizational IT objectives, and highlighting these should help to give you the IT or system development support you need. Better positioning your requirements, and demonstrating how they serve broader information management needs, will help you to obtain the support you require.

**Example: Work together**

In its assessments of organizational systems, Indiana University noted that to the university's IT managers that the 'standard back-up procedures were not creating an environment where records could be easily retrieved and were not preserving the kind of records that would be useful in the future'.[4]

Specifically examining IT procedures and discussing their concerns from an IT viewpoint helped both IT and records staff to agree that there was a problem and to work together to rectify it.

**Tip: Sign a 'memorandum of understanding' (MOU)**

Consider establishing an MOU with the IT Department and build responsibilities for your project into IT planning. If IT staff have written responsibilities as part of the project this indicates their significant commitment to the project.

Before you talk to IT staff about the type of technical components you want, make sure you have a very good idea about the functionality you want from your system:

- what should it be able to do?
- what type of metadata do you want to capture?
- what types of records should it administer?
- should it be capable of resolving access permissions?
- does it need to integrate with other business systems?
- do you want to employ classification schemes?

Clearly outlining these and other requirements will greatly assist IT and system designers to understand your needs and help all participants build a system that meets business needs. The ideas you outline should not just be preliminary. You must provide solid information so that the designers can create specific functionality that enables your department/section to meet its recordkeeping requirements.

You do not need to become an IT or technology expert to effectively undertake this step. You do however need a good understanding of how you want your system to operate and be able to explain this, using appropriate terminology and concepts, to IT or system design staff.
Example: Do not assume understanding
Staff at Indiana University found that when dealing with IT staff or those with data management responsibilities, IT personnel had a good understanding of functional assessment, metadata and how data is managed within systems. They did not tend to have a great degree of familiarity with records as defined by ISO 15489, the role and importance of contextual information and the value of evidence in organizational business systems. Informational content is often regarded as more valuable and of more organizational importance than the preservation of evidence. [5]
Therefore do not assume that all your colleagues will have the same understanding of concepts and issues. Be sure everyone is working from the same definitions and understandings before you commence any specific design work.

Steps involved in technical design
It is not the purpose of this step to describe in detail the different modelling tools used in computer system design. The following outline simply provides a brief introduction to the process and focuses on:
- determining whether to buy or build
- conducting logical systems design
- conducting physical systems design, and
- developing a systems testing plan.

Tip: Do not do the work, but advise on your requirements
If you are a recordkeeping professional, you do not need to undertake these technical design processes yourself. You should, however, be aware of what they involve and be prepared to advise IT staff on your requirements in relation to them.

Determine whether to buy, build or both
When it comes to designing or redesigning the technical components of your system, it is necessary to determine whether:
- existing in-house technology can be utilized
- additional technology should be bought and/or tailored, and
- additional technology should be designed and by whom.

The recordkeeping requirements that you articulated in Step C, the recordkeeping gaps identified in Step D and the overall design strategies determined in Step E will indicate the complexity and scope of the technological components that you need.

Factors likely to influence the decisions you make about the technical components include in your decision to adapt, acquire or design include:
- cost of the proposed strategy
- the flexibility or lack of flexibility it contributes
• the speed and/or ease of integration with existing technical and other system components, and
• availability of staff or contractors to perform design work.

Conduct logical system design

Logical design pertains to the 'what and when' of a system, that is, its functions and processes. It focuses on what the system should do, and how it should appear to the users. Logical design involves the use of various conventions and modelling tools to translate the requirements identified and documented in steps C and E into detailed technical specifications for system inputs, outputs, interfaces and data stores.

Logical design includes the design of:

• forms and templates, such as metadata templates, which enable the presentation and collection of information
• user interfaces, such as menus and dialogue boxes, which enable users to interact with a system, and
• data stores, such as databases, which enable data or information objects to be stored in a structured way.

During the logical design of an electronic system, users need to be actively involved in reviewing the design to verify that the system is usable and continues to meet requirements as it evolves.

Tip: Build good interfaces

Do not forget the importance of good user interface design. A good design will encourage and facilitate people's use of the system and is important to the success of the system you are designing.

Example: Metadata redesign

If, in the course of your Step D: Assessment of existing systems analysis you noted that your business system is not specifying adequate metadata, and you opted for the design strategy in Step E: Identification of strategies for recordkeeping, you should incorporate metadata redesign into your Step F work.

Consider the types of metadata required to meet your recordkeeping requirements and build these into your system design. Consider means by which metadata capture can be simplified through such means as automatic metadata attribution, metadata inheritance etc.

Consider how record classification can assist with metadata attribution. Can certain metadata elements - such as disposal, access, preservation, function etc - be applied to aggregates of records that have been similarly classified, to save you or your users from having to attribute metadata to each individual record? The business classification scheme you developed in Step B will help you to simplify your metadata
management in this way.

Consider too, how you want staff to apply metadata. Do you want to include a lot of guidance in the system to help staff choose appropriate metadata? Do you want to build thesauri or other tools into the system, or a range of default values, to limit user choices and control the type of data that is input into the system? Choosing to follow this approach can be labor intensive in the design phase, but can help to reduce mistakes and the amounts of invalid data that is input into the system.

Metadata can be used in many different ways to help you meet your recordkeeping and other business objectives, so consider how you can make this happen during the course of your Step F deliberations.

You may also want to examine the ARMS Standard on Recordkeeping Metadata for additional guidance in this area.

**Conduct physical system design**

Physical design deals with the 'how and where' of a system. It involves specifying the technological characteristics of the system, including:

- overall system structure
- system integration
- software program structures
- hardware configuration, and
- data (information) processing, storage, access and protection.

**Tip: Use open systems and technical standards where possible**

In their physical system design, it is strongly recommended that you specify and adopt open systems architecture and non-proprietary information technology standards to manage electronic records required for long-term access.

Note that system integration can include:

- integration with existing electronic systems or applications (for example, an organization’s legacy system, current electronic document management system or suite of document authoring applications), and
- integration of specific recordkeeping tools (such as thesauri, retention and disposal schedules, or metadata creation tools) to enhance the recordkeeping functionality of the system.

A system integration plan should be compiled for use during implementation phase (Step G: Implementation of a recordkeeping system). This plan is similar in concept and structure to the system implementation plan, but it relates only to the technological components of the system. Decisions made earlier about whether to buy, build or combine both approaches will impact on the physical design of the system. In one sense, the decisions made at
that time really constitute a part of the physical design. Inevitably, the choice of particular technologies will place constraints on the functional capabilities of system being designed.

It is possible that problems or errors will occur during physical design that can be traced back to the logical design stage. This may reflect inconsistencies in the requirements. Even at this late stage, you need to continue consulting with users, gathering additional information and, where necessary, making and documenting changes to the requirements and/or the system design.

As the final design activity before system implementation, physical design provides the last opportunity to ensure that the system design is consistent, complete, and meets the requirements. Changes to design after this time will prove both costly and time-consuming. It is therefore strongly recommended that system auditors and security specialists contribute to this activity.

**Example: What if the system I have developed is too large?**

You have developed a technical component for your system that meets all identified recordkeeping requirements. Unfortunately, however, it is too big. Storage costs are getting cheaper in the electronic environment, but infrastructure required to support systems is getting more expensive. Therefore your solution may be too costly for your department/section to implement or may require too much network space than can be allocated.

If you find yourself in this position you can:

- negotiate with management and IT - demonstrate how your project is trying to provide solutions for key issues and the extra cost required to complete the project is therefore justified
- use risk management techniques as a means of scaling back your solution - have you built in functionality that addresses only medium level concerns? Can some functionality that deals with such matters be removed as a means of decreasing system size? Is the system scalable - can the desired functionality be incorporated in full later when greater system capacity may be possible?
- utilize other Step E tactics - if your full design plans are just not feasible, can you use policy or implementation tactics to meet your recordkeeping requirements? Will a combination of rules and training lead to the same outcome?

**Develop technical application testing plan**

One final activity in the design of the technical components of your system is to develop an overall testing plan. This plan is a sub-element of the testing processes referred to in Step G.

The system testing plan details the different kinds of testing which need to be carried out during implementation of the system, and specifies what form(s) the testing should take. Testing of electronic systems involves using test data and scenarios to
verify that each component, and the system as a whole, works as intended under both normal and unusual circumstances. Working ‘as intended’ means meeting requirements as documented in the requirements specification.

Some examples of what needs to be tested during the implementation of an electronic recordkeeping system, or during the incorporation of recordkeeping functionality into an existing system, include:

- system functionality (does the system do what it is required to do?)
- system integration (how well do the different components work together?)
- user interfaces (are menus, forms and templates understandable and usable?)
- validation of inputs and outputs (does the system produce or allow the entry of erroneous data?), and
- system response and recovery times (how quickly does the system perform tasks and how long does it take to recover from crashes or interrupts?).

As discussed above, system operating procedures will also need to undergo testing to ensure correctness, usability and understandability.

**Tip: Competing priorities may affect timetables**

Remember DIRKS projects, particularly if they involve technical design components, are very reliant on the efforts of a range of people across your department/section. These people will have a range of other demands on their time, and so making long-term commitments to achieving your DIRKS requirements may be difficult. Be prepared for compromises and delays that may be unavoidable due to competing priorities amongst your DIRKS team members.

**Conduct regular design reviews**

Remember that it is important to involve system users in the process of the design or redesign of your technical components. Liaise with users about aspects of the design that affect them through both formal and informal means, and use this as a mechanism for obtaining useful feedback. Do not forget to have formal design reviews at critical stages in the design process, such as the completion of the design of a major system component.

Design reviews help to maintain links between the requirements you are aware of or articulated in Step C of your analysis, and the design activities you are now undertaking. These reviews will highlight requirements that have:

- not been properly addressed
- changed, or
- become infeasible due to other changes or new constraints.

Design reviews often result in requests for changes to requirements and/or to parts of the design itself. For this reason, it is essential to document the outcomes of the review. It is also vital that you maintain a visible documentary trail from the requests
for change to resulting changes in requirements or design. Requested changes which are not implemented, or which are implemented only partially, must also be documented.

**Tip: Remember to separate development and operational facilities**

According to ISO 17799, the *International code of practice for information security management*, it is important to ensure that design and testing operations for significant system redevelopment are separated from your operational environment. In clause 8.1.5, the standard states that the following controls should be in place:

- a) development and operational software should, where possible, run on different computer processors, or in different domains or directories
- b) development and testing activities should be separated as far as possible
- c) compilers, editors and other system utilities should not be accessible from operational systems when not required
- d) different log-on procedures should be used for operational and test systems, to reduce the risk of error. Users should be encouraged to use different passwords for these systems, and menus should display appropriate identification messages
- e) development staff should only have access to operational passwords where controls are in place for issuing passwords for the support of operational systems. Controls should ensure that such passwords are changed after use.

The standard also states that 'rules for the transfer of software from development to operational status should be defined and documented.'

**Develop a migration and/or conversion strategy**

If, at the end of your work in applying the design and standards tactics, you have developed new systems or redeveloped old ones, you may need to develop record migration and conversion strategies to ensure records are carried forward from old frameworks into new ones. You plan for and undertake these activities in Step F, *Design of recordkeeping systems*.

**Migration** is the 'act of moving records from one system to another, while maintaining the records' authenticity, integrity, reliability and usability'. [6]

**Conversion** is the 'process of changing records from one medium to another or from one format to another'. [7]

**Example: When migration is needed**

You would need to undertake migration activities if:

- business information systems were to be decommissioned or superseded as a
result of your DIRKS work and the records they contain need to be maintained in an active system,

- as a result of your system assessment it has been decided to upgrade to the next version of a software application and records need to be carried over into this new environment, or
- existing business information systems have undergone significant transformation and records need to be migrated into new system components.

Example: When conversion is needed
You would need to undertake conversion activities if:

- you have decided to implement technical standards for records management and need to convert existing records to the new standard format
- you have decided to adopt a digitization strategy and need to convert all paper records into an electronic format, or
- you have identified that records stored on one format are at risk, such as records stored on floppy disks, and want to move these to a more secure format, such as CD-ROM.

Both migration and conversion activities need to be conducted carefully and need to be tested and well documented. See ARMS' guideline: *Ensuring the accessibility of equipment/technology dependent records*. This document contains a range of clear guidelines to help ensure you conduct conversion and migration activities in an accountable and efficient manner.

Documenting technical design

In most design projects documentation is an ongoing and prolific activity. System design documentation is developed progressively at different stages (or 'milestones') in the design process. In addition to the policies and procedures you may develop, each design solution generated by the project team or tendered by an external party should incorporate extensive design documentation, including:

- design diaries, detailing original design decisions and rationale, and documenting changes made to the design over time
- introductory, non-technical design descriptions which can be understood by senior management, staff and other stakeholders
- descriptions of redesigned or newly designed business processes
- logical and physical models of different aspects of the system
• metadata specifications
• structured, precise hardware and software design specification(s), aimed at computer system developers and vendors
• initial testing plans
• initial training plans, and
• skeletal system implementation plan.

**Applying the implementation strategy**

Overview
Design or redesign work processes
Develop a training strategy

**Overview**

If in Step E: *Identification of strategies for recordkeeping*, you selected implementation as a strategy that would be of use to your department/section, this section examines how you can develop and use a range of implementation options as means to improve recordkeeping.

This section looks at revising work processes and training as two key implementation options. It concludes with a case study that demonstrates how implementation can be used as a stand-alone strategy, and as a means to promote all the changes you've made to your recordkeeping system to the staff of your department/section.

**Design or redesign work processes**

Your work to date may have revealed that you need to:

• design new processes and work flows that incorporate recordkeeping functionality, and/or
• redesign existing processes and work flows to incorporate recordkeeping functionality.

Step F is the point in the methodology where you look at redesigning work processes so that they encompass adequate recordkeeping.

**Example:**

Your work in Step D: *Assessment of existing systems* may have revealed that changes should be made to business processes to eliminate existing problems, such
as:

- information bottlenecks and duplication
- information double-handling, and
- inability to quickly locate and retrieve important information (including records).

You would design approaches to eliminate such problems in the course of your Step F work.

**Case study**

**Example: Business process improvement**

An organization has worked through the DIRKS methodology and realized that its current business processes are contributing to its poor recordkeeping practices. In their Step B analysis they documented their current workflows.

In Step D they identified that in no point of the workflow for the complaints management process or the policies surrounding this process were staff required to formally create a record of their responses to a complaint. This had resulted in a number of significant business inconveniences to the organization. It also meant that the organization was not complying with its Charter of Public Service. The Step D analysis revealed that technical applications were appropriate and required no configuration - people had just not been instructed in how to use them appropriately.

In Step E the organization decided to adopt the policy and implementation strategies to rectify the issues they had identified.

In Step F the organization redesigned the work process underpinning its complaints management process, as part of its application of the implementation strategy. After consultation with staff, the following workflow was decided upon:

1. Receive complaint
2. Register date and nature of complaint in complaints management system
3. Research complaint
4. Formulate response
5. Respond to complainant verbally or in writing
6. Capture details and date of response in complaints management system

As part of the implementation strategy, the organization also decided to develop training for staff involved in complaints management, to explain why complaints need to be documented and how this documentation should be achieved. This training was tailored to those staff that managed complaints management, and was designed to provide a very practical overview of how the new process worked. A number of case studies and practical examples were used in the training to help
accustom people to the new practice.

In applying the policy strategy, the organization chose in Step F to develop corporate procedures for complaints management.

**Manage change and involve users**

Changes to business processes will result in the creation of new, or the modification of old, business rules. More importantly, it will result in new ways of working for staff. Changes to business processes must have clear management backing, and be supported by:

- the assignment and documentation of new roles and responsibilities;
- timely modification or development of guidelines and operating procedures, and
- training in new responsibilities, processes and procedures.

**Tip: Use policy, training or system design to implement changes to business process**

Try to support any changes you make to business processes by:

- issuing policies and procedures that support or explain your revised business processes,
- developing detailed or minor training to help staff understand the changes, and/or
- incorporating aspects of your business process redesign into any technical work you are undertaking. You may be able to automate aspects of business processes, or make certain steps in a workflow mandatory.

Supporting business change in this way will help staff to understand and implement the new processes you are requiring.

There is significant potential for business process change to cause major disruption to staff (and, hence, to business). Any redesign of workflows and business processes should be handled sensitively and within a change management framework.

**Tip: Discuss changes with users**

If you are redesigning work processes for a particular work group, it may be useful to verify your recommendations using a formal review process. You could convene a meeting with affected staff and go through your redesign of work processes, explain what you have done and why you have done it, and show how the changes you have made enable the group and the department/section to better meet their requirements. At the meeting users and other stakeholders could be given the opportunity to ask questions, comment, criticize or suggest alternatives to the design you have developed. Remember, involving users in the process is crucial to any
effective system redesign.

**Develop a training strategy**

If you believe that a staff training program will be necessary to enable effective system implementation in your department/section, Step F will involve you developing a training strategy that allows you to achieve this objective. This strategy will be implemented in Step G, *Implementation of a recordkeeping system.*

If you are developing a training strategy, in Step F you should specifically identify:

- what concepts, policies, procedures or requirements you want to support using training
- recommended training methods - will training be face to face, online, publication based, hands-on use of live system etc, developed and conducted by internal or external staff, and
- the timetable for your training schedule.

**Tip: Include all relevant offices**

If it is appropriate, do not forget to include all offices of your department/section in your training strategy.

As has been discussed, training should be used as a strategy to support virtually any DIRKS project. Training ensures that staff affected by the design of the new recordkeeping system are informed, supported and equipped with the appropriate skills and experience to effectively use this system.

**Tip: Use what has worked previously**

If you have adopted training strategies in the past that proved effective in your department/section, use them again. Know what training strategies have failed and this knowledge to avoid making similar mistakes.

**What to support using training**

Making decisions about the type and content of the training you will offer to staff will largely depend:

- the nature of the system changes you are implementing
- the staff members’ roles in relation to the operation of the new system, and
- the appropriate knowledge and skills required to carry out that role.
If the system changes you are implementing are significant, fairly detailed training in actual use of the system may be required for all staff that will use it. If changes are minimal but you still want to keep people informed, your training strategy could comprise a ten-minute briefing at your next staff meeting.

If the changes to your recordkeeping systems are significant, or if you think there is an office wide need for it, you may wish to collect information regarding current levels of knowledge and expertise in order to assess individual, work group and section training needs. Some of this information may have emerged during your DIRKS project and can be used to guide your training strategy development.

**Example: General training in the principles of records management**

You may have discovered in your investigations that there is little knowledge of general principles of records management or even what constitutes a record in your department/section. There may also be little knowledge about the recordkeeping responsibilities of staff. Therefore, general training on these issues may be required before launching into more detailed training on recordkeeping tools or systems.

Other ways to collect information about training needs might include:

- interviews
- observation
- job analysis
- quality control and performance appraisal reports, and
- skills analysis and/or audit.

**Tip: Use targeted training tactics**

Depending on your target audience, special one-on-one or tailored training may also be required for managerial staff or select groups of users with particular responsibilities.

**Determine how training will be developed and presented**

If you recommend that training should be developed and presented internally, your training strategy should identify the person or persons with training drafting and presentation responsibilities.

**Recommended training methods**

Depending on the needs of your department/section or the nature of the system you are implementing, you may want to develop a range of delivery methods for your training strategy, or adopt a specific method that is going to best meet your needs. Possible options for your training program include:

- briefings
- face-to-face training, where participants also have 'hands-on' practice on a live system
- online, context-sensitive help
- reference cards and charts
- 'tips and hints' documentation, regularly updated in response to problems and quirks encountered by users
- user guides and manuals - in hard-copy form, or made available on your section's intranet, and
- user help-desk facilities.

Be guided by your own risks, resources and systems when determining the best method of training for your department/section.

**Example: Online training or printed course materials**

If yours is a large and distributed department/section and you know you will never gather all relevant staff in one place at one time, investigating online training or the use of printed course materials which people can pick up in their own time.

**Example: Working through changes in small groups**

If you have implemented significant technical changes to the system and consequent changes to business processes, it may be best to sit people down in small groups in front of the new technology and walk them through the changes.

**Example: Immediate training and induction training package**

You may decide to have an immediate training run, where you provide all current staff with an overview of the existing system. However you also decide to develop an induction training package, to ensure all new staff are also provided with relevant information about recordkeeping and your recordkeeping systems.

**External training options**

If you do not have the resources internally to develop courses and present them to all relevant staff, you may want to consider engaging consultants to do this for you. Records management consultants can develop customized training and present this for staff. Please contact ARMS for advice about external records management training.

ARMS can provide advice on different forms of external training that are available. External training options might include:

- tailored courses prepared and provided by external consultants
• presentations by records management software vendors
• vocational, undergraduate and post graduate courses conducted by colleges and or universities, and
• short courses, seminars and other forms of continuing education offered by ARMS, tertiary institutions and professional associations.

**Develop a training timetable**

It is important to determine when you are going to implement your training plans. Consider the state of your system’s development, issues that may have previously delayed its deployment or other risks it may face.

With these in mind, draft a plan that states when you will have training content developed by, when you will present this content to users, or alternatively, when you will engage consultants to develop a training package for you.

Be sure to consider the requirements of your chosen training method - face-to-face classes, formal course reading material etc when finalizing your timetable.

Note that this training timetable will need to be referenced in the broader implementation timetable you develop as part of Step G: *Implementation of a recordkeeping system.*

**Tip: Keep focussed on your target audience**

Remember your target audience and remember the message you want to communicate. When developing course material, try to explain your message using examples that are relevant to your target audience and provide them with knowledge that will be directly relevant to their responsibilities.

When determining a project timetable, also keep users in mind. Try not to let there be a lag between the time the system is rolled out, and the time when users actually receive training.

**Footnotes**


Step G - Implementation of a recordkeeping system

Implementing a recordkeeping system should be undertaken systematically using project planning methodologies appropriate to the situation and with a view to integrating the operation of the recordkeeping systems with business processes and related systems.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step G
Planning for implementation
Implementing strategies and systems
Managing ongoing implementation
Documenting Step G

Content and scope of Step G

Overview
Aim of Step G
Summary of Step G
Why should you do Step G?
How is Step G scalable?
Relationship to other steps

Overview

This section is an introduction to Step G: Implementation of a recordkeeping system. It:

- outlines the aim of Step G
- summarizes the major elements of Step G
- explains why it is important to undertake Step G for DIRKS projects
- indicates how Step G is scalable, and
- shows how Step G relates to the other steps in the DIRKS methodology.

Aim of Step G
The aim of Step G is to manage the implementation of your recordkeeping system, using an appropriate mix of strategies, so that it integrates appropriately with business practices.

Summary of Step G

DIRKS should not be seen as a linear process, and this is most obvious when you examine Step G. There are many aspects of implementation that should be a consideration from the very beginning of any DIRKS project.

Examples: Implementation measures required from the beginning

- Change management initiatives, such as the involvement of staff and communication methods with staff and management, should be built into your project planning at the start and happen throughout the project.
- Some people chosen for the project team should be good communicators and have the skills to sell the project.
- Choosing a suitable champion for the project, and gaining the support of senior management, should be at the beginning of the project but will be a crucial part of implementation.

As these need to be addressed throughout the project, they have been explained in Introducing DIRKS and referred to in various steps within the manual.

You may have already examined implementation issues and chosen the appropriate mix of design, standards, implementation and policy strategies to best meet your particular situation and goals in Step E: Identification of strategies for recordkeeping. These are designed in Step F: Design of a recordkeeping system, but need to be practically implemented in Step G. This might involve:

- planning for implementation
- communicating roles, responsibilities, and skills to staff by training and other means
- introducing staff to new policies, procedures, and tools, and
- conducting your rollout of systems according to chosen methods.

Tip: There is no such thing as a perfect system

Do not try to implement the perfect system, as perfect systems do not exist. Just try to implement the system that will help your department/section to meet its business needs.

Why should you do Step G?
Any project, no matter how large or small should involve a planned and considered implementation to increase the chances of success. Even if you have only performed a few of the DIRKS steps, you have probably spent time and energy on your project. If you are integrating new or improved systems with office communications and business processes you may have very high accountability and financial stakes. In addition, all recordkeeping projects will invariably impact on organizational responsibilities, work practices and procedures, and there is considerable risk that staff will not embrace the changes.

Planning and managing the practical implications of implementation can minimize risks to your project. It give you a better chance of integrating your improved recordkeeping tools, systems or practices in your office in way that causes minimum disruption to your business activities. It will also:

- contribute to organizational requirements for quality accreditation
- encourage uptake by staff, and
- help you to remain within your budget.

This will allow you to capitalize on your investment of resources.

Tip: Implementation is costly
You should never underestimate the importance of your implementation or the costs. In significant projects in large organizations implementation costs can account for over 50% of the total budget. Even in small projects, implementation time and costs can take up a large amount of available resources.

How is Step G scalable?

The implementation step is essential for any DIRKS project - there is no point in creating solutions for existing problems or designing systems if you do not implement them. However, the scale of Step G will depend heavily on solutions you are implementing and how much of the DIRKS process you have already undertaken. With large and complex changes, you may choose to implement aspects gradually to make the best use of resources and to manage change effectively.

There may be management-driven imperatives to skimp on resources for implementation or to implement systems or components of systems without fully understanding recordkeeping requirements and organizational constraints. Be aware that implementing a new system without proper resources or the knowledge that comes from completing relevant steps of DIRKS may adversely affect:

- how the system or component is configured or developed
- its ability to meet your needs
- the way implementation is carried out, and
- the acceptance of the change by staff.

You may ultimately incur additional, and otherwise avoidable costs (in terms of staff, time and goodwill) and your system may not be able to guarantee you are creating
and managing the evidence you need to satisfy your regulatory and business needs and community expectations.

**Relationship to other steps**

**All other steps**

Step G is, of course, reliant on having something to implement, so you will be undertaking other steps of the DIRKS methodology in order to use it. You may have undertaken some or all of the following:

- analyzed recordkeeping requirements and organizational constraints. These can be derived fully from Steps A to E
- developed any specific tools to assist your records management needs, such as a corporate record plan (arising from Step B or C) and retention and disposal schedule (derived from Steps A to C)
- developed a list of vital records which can help you to protect them from disaster, promote business continuity and prioritize recovery efforts during a disaster (derived from Steps A to C)
- identified the strengths and weaknesses of your existing systems (Step D)
- agreed on a range of strategies to satisfy your recordkeeping requirements and organizational constraints, including implementation strategies (Step E)
- developed a plan that shows how the various system components (processes, procedures, people and technology) fit together in practice (Step F)
- obtained management support and resources to implement the plan, and/or
- acquired necessary hardware and software.

**Step E and F**

Step E: *Identification of strategies for recordkeeping* and Step F: *Design of a recordkeeping system* are closely aligned to Step G and in many cases these steps will be undertaken together. In Step E you choose strategies to meet your needs and you design these in Step F to implement in Step G.

**Example: Relationship with Steps E and F**

You may decide in Step E that an important strategy for implementing a file classification scheme across the office is to have classification procedures in place (policy strategy) and to train staff in those procedures (implementation strategy). Step F is where you design these procedures, decide training methods and write the training course. Step G is where the procedures are distributed to the department/section and where training is conducted.
Planning for implementation

Plan for implementation at the beginning of your project
Plan for implementation at later stages of your project
Develop a timetable for implementation
Use project management and change management methodologies

Plan for implementation at the beginning of your project

At various stages in your DIRKS project you will need to plan for implementation. You will have established broad strategic plans at the beginning of your project and these should address some aspects of implementation and change management, such as involvement of staff in analysis and design. See *Introducing DIRKS* for more information on project planning and change management issues.

If you have a particular issue in mind, such as implementing a records classification scheme, you may have also developed more detailed implementation plans at the outset of your project, focused on how you want to design and introduce this tool into your department/section (aspects of Step E: *Identification of strategies for recordkeeping* and Step F: *Design of a recordkeeping system* can help you with this).

Plan for implementation at later stages of your project

However, sometimes you may be unclear at the beginning of a project just what strategies you will choose to address your problems. You may not even be fully aware of the nature of the problems! Therefore, you may need to do some additional planning at a later stage, after you have assessed existing systems (Step D) and looked at strategies to address problems (Step E).

Implementation issues are likely to come up again in Step F when you are deciding how to design aspects of your overall strategy. Planning for rollout may begin in Step F but should form part of your planning for implementation in Step G. See *Roll out new or redesigned systems* for more information.

[Drafting note: ARMS would like to include a model implementation plan as an example. If anyone has examples they consider suitable, and is willing to share, they would be greatly appreciated].

Develop a timetable for implementation

Before embarking on Step G you need to draw on your existing project planning to develop a detailed timetable for implementation. This might include when and how often the training will be delivered and who will present it.

**Tip: Training should be timely**
When determining an implementation timetable, keep your users in mind. Try not to let there be a lag time between the time the system is rolled out and the time when users actually receive training.

Use project management and change management methodologies

As with any planning, ensure that you use project management methodologies and that change management is considered every step of the way. If you require further advice on project management or change management refer to the Introduction or consult the Project Management Guideline or Change Management Guideline available from the NSW (Australia) Office of Information Technology website.

Implementing strategies and systems

Overview

Communicate, communicate, communicate!
Roll out new or redesigned systems
Train staff to use new or redesigned systems
Introduce new or revised processes, documentation and responsibilities
Highlight support, feedback and review mechanisms

Overview

The main emphasis of Step G is the physical implementation of the strategies chosen in Step E: Identification of strategies for recordkeeping and designed in Step F: Design of a recordkeeping system according to the implementation plan. This involves implementing:

- the roll out of the system
- implementation, policy and some design strategies (standards strategies are technical and are implemented as part of Step F).

Naturally the elements to implement will be entirely dependent on the mix of strategies chosen in Step E and designed in Step F. This section contains some general advice on implementing the main types of strategies that are usually adopted when introducing recordkeeping systems.

Communicate, communicate, communicate!

In implementation phases you need to inform staff about:

- timeframes for the introduction of the new or revised system along with revisions to timeframes
• methods of implementation and when they will be introduced eg. how the system will be rolled out
• who will be trained in how to use the system and when this will happen
• how they can give feedback on the system and the implementation process
• how the system is likely to directly affect their work processes and practices.

**Tip: Tailor communication methods to your audience**
Different levels of staff and stakeholders may respond to different communication methods and content. Therefore you should carefully consider your audience when designing the method, content and the style of presenting information in Step F. Your experiences when implementing may reinforce your assumptions about the best methods of communicating with staff, or you may decide you need to revise your strategies.

**Tip: Only communicate the information people need**
Do not overburden staff with information about the project or system. Give them the information they need to know to carry out their work and provide them with sources of further information and advice in case they want to know more.

### Roll out new or redesigned systems

#### Follow plans for roll out
In Step G you need to implement your plans for roll out, part of your implementation planning. The methods chosen should ensure that the risks are identified and counteracted effectively. Some possible methods of roll out are listed in the table below:

<table>
<thead>
<tr>
<th>Method</th>
<th>Advantages/disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct changeover - where the new system is introduced at an agreed point in time without any gradual implementation.</td>
<td>The risks of failure or extended downtime are high but the operational costs are low due to the maintenance of only a single recordkeeping system.</td>
</tr>
<tr>
<td>Parallel operation - where the new and old systems run in tandem for an agreed time.</td>
<td>This represents a conservative but potentially expensive approach as dual systems must be maintained. Staff may continue to use the old system rather than adapting to the new.</td>
</tr>
<tr>
<td>Pilot operation - where the new system is implemented initially for only a discrete part of the department/section.</td>
<td>This approach is particularly useful when there are potentially high technological or organizational risks associated with the project. It gives the project team</td>
</tr>
</tbody>
</table>
implementing time to learn lessons about change management and staff needs.

| Phased changeover - where only certain modules of the new systems are implemented over time and the old system is phased out as functions are subsumed by the new system. | This approach may result in a lengthy implementation period but enables organizations to achieve some benefits from the new system more rapidly than they would using other strategies. |

**Example: A combination of roll out methods**

The State Records Authority, NSW, Australia, used a combination of roll out methods when implementing their electronic records and document management system.

The records management system was introduced first. A pilot was conducted for the system and new file classification scheme, and changes were made before rolling the system out across the organization.

For the document management component, a small pilot group began using the system for several months and made suggestions for improvement to the design team. Later the pilot group was extended and new versions of the customized software were made available to these groups. Finally a decision was made that the document management pilot met all requirements and the implementation would go ahead, first in the city location, then in the regional location.

There are a myriad of other smaller decisions that need to be made when you are rolling out new systems which need to be carefully considered in planning and implementation.

It is important to liaise with IT staff to ensure that the roll out is fully and appropriately completed. Roll out processes should be tested before sign off, and should be fully documented.

**Train staff to use new or redesigned systems**

Training is probably the most common method of implementing your DIRKS projects. Information on choosing methods of training and writing training courses is provided in Step F. Training programs should be well-planned, explicitly supported by management and delivered in a timely manner.

The actual implementation of training is also very important to consider carefully. If delivering training internally, you should ensure that:

- rooms or spaces away from the normal office environment are available for training and are conducive to learning
- regular breaks are planned and there are changes in presentation styles to keep the audience interested
• group sizes are suitable for the type of training being offered. More difficult concepts may require smaller group sizes so trainers can provide more personal attention
• trainers are knowledgeable about the subject matter
• trainers are dynamic communicators who can adapt to different levels of audience understanding.

Try to find innovative means of delivering your message that will keep your audience interested.

**Example: Innovative training methods**

One organization used a range of techniques to deliver face-to-face training for their staff. They started with an informal, anecdotal talk to deliver the message that poor recordkeeping can adversely affect the organization. They also focused their training around 3 key themes and had visual symbols for each of the themes so people would remember them. The organization also used games, bedtime stories, competitions with prizes and quizzes. All these techniques made the training fun and made the participants more responsive to further training initiatives.

**Tip: Training should be offered for all relevant personnel**

Remember that training in recordkeeping systems should not only be for full time staff. Part time staff, casuals, consultants and contractors all create records and interact with systems and should also be trained.

[Drafting note: ARMS would like to include other examples/model training courses. If anyone has examples they consider suitable, and is willing to share, they would be greatly appreciated].

Training needs to be offered on a reasonably regular basis as staff change over time and existing staff need to be reminded of their responsibilities. Innovative ways of working around budget restrictions may also be required.

**Example: Training strategy incorporating regional areas**

Steps D and E discussed the example of an organization which had identified problems with its management of its licensing agreements.

It was identified that training in the use of the licensing system was regularly conducted in central office. In the regional offices, however, staff have not been adequately trained in system use and also do not have copies of up to date system policies and procedures.

In Step E the organization decided to adopt the implementation strategy and undertake concerted training to ensure all staff are aware of how the licensing
system operates and the requirements surrounding license management.

In Step F the organization developed a training strategy that said training had to be regularly conducted in the regions, it had to be consistent across all offices and it should be presented by organizational staff with a good understanding of the licensing process.

To implement the training strategy in Step G, the organization offered a program of annual training across their offices. To make this cost effective, the organization brought a representative from each of its regional offices to central office for two days each year. These representatives and their central office colleagues were educated on system changes and given a refresher course on best practice. They had a lot of unstructured discussion time during the course of the two days where they could discuss as a group the issues they were facing and determine best practice solutions.

The week after they returned to their offices, regional staff were required to give a series of presentations to all staff of their office on system changes and any other knowledge they learned during their time at central office. At these meetings they distributed any updated policies and procedures that had been developed to ensure that these could be effectively implemented by all staff.

### Introduce new or revised processes, documentation and responsibilities

In Step E you may have identified the need for:

- new business processes or revision of existing business processes
- new policies, procedures, guidelines or business rules, or
- new or revised allocation of responsibilities to staff for particular recordkeeping tasks and issues.

These will be designed in Step F and need to be introduced and distributed to staff in Step G.

Training is often a suitable time to:

- introduce policies, procedures, guidelines or business rules and responsibilities that apply to the department/section as a whole
- reinforce managerial commitment to them, and
- clarify any misapprehensions and reduce concerns.

Training can also contribute to the revision of these documents over time, allowing them to remain an ongoing resource.

If there are business processes, documentation or responsibilities that apply only to certain groups or individuals within the department/section, they could be addressed in:

- smaller, tailored training courses for the groups in question, or
- discussions within the areas affected.
Step G can involve implementation methods other than training programs. It is also concerned with implementing frameworks that enable recordkeeping to be effectively managed and recordkeeping advice to be provided, long after the training courses themselves are over. In addition, you may have identified other needs, as part of the implementation strategy, where training is not an appropriate method of implementation.

**Example: Implementation of needs that do not require training**

- The need to lock particular storage areas.
- The need to remove hard drives from computers so staff to do store files there.
- The need to document responsibilities in position descriptions.
- The need to monitor documentation of business practices.

The reasons for these measures should be communicated to staff. However, it may be more appropriate to introduce them with an email message or statement rather than the provision of a training course.

**Highlight support, feedback and review mechanisms**

You should establish support, feedback and review mechanisms such as:

- user or interest groups
- help desk support
- contact people to respond to enquiries and comments
- evaluation forms for systems and training, and/or
- other methods of ongoing monitoring.

When you are implementing Step G it is a good time to ensure staff are fully aware of these mechanisms. Information received can assist you in making changes to the system and/or the ways you are approaching implementation. Relevant feedback should be acted on as soon as it is viable and can also contribute to the post implementation review in Step H.

**Managing ongoing implementation**

It is important to realize that implementation is not a one-off process. Certainly there will be a point where the system goes 'live' and staff will require the training, and/or policies and procedures and support to ensure the transition is a straightforward one. This will be the main thrust of your implementation, and the main expense.

However, staff may change and even existing staff need to be regularly reminded of responsibilities and methods. Therefore you should budget for, and ensure the implementation of:
• mechanisms to monitor staff usage of the system and to detect problems (see Step H: Post implementation review for further information)
• regular refresher courses or briefings, which can focus on their responsibilities and the whole system or particular aspects that may be problematic, and
• training or advice for new staff members on their responsibilities and the system itself.

Tip: Give staff assistance to change and evolve
Remember the adage from Charles Darwin 'It is not the strongest of the species that survives, nor the most intelligent, it is the one that is most adaptable to change.' Any assistance you can give to help staff to adapt to the changes facing them in the short and the long term can help you in achieving success with your project.

Documenting Step G

Document implementation plans
Changes to implementation
Report on implementation

Document implementation plans

You may have planned for implementation as part of your broader project planning or in earlier steps of DIRKS. You should also document the timetables and implementation plans developed for Step G showing:
• what implementation methods will be used for the rollout of systems and strategies
• when implementation will happen, and
• ongoing implementation required.

Changes to implementation

Once you have started implementing you should also note any changes made to plans.

Example: Where to document changes
Changes might be documented in:
• versions of the plans and reports on implementation, or
• minutes of project team meetings.
The implementation process may also have highlighted the need for changes to documentation such as training notes and procedures and policy. These changes should be noted and consideration given to changes.

**Report on implementation**

It is a valuable exercise to prepare a report at the end of the implementation process. This report could outline:

- areas or staff targeted in the implementation
- methods implemented
- changes made to implementation planning, such as timetables or budgets, and the reasons why
- changes made to documentation from Step F, such as training notes or procedures
- issues or problems identified
- action required, and
- future implementation needs.

Such documentation can be valuable for accountability and auditing purposes and can be a case study for future implementation projects.[2] Major issues with the implementation process, along with recommendations for future action, should be highlighted in a report to management.

[Drafting note: ARMS would like to include a model/example of a report on implementation. If anyone has examples they consider suitable, and is willing to share, they would be greatly appreciated].

**Footnotes**


Step H - Post implementation review

Gather information about the performance of the records system as an integral and ongoing process. This may be undertaken by interviewing members of management and key employees, using the questionnaires, observing the system in operation, examining procedure 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 continuous monitoring and regular evaluation.

ISO 15489.1, Information and documentation - Records management, Clause 8.4

Content and scope of Step H
Planning for ongoing monitoring
Planning the post implementation review
Conducting the review or ongoing monitoring
Taking corrective action
Continuous review and monitoring
Documenting Step H

Content and scope of Step H

Overview
Aims of Step H
Summary of Step H
Why should you do Step H?
How is Step H scalable?
Relationship to other steps

Overview

This section is an introduction to Step H: Post implementation review. It:
- outlines the aim of Step H
- summarizes the major elements of Step H
- explains why it is important to undertake Step H for particular DIRKS projects
- indicates how Step H is scalable, and
• shows how Step H relates to the other steps in the DIRKS methodology.

**Aims of Step H**

The aims of step H are to:

- measure the effectiveness of the recordkeeping system or system components, after they have been implemented
- identify and take corrective action where it is required
- evaluate the efficiency and appropriateness of the system development process and implementation, and
- establish and implement an ongoing monitoring regime for the duration of the system.

**Summary of Step H**

Step H involves the planning and implementation of both:

- set reviews of the system and development process, and
- ongoing monitoring regimes.

Planning involves deciding:

- what is required for ongoing monitoring
- how and who will perform ongoing maintenance
- when post implementation reviews should be conducted
- the scope of reviews
- what criteria should be used in reviews for evaluation
- how projects will be evaluated and by whom.

Measurement techniques for reviews or monitoring can include:

- interviewing management, staff and other stakeholders
- conducting surveys
- examining documentation developed during the earlier phases of the systems development project, and
- observing and randomly checking operations.

Ongoing changes to systems or tools should be documented when they are made. The findings from reviews should be documented in a manner that can be used for comparative purposes in the future. Needs for corrective action highlighted in ongoing monitoring or a review should be prioritized and acted on.

**Why should you do Step H?**
Your DIRKS project has involved an investment of resources, in terms of time, money, staff and goodwill. It is important to demonstrate to management and other stakeholders with a vested interest in organizational accountability that:

- the developmental process has been conducted efficiently, and
- the recordkeeping system has the capacity to deliver its stated benefits in the short and long term.

A post-implementation review can provide such assurance.

In addition, by completing the initial post-implementation review and developing ongoing monitoring strategies you will:

- help guarantee a continuing return on the organization's investment by maintaining the recordkeeping system to optimal levels of performance throughout the system's lifecycle
- have objective proof that your organization is creating and managing appropriate evidence of its business activities in accordance with operational, accountability and community expectations
- minimize your organization's exposure to risk through system failure, and
- over time, anticipate significant changes in recordkeeping requirements and organizational needs that necessitate a new developmental cycle.

**Tip: If you fail to plan you plan to fail**

If in the rush to implement a new system your organization fails to realize the importance of planning for ongoing monitoring, measuring system effectiveness and the effectiveness of the development process, you can jeopardize the entire endeavor. Faults may go undetected or untreated and system users may become increasingly disgruntled. The project may ultimately fail as a result. In addition, lessons learnt and knowledge gained as part of the implementation may not be available to future projects. Strategies for review and ongoing monitoring are therefore essential.

**How is Step H scalable?**

The scale of the ongoing monitoring will depend on the scope of your initial project and what kinds of faults or problems are detected.

In terms of reviewing, you can choose to conduct a full review of all components of the system (people, processes, tools, technology) that you have implemented or you may decide to review elements of the project independently. The scale can be according to the needs, resources and priorities of your organization.

Depending on the complexity of the system and the level of resources available, it may be appropriate to conduct risk assessments to determine the scope and emphasis of the post-implementation review. See *Risk analysis in DIRKS* and the *Recordkeeping risk analysis guidelines* for more information.

**Relationship to other steps**
Step H is an important step to all DIRKS projects.

**Example: Information from other steps can assist**

- if you have analyzed your recordkeeping requirements and organizational constraints (Step C-E) you can assess the system to see if it meets these, or
- if you have completed Steps F: *Design of a recordkeeping system* and Step G: *Implementation of a recordkeeping system* you can examine the efficiency and appropriateness of systems design and implementation in Step H.

Some aspects of step H, such as putting plans in place for future monitoring, can also be conducted concurrently with Step G.

**Planning for ongoing monitoring**

Plans and timetables for ongoing monitoring of systems and system components should be a part of any DIRKS project. Mechanisms such as:

- help desk support
- suggestion forms, or
- user groups

should be considered and adequately resourced. Problems found through observation and use, reports and random checks may highlight where corrective action is needed.

Responsibility for ongoing monitoring should be assigned to people with the appropriate skills and knowledge to find and address problems.

**Example: Using skilled staff for monitoring**

One organization had a project team consisting of representatives from each business unit who were trained and assisted in the development and implementation of the system. This same team then became the core members of a user group, feeding back complaints or suggestions from their business areas to the project leaders both during the implementation and afterward so that they could plan for remedial action or further development or refinement of the system. As the team members were in the work areas they heard more about problems or issues found.

**Planning the post implementation review**

**Overview**

The scope of the review
Who should review?
When should you review?
Performance indicators
Review methods
What should you review?
Documentation required for review

Overview

This section outlines what you should consider when planning for a review of your recordkeeping system. Suitable resources should be allocated. You will need to decide:

- the scope of the review (what you want to evaluate)
- who will perform it
- when it will occur
- what performance indicators should be used
- what methods should be used, and
- the documentation required.

Ideally an evaluation framework should be developed as part of the original design process so that any performance data requirements can be built into management and administrative processes and the review can be conducted with minimal intrusion on work practices or the delivery of services.

The scope of the review

The scope of the review will be dependent on the original scope of your project, the resources available and organizational needs and priorities.

Who should review?

The choice of the reviewer(s) is dependant on a number of factors such as:

- the specific circumstances
- needs
- organizational culture
- knowledge possessed, and
- the size of the review.

Example: Who should review

A large organization, such as the United Nations, with multiple layers of management
and complex business activities which implemented major new systems may choose to engage external consultants to prepare an in-depth report.
A small organization with few unique or high-risk functions may opt for peer review.

To avoid any actual or perceived bias, broad system reviews should preferably by undertaken by personnel who were not involved in the system design and implementation process.
Members of the review team will need to have good analytical skills and knowledge appropriate to the task at hand. They should understand and have access to the project goals and design and implementation documentation, so that they are able to assess whether the system or system component is adequately meeting the project goals and organizational needs.

When should you review?
An initial post implementation review for a system should be carried out between six and twelve months after the system has been implemented and then repeated on an agreed cycle. Smaller reviews of elements of the system may be conducted at more regular intervals, or in accordance with organizational needs.

Performance indicators
As part of initial project planning the project team should have established performance indicators to measure the success of your project. The indicators (e.g. timeliness, teamwork, budget, satisfaction of sponsors and other stakeholders) should be used in the review process to measure project progress.
The project team should also have established expected project outcomes (e.g. comparison of inputs to outputs, behavioral change, cost savings, level of satisfaction or involvement) as part of initial planning. These should also be measured in the review along with other outcomes evident along the way.
Depending on the scope of the project other measurement tools may have been developed during the project.

Example: Information produced during other steps can become measurement tools
The list of agreed recordkeeping requirements developed by the end of Step C: Identification of Recordkeeping Requirements can become performance indicators for assessing the performance of the system in meeting these requirements.
Reports arising from earlier steps might include recommendations on improvements
to existing systems will help inform the review process.

Any criteria used must be objective, verifiable and quantifiable and should allow for comparisons to be drawn over time. Organizational constraints (cultural, technical, economic, political and other factors) and their impacts should also be assessed.

Questions for the review should be related to the particular project you have undertaken. See What should you review? for a list of possible questions (based on an entire system review).

There are various types of evaluation depending on the particular questions you want answered. Generally, they fall into the following areas:

- **appropriateness**
  - appropriateness of solution compared to the organization's needs
  - objectives compared with available resources, and
  - comparison of need now with original need.

- **effectiveness**
  - original objectives compared with outcomes (what was desired and what was achieved)
  - outcomes compared with needs
  - outcomes compared with standards
  - present outcomes compared with past outcomes, and
  - comparison between target groups within the organization.

- **efficiency**
  - current costs compared with past costs (people, processes, technology and tools)
  - costs compared with similar systems elsewhere (benchmarking), and
  - extent of implementation compared with targets.

**Tip: Develop clear performance criteria**

One of the common faults in performance criteria and measures is that they are vague and ambiguous. Try to be clear about what you are measuring.

**Review methods**

Methods for collecting information for the review may include:

- interviewing stakeholders (e.g. project sponsor, senior management, business experts, records management staff and representative users)
- using questionnaires or surveys
- observing the system in operation
• examining procedures manuals, training materials and other documentation
• carrying out random checks on the quality of records and control information, and/or
• obtaining computer-generated reports on usage figures for statistical analysis.

What should you review?

What you need to review will depend very much on the scope of your review. See Doing your DIRKS project for reference to particular projects. Below are some sample questions you might select from, as appropriate, to measure systems:

• Records creation and retrieval
  o Are records being created to adequately document business activity?
  o Are records being captured into the recordkeeping system in a timely, accurate and complete manner?
  o Are records adequately preserved and accessible?
  o Can users retrieve the records they need?
  o Can users easily locate the records they need using the new system?
  o Do your business classification scheme and recordkeeping metadata adequately reflect functions, activities, and transactions?

• Management
  o Is systems documentation adequate for operational and maintenance purposes?
  o Have audit trails been established between the old and new systems?
  o Have vital records and relevant control information from the old system been converted to the new system?
  o Are staff still relying on any unauthorized stand-alone or ad hoc systems in preference to the new system?
  o Are adequate security arrangements in place to protect sensitive records (including privacy and confidentiality aspects)?
  o Is the physical security of records adequate (e.g. locked cabinets/compactus)?
  o Has the quality and level of records-based services changed since implementation from both the user and management perspective (e.g. ease of use, precision and coverage of search and retrieval)?
  o How often are maintenance checks carried out?
  o Has the disaster response plan been tested?

• Retention and disposal
  o Do you have comprehensive records retention and disposal coverage?
  o Does the coverage satisfy the needs of the department/section?
- Is it consistent with the requirements of the UN Archives and Records Management Section (ARMS)?
- Is the retention schedule built into the recordkeeping system in a way that meets your needs?
- Are the retention periods sufficient to fulfill business, accountability requirements and community expectations or do they need to be revised to longer/shorter periods?
- Are records being sentenced and disposed of appropriately?
- Is there documentation to substantiate these actions (e.g. certificates of destruction, retention of control records, current records retention schedules)?
- Is your department/section creating any additional types of records that need to be appraised and incorporated in its disposal coverage?
- Are some of the vital records listed no longer being created?

- **Staff training**
  - Are personnel aware of their recordkeeping roles and responsibilities (e.g. through job descriptions, training)?
  - Do personnel have access to up-to-date policy and procedural documentation?
  - What problems have personnel experienced with the new system?
  - Are personnel applying classification and titling conventions appropriately and consistently?
  - Are personnel retrieving records using the appropriate tools?
  - Are staffing levels and competency skills adequate (within the records management area and among other staff)?

- **Learning from the process**
  - Were the original terms of reference sufficiently precise to guide the project?
  - Did we negotiate sufficient resources to carry out the project?
  - Did we keep the key stakeholders informed and committed during the project?
  - Could we improve our broad planning processes if we had to start afresh?
  - Was the planning process appropriate to the project’s size, complexity and predictability?
  - Did our techniques for managing the project work well?
  - Are the stakeholders satisfied?
  - Did we complete the project on time?
  - Did we complete the project within budget?
  - Have we handed the project over as a going concern?
Do we need a formal sign-off?
Have we acknowledged everyone who made a contribution?
Have we celebrated our success as a team?

Documentation required for review

You should specify in review planning what type of documentation is required. You might, for example, construct a table that lists the aspects of the recordkeeping system you wish to measure, with columns for a ‘yes/no’ answer and comments. See Documenting the Step H analysis for information on all of the documentation recommended for this step.

Further information

Conducting the review or ongoing monitoring

Ongoing monitoring
Post implementation review

Ongoing monitoring

Planning for ongoing monitoring of systems and tools should be implemented when the need arises.

Post implementation review

Once the planning for a post implementation review is in place, the review team can conduct the review using the performance criteria and methods identified. Review teams should be given access to all appropriate sources and personnel required to conduct the review effectively.

Taking corrective action

Any remedial action suggested by the review or ongoing monitoring should be documented and assessed. It may also need to be prioritized. If the action is
essential to the viability of the recordkeeping system it should be undertaken as soon as possible.

**Continuous review and monitoring**

Monitoring and review are not one off processes. Components of the system are likely to require ongoing monitoring and regular review. They should be periodically examined to allow you to:

- identify changes to recordkeeping requirements
- respond to environmental changes (such as user requirements)
- assess the efficiency of technological components, and
- anticipate the need for any modifications or systems redevelopment.

In some cases this may involve re-examining other steps of the DIRKS methodology.

**Example: Use existing internal methods of monitoring**

A number of organizations have included recordkeeping components in their scheduled internal audits as a means of promoting ongoing monitoring.

**Documenting Step H**

**Overview**

Planning documentation
Data gathered and recommendations
Report to management

**Planning documentation**

You should document all decisions made in planning for:

- ongoing monitoring, including what needs to be maintained, what methods should be used, who is assigned responsibility, and
- the review process, including choosing the scope, particular reviewers and dates, performance criteria and methods.
Any variations to planning documentation that resulted from monitoring or reviews should also be documented.

**Data gathered and recommendations**

You should document the data gathered in ongoing monitoring or post implementation review, such as checklists used.

You might also:

- document any variations or deviations to requirements defined in steps C and D
- review the effectiveness of recordkeeping strategies chosen in step E
- identify areas that warrant priority treatment
- recommend corrective action, and
- propose mechanisms for ongoing monitoring.

**Report to management**

The monitoring and review process and findings should be presented to management and a record created and retained for evidential and future reference purposes. This record may take the form of a written report, speaking notes or minutes.

Remember that circumstances may change over time and justification for decisions made or action taken may become very important. For this reason, the review and any follow-up action should be formally endorsed by senior management and all project management files and systems documentation should be brought up to date before the project team is dispersed.
Doing your DIRKS project

This section contains information on how Steps A-H can be applied to achieve specific recordkeeping goals. The guidance provided in this section should be read in conjunction with the relevant steps of the DIRKS Manual.

Guidance is provided to help you with the following projects:

- doing DIRKS to create and implement a file titling plan/thesaurus
- doing DIRKS to create and implement a retention schedule
- doing DIRKS to ensure the creation and capture of records
- doing DIRKS to manage your vital records
- doing DIRKS to specify and apply recordkeeping metadata
- doing DIRKS to manage records access and security
- doing DIRKS to ensure records are kept of outsourced functions
- doing DIRKS to ensure records are created and kept when business processes and systems are reengineered
- doing DIRKS to select and implement off-the-shelf records management software packages
- doing DIRKS to develop new systems with adequate recordkeeping functionality

If you are undertaking DIRKS with more than one project aim you should compare the relevant summaries and your scope to ascertain the extent of the work required.

Example:

If you are doing DIRKS to compile a whole-of-office classification and you are also intending to examine vital records for one function as part of the same project, you will need to complete Step A: Preliminary investigation and Step B: Analysis of business activity for the whole of your organization, then consider what the scope of Step C: Identification of recordkeeping requirements should be in order to address the vital records issue.

What can you do with the DIRKS methodology?

The primary use of the methodology is to design and implement recordkeeping systems.

You can use DIRKS for a range of projects designed to:
• build better recordkeeping, and
• develop recordkeeping tools.

**Build better recordkeeping**

This might include:

• ensuring the creation and capture of records
• managing your vital records appropriately
• managing records security and access
• improving business processes and systems
• designing new recordkeeping systems
• facilitating the purchase and implementation of off-the-shelf records management software
• outsourcing functions

**Develop recordkeeping tools**

Parts of the methodology have other application. They can be used to:

• create and implement a keyword thesaurus
• create and implement a file classification scheme
• specify and apply metadata

You may find that DIRKS can be used to support a range of other business outcomes in department/section, in addition to the projects outlined above.
Doing DIRKS to ensure the creation and capture of records

The creation and capture of records
Identifying what your organization should create and capture
Ensuring that your systems support creation and capture
Reviewing strategies for records creation and capture
Further information

The creation and capture of records

You may embark on a DIRKS project with the aim of ensuring the creation and capture of appropriate records to meet your business needs, regulatory requirements and what the community expects of you. This involves:

- identifying what records your department/office are required to create and capture
- ensuring that your systems, including people, policy, procedures, tools and software, support this creation and capture.

Identifying what your office should create and capture

Steps A-C of the DIRKS methodology enable you to define what records your office is required to create and capture.

Step A: Preliminary investigation

To understand what requirements your department/office has for creating and capturing records you will need to undertake an assessment of the business performed. This analysis begins in Step A where you examine sources to learn about the broad context of the U.N.

If you are intending to concentrate on one function or business unit at a time, you should still broadly analyse your business in Step A but you can start to focus more on those sources that relate to the function or business unit.

Step B: Analysis of business activity

The functional analysis conducted in Step B and business classification scheme that results from this step are useful in a project to identify requirements for creating and
capturing records, because they provide a workable structure for mapping the requirements to. However, you may decide, in the case of a business unit, to map only those requirements affecting the business unit. The sequential analysis in Step B gives you a much better understanding of current processes, current records creation and business needs for records creation.

**Step C: Identification of recordkeeping requirements**

Step C is essential to understanding organizational requirements for creating and capturing records as it enables you to understand what your recordkeeping requirements for evidence are. If you decide that the department_office should not meet particular requirements, due to costs or difficulties caused, you need to analyse the risks of not meeting the requirements. You will then come up with an agreed list of requirements which will demonstrate what records should be created and captured in the department_office. You should obtain the approval of senior management about this list.

**Ensuring that your systems support creation and capture**

Knowing what records your department_office is required to create and capture is important. However, you still need to ensure that these records are actually created and captured, and that your systems support these activities. Steps D-G of the DIRKS methodology can assist you in:

- understanding whether your existing systems enable your creation and capture requirements to be met
- deciding on the strategies required to ensure that your creation and capture requirements are met
- designing or redesigning software and necessary system tools to support the creation and capture of these records, and
- implementing these strategies effectively in your department_office.

**Step D: Assessment of existing systems**

Step D enables you to assess your current systems, to determine whether they are enabling your creation and capture requirements to be met. From this assessment you can see if systems need to be designed or redesigned to ensure that all appropriate documentation of business activity is being undertaken.

**Step E: Identification of strategies for recordkeeping**

Step E involves you determining the best combination of strategies - policy, design, standards or implementation - that will enable your creation and capture requirements to be effectively implemented and followed across your department_office.
**Example: The policy strategy**
You may decide to write a records management policy stating which positions have defined responsibilities for ensuring the creation and capture of records.

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**Example: A relevant mix of strategies**
You might decide in Step E that requirements for creation and capture should be integrated into workflow and procedure manuals for particular business units. You may also highlight individual responsibilities that need to be assigned and training that needs to be conducted to ensure that the creation and capture rules are followed.

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**Step F: Design of a recordkeeping system**

In Step F you can actually design or write the strategies chosen in Step E. Your system redesign work will focus on incorporating creation and capture tools into your systems and will build upon the strategies you outlined in Step E.

**Step G: Implementation of a recordkeeping system**

In Step G you need to implement the strategies so that they have effective uptake.

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**Example: Implementation drawing on Step F**
You can issue the procedures or documentation designed in Step F and train staff in how to use the procedures to create and capture the necessary records.

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**Reviewing strategies for records creation and capture**

**Step H: Post implementation review**

Creation and capture requirements and system support should be reviewed:

- when new business processes or needs are evident
- when there is a major change (for example, a change in functional responsibilities or new legislation)
- on roughly a 5 year cycle to account for changes.

**Further information**
For more information about the creation and capture of records read the relevant steps of DIRKS and see ARMS' *Create and Capture: Guidelines on Better Recordkeeping*. (Not yet issued)

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**Doing DIRKS to manage your vital records**

What are vital records?
How are vital records managed?
Identifying your vital records
Implementing strategies for managing your vital records
Reviewing strategies for managing your vital records
Further information

**What are vital records?**

**Vital records** include records needed to:
- operate if the United Nations were affected by a disaster
- re-establish United Nations’ functions after a disaster, and
- establish and protect the rights and interest of the United Nations and its employees, customers and stakeholders.

In effect, they are records that are essential to the United Nations. Without them the United Nations cannot establish, conduct or continue business effectively.

**How are vital records managed?**

Managing vital records involves:
- identifying and documenting vital records
- finding measures to protect them, and
- ensuring they are priorities for salvage in a disaster.

This management regime is effectively an ‘insurance policy’ against disruption to critical operations. [1]

A vital records program is an essential component of a counter disaster program, which aims to prevent disasters or enable the United Nations to attain business continuity or quick recovery.
Scope

Vital records may be found in any part of an organization, and in records created in the course of administrative and core functions.

Example: Types of vital records

Pension Fund records may be considered vital because they establish the rights and interests of U.N. staff. Likewise, personnel records are vital because they protect the rights and interest of the organization’s employees.

Therefore vital records programs should be department/office-wide. However, some functions or business units may have particular risks associated with them so vital records programs may be implemented first in these areas.

Identifying your vital records

Steps A-C of the DIRKS methodology can be used in order to identify what records are vital.

Step A: Preliminary investigation

Step A provides a broad overview of the business of the United Nations at the department level, who its stakeholders are and the business risk factors the organization and particular business units may be subject to. This information provides a contextual basis for the vital records program.

Step B: Analysis of business activity

The main benefit of Step B for a vital records project is that you are able to understand your business and how it is documented in more detail. You can therefore start to identify which of the functions and activities performed are critical to the organization in meeting its goals and strategies. You may then wish to prioritize these in planning for your vital records programs.

The records to support these functions may be identified during Step B interviews and will be considered in more detail in later steps. Through interviews you can directly discuss what staff and stakeholders believe are the functions and processes of most importance to the organization.

Tip: Not all useful records are vital

It is common for staff and stakeholders to consider all the records they use to be vital to the organization. You need to make it very clear to them that vital records...
are only those ones that are so essential to the organization that it could not function without them.

Linking risks to the functions and activities you identify may highlight high risk areas with high consequences for the organization if the information is lost.

**Step C: Identification of recordkeeping requirements**

The outcomes of Step C are critical if you are doing DIRKS in order to identify what records are vital to the organization. The analysis of business and regulatory requirements and community expectations and the risk assessments performed in this step will help you to see what records are key to business operations and the consequences to your department/office of not meeting its requirements. This knowledge allows you to have a far better understanding of what is really vital to the organization’s survival and whether staff and stakeholder views on vital records are accurate. At this stage you should be able to produce a list of your department/office’s vital records. You should have this signed by senior management.

**Implementing strategies for managing your vital records**

Knowing what vital records your office has is important. However, you still need to plan for how you will manage and protect these records. Steps D-G of the DIRKS methodology can assist you in:

- understanding where vital records are stored and how they are currently being managed
- deciding on the strategies required to manage and protect these records further
- designing or redesigning the necessary components of your strategies for managing and protecting vital records, and
- implementing these strategies effectively.

**Step D: Assessment of existing systems**

You can use Step D as a means to determine where vital records are stored and how vital records are currently managed, and to identify means by which their management can be improved. You can examine existing systems and ask:

- what are the vital records managed within this system?
- how are vital records currently identified and managed within this system?
- is the current management of vital records within this system adequate?
  - have disaster recovery plans been established for this system?
do policy and procedure documentation adequately reflect vital records management requirements, including backup, copying or relocation requirements?

- are record storage arrangements appropriate? are there physical risks in storage areas or locations that can be mitigated or controlled?

If, after your Step D analysis, you determine that vital records are not adequately managed, you can implement Steps E - G of the methodology to improve your vital records management practices.

**Step E: Identification of strategies for recordkeeping**

In Step E you can use the knowledge gained from identifying vital records (Steps A-C) and assessing the systems in which they are managed (Step D), to develop a range of strategies that will enable your department/office to have better protection for its vital records. In this step you will determine which combination of the policy, design, standards and implementation strategies will allow you to improve the identification and management of its vital records.

**Example: A relevant mix of strategies**

You may highlight the need to have regular risk assessments and a counter disaster plan to address actual and potential risks. Staff training strategies will also need consideration. You may also decide on the range of strategies you will implement to protect vital records, such as backups or other forms of duplication.

**Step F: Design of a recordkeeping system**

In Step F you can design the strategies identified in Step E to ensure your department/office is better able to manage its vital records. It involves assessing each component of your systems to ensure that they will work in a coordinated way to ensure that vital records are identified and protected.

**Example: Design elements of strategies**

You might write the counter disaster plan, write or source the training courses, assign responsibilities and integrate them into position descriptions and procedures manuals and design how protection methods will work and when they need to be reviewed.

**Step G: Implementation of a recordkeeping system**

It is important that a vital records program be implemented effectively. To effectively protect these records in a disaster, staff need to be trained in their responsibilities.
and disaster teams in disaster management techniques involving the prioritization of vital records. In addition, protection methods must be implemented appropriately.

**Reviewing strategies for managing your vital records**

**Step H: Post implementation review**

What is vital to the organization will change over time, particular when new business processes are undertaken, or functional responsibilities change. You will need to work with staff responsible for critical functions at regular intervals to continuously identify and update lists of vital records and you will also need to review protection methods and duplicates.

**Further information**

For more information about disaster management and vital records read the relevant steps of DIRKS and contact ARMS for further information.

**Footnotes**


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**Doing DIRKS to specify and apply recordkeeping metadata**

What is recordkeeping metadata?
NSW Recordkeeping Metadata Standard
DIRKS and recordkeeping metadata
Identifying your recordkeeping metadata requirements
Improving metadata creation and management
Reviewing your recordkeeping metadata
Further information

**What is recordkeeping metadata?**
Recordkeeping metadata is data that facilitates the use and management of records. Particularly in electronic applications, metadata can be a key means of improving your system and helping it to meet recordkeeping requirements.

Recordkeeping metadata is a tool that enables you to describe records, people and business activities in a suitable amount of detail to ensure:

- better information accessibility
- improved records management, and
- greater accountability in business operations.

**Tip: Metadata can be applied in a variety of forms**

Remember that metadata can be employed in both electronic and paper based recordkeeping environments. How you deploy it depends on your business needs.

**ARMS Recordkeeping Metadata Standard**

Any recordkeeping metadata you decide to implement should comply with ARMS' *Standard on Recordkeeping Metadata*. This standard identifies the metadata elements that should be employed within recordkeeping systems. It is a useful tool that can assist with your metadata implementation.

**Tip: Metadata can be scalable**

With recordkeeping metadata, it is rarely one size fits all. You may require a range of metadata strategies to meet the needs of your business environment. Remember that a metadata strategy can cover a section or part of your office's business or the whole organization. It can relate to one or more of your functions. Consider the disparate needs of your business areas, your variety of staff. Metadata is a flexible tool. Be sure to implement it in a flexible manner.

**DIRKS and recordkeeping metadata**

The DIRKS Manual can be used to develop metadata strategies that meet your organizational needs, constraints and objectives and to implement these strategies in effective and accountable recordkeeping systems.

You may choose to do a specific DIRKS project that is focussed only on metadata implementation, but it is more likely that metadata will be considered as an integral aspect of broader DIRKS projects you undertake.

The steps below flag the various different points at which you may want to consider metadata and its implementation during your DIRKS project.

**Identifying your recordkeeping metadata requirements**
Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of requirements your department/office has concerning recordkeeping metadata, or how recordkeeping metadata can be used to help you meet other requirements.

**Step A: Preliminary investigation**

To understand metadata needs, you will need to start by conducting some broad research into your department/office, how it operates and its broad technological framework. The sources in Step A will help you to understand what business is performed in the organization, broad legal requirements affecting this business and the stakeholders that impact upon your business operations. It also tells you about risks and organizational information needs, some of which you can addressed through appropriate metadata implementation.

If you are intending to develop a metadata scheme for one function or business unit at a time, you should still broadly analyse your business in Step A to get an overview of operations, but you can start to concentrate more on those sources that relate to the particular function or business unit you wish to focus on.

**Step B: Analysis of business activity**

In Step B you focus on your department/office's business activity and how this activity is performed. The analysis in Step B allows you to start defining:

- what areas of your business might require more detailed metadata than others
- the scope and content of metadata schemes, and
- the ways metadata might be used to meet business objectives.

The business classification scheme, a key product of your Step B research, is a tool that can be used to populate certain values in your metadata scheme. Products created from the business classification scheme, such as a keyword thesaurus or a disposal authority, can also be used to populate your metadata scheme.

**Step C: Identification of recordkeeping requirements**

In Step C you identify the recordkeeping requirements affecting your department/section. In relation to metadata, these requirements may be of two types:

- those that specify particular metadata requirements - such as 'name of complainant must be captured with every complaint received'. These types of requirements point to specific metadata elements that you should be able to provide within your systems.
- those that can be satisfied, completely or partially, through the use of metadata - such as 'official status files must be retained for 75 years'. Metadata can be used to facilitate the management and appropriate disposal of records to help to ensure that they are retained for as long as required.
Compiling a list of the recordkeeping requirements affecting your office as a whole, or each specific business unit, will provide you with a means to develop a comprehensive metadata strategy for your department/office. It will identify how and where metadata should be applied to help you meet your business needs.

**Tip: Talk to staff about their metadata requirements**

Talking to action officers about their business needs and information requirements is a very useful way to identify recordkeeping requirements concerning metadata. Staff will know the types of information that will facilitate their jobs or enable them to access information better. Use this feedback to help identify the metadata that should be captured to support a range of business activities.

**Example:**

Have you identified a requirement to keep business records for long periods of time? If your records are in electronic form, maintaining these records for the ten, twenty or fifty years that may be required by legislation or to meet business needs, can be a difficult process. In this situation, you could look at utilising metadata as a means of helping you to meet this requirement. You could use metadata to flag those records requiring ongoing migration or to initiate the types of preservation acts they require. Metadata could also be used to document any preservation activities performed upon the records as part of your ongoing accessibility strategy.

**Improving metadata creation and management**

Doing Steps A-C and knowing the types of requirements relating to metadata, or those that can be satisfied by using metadata, is important.

Steps D-G of the DIRKS methodology can help you to apply this knowledge. These steps of the methodology can help you to:

- determine whether your existing systems enable your metadata requirements to be met
- employ a range of strategies to ensure adequate metadata is made and managed to support your recordkeeping operations
- undertake system design work where necessary, to help you meet your metadata requirements, and
- implement metadata effectively across your office.

**Step D: Assessment of existing systems**

In Step D you assess the capacities of your existing systems to meet your recordkeeping requirements. Including metadata analysis in your Step D
assessments is important to determine the efficacy of your current metadata capture and management and to establish whether this can be improved.

To assess the metadata in your business systems, you need to have a good understanding of how business is currently transacted in your office. What technology is used, how is it used? What are the rules and procedures that people are following? Have problems in interpreting or using records been identified that you can use metadata to rectify?

Within your business systems, it is important to know the metadata they contain and how this metadata is being managed.

**Tip: How to identify metadata**

You can identify the metadata captured within a system by examining the system itself, by reading system documentation, data dictionaries and data models. Staff using the system will also be able to provide you with an understanding of the types of data they create and manage about records in their daily business operations.

**Example:**

Some questions you may want to ask during your system assessment to determine whether your system's metadata creation and management is appropriate include:

- is disposal metadata captured to describe the retention periods applicable to the record/system?
- is access metadata captured to describe who can or cannot access the record/system?
- is record title information provided to facilitate searching?
- is it possible to determine who created a record?
- is it possible to determine the business transaction that generated the record?
- is an audit trail that documents when a record was accessed, registered, sentenced etc created?
- does each record have a unique identifier?
- is a record linked to its metadata or is the metadata maintained in a separate database?
- can the link between a record and its metadata be maintained through system migration?
- do system rules prevent metadata alteration or update?
- if metadata is maintained in paper form, can it be logically related to appropriate paper or electronic records?
- where relevant, can the system capture structural metadata, such as data and media format, compression methods, hardware and software dependencies and description of standards used?
Tip: Metadata can be stored at different levels
Depending on the type of system you are assessing, metadata may be captured to describe:

- individual records
- record aggregates such as files, or
- the business system as a whole

Each of these options can be appropriate, but you need to determine the levels and types of metadata that will work best to meet your recordkeeping requirements.

If, at the end of your Step D assessment, you determine that your existing practices, systems and structures are currently not enabling you to create and manage the metadata you require, Steps E - G can help you to design or redesign systems and practices that enable you to generate and maintain the metadata you require to meet your business requirements.

**Step E: Identification of strategies for recordkeeping**

Once you have determined what metadata you should be capturing and examined the capacities of your current systems, in Step E you can examine the policy, design, standards and implementation tactics to determine the combination of these strategies that will best enable you to implement your metadata strategy across your office.

Based on your assessments in Step C: Identification of recordkeeping requirements and Step D: Assessment of existing systems you may have determined that different systems in your department/office require different metadata solutions. You may therefore develop quite a mixed approach in Step E, utilising policy and design based approaches, to ensure all the gaps you identified in Step D are able to be rectified.

**Example:**
In one business area that operates in a high risk environment you may decide that a system needs to be redesigned to enable more metadata capture and to potentially automate much of this capture.

In another business area where the technical infrastructure is adequate but metadata capture is poor, you may decide to implement the policy tactic and establish rules that specify exactly what metadata people need to capture about each of the business transactions they document.

**Step F: Design of a recordkeeping system**
If, in Step F, you decide to design technical components of your systems, metadata will be a key component of your system design work. If you are working with IT or systems staff to develop your technical components, you will find that they generally have a good understanding of metadata and will provide you with some good ideas about how it can be used to best affect within your systems.

Part of effective system design is determining how the metadata you will require is to be generated. There are numerous options open to you. Metadata can be:

- input by staff
- automatically captured by system as a part of business transactions
- automatically created by system according to rules established within it (such as sequential file numbering, automatic capture of audit log details, automatic attribution of disposal class according to classified title applied to file)
- drawn from recordkeeping tools such as retention and disposal schedules, thesauri – it is very important to have such tools to help populate your metadata fields and automate records management activities
- derived from security classification scheme employed within your office
- obtained from IT system controls, inherited from logins etc
- taken from dates and times inherited from system clocks

Metadata can be stored in documents, databases, distributed systems, paper form – a range of different options – so consider that which is best for your needs and what works best with your existing technologies.

A range of other guidance about incorporating recordkeeping metadata in your recordkeeping system design is included in Step F: Design of a recordkeeping system.

**Tip: Try to automate metadata capture**

If you are designing your system to capture better metadata, try to automate your metadata capture as much as possible. Look at the business environment surrounding your system, the recordkeeping tools you have developed and data that is maintained in other systems. Try to see where you can automatically extract or derive data from, to save users from having to enter significant amounts of information.

If, in Step E: *Identification of strategies for recordkeeping* you decided not to develop technical components of systems (i.e. decided not to adopt the design tactic), in Step F you can design approaches using the policy and implementation tactics to help ensure that metadata is better made and managed in your department/section. For example you can develop:

- policy or procedural documentation that require staff capture adequate metadata and explain specifically how they achieve this, or
• training programs to show staff how to use existing technical applications and recordkeeping tools, such as retention and disposal schedules or thesauri, to create adequate metadata within systems.

**Tip: Remember that metadata can be used to drive functionality in your recordkeeping system**

Understanding metadata as an active entity will help you to implement the dynamic functionality it can enable in your business and records management operations. Will the metadata you are implementing enable you to trigger record disposal operations? How can your metadata and system be configured to enable records to be automatically dispatched along a workflow? Remember that implementing recordkeeping metadata should not be about creating data profiles, but about facilitating process.

**Tip: Be aware in your system design work that your organization's metadata may need to evolve through time**

The metadata your organization creates should evolve and be added to through time. Be aware of this when designing metadata systems, or liaising with software vendors over system design. A static, fixed metadata description will only serve a limited number of business needs. If your organization has strong accountability requirements, can an audit trail of record use be compiled and maintained about high risk records? If your systems automatically trigger record migration operations, can documentation of these operations be captured within the system?

**Step G: Implementation of a recordkeeping system**

In Step G, you implement your metadata strategies in your organization. Depending on the nature of your metadata project, only a small amount of implementation work may be required. If you have designed your system so that your metadata capture is significantly automated, you will need to apply the new system, and inform staff of its new capacities.

If you are relying on staff to provide much of the metadata for you, you will need to implement a training program and/or the policies and guidelines you have developed to clearly inform staff about the metadata they will be required to capture and the ways in which they can do this.

**Tip: Be aware of the training that may be required to support metadata**
implementation

Certain forms of metadata creation can be complex, so ensure your staff have the knowledge they need to accomplish this.

For example, if staff are expected to use recordkeeping tools, such as retention and disposal schedules or thesauri, to create adequate metadata within systems, they may require specialised training. If accuracy is crucial to your work, special emphasis on the importance of clear, consistent metadata creation may also need to be made.

Reviewing your recordkeeping metadata

Step H: Post implementation review

Ongoing monitoring and review of your metadata requirements is important to the success of your metadata strategy. You may want to assess how metadata is being captured, to ensure this is efficient, test the security of metadata or examine the capacity of metadata to be migrated through system change.

Liaison with staff is a key means by which you can determine the adequacy of your metadata capture and whether it needs to be improved to better meet your recordkeeping needs.

Further information

Recordkeeping metadata is referenced throughout the DIRKS Manual (particularly in Steps D and F), so read the manual for more guidance.

For further information you can also read ARMS' Standard on Recordkeeping Metadata.
Doing DIRKS to manage records access and security

Records access and security
Identifying records access and security requirements
Ensuring that your recordkeeping systems support access and security
Reviewing strategies for records access and security
Further information

Records access and security

Recordkeeping systems should provide timely and efficient access to, and retrieval of, records. Systems should also include and apply security controls on access to ensure the integrity of records is not compromised.

Having an effective access and security program in place will help to ensure that records:

- are available, when appropriate, for use
- are not subject to unauthorized use
- cannot be altered, and
- cannot be inappropriately destroyed.

Doing DIRKS to manage record access and security could involve:

- identifying access and security requirements that relate to specific business activities and/or business units
- allocating the appropriate classifications or access rules to records
- incorporating requirements in a suitable, responsible and compliant way in recordkeeping systems, and
- monitoring decreasing sensitivities and changing requirements in systems over time.

Tip: Don’t be over prescriptive

Access to records should only be restricted when there is a business need or when restricted access is required by law. Staff of your organization need access to records - try to facilitate this wherever possible.

Ideally record access and security should be defined and implemented across your whole department/office. Such a project could however be implemented in stages, so you could examine your office’s access and security requirements by unit
or function. Priority should be given to areas where you have identified higher risks for unauthorised disclosure.

**Identifying records access and security requirements**

Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of requirements your office has concerning record access and security.

**Step A: Preliminary investigation**

Step A will provide you with a broad overview of the requirements relating to access and security that your department/office is subject to. In Step A you should identify:

- what existing rules for access and security operate in your department/office
- the access and security rules contained in:
  - government-wide and industry-wide legislation
  - policies and codes of practice, and
  - specific regulatory sources.

**Example:**

Your Step A analysis may reveal that you need to implement an access and security program in order to protect:

- personal information, according to U.N. requirements,
- the commercial confidentiality of some of the business operations you conduct, and
- the physical security of your organization's premises.

Your Step A analysis should reveal the need to comply with public rights of access to your records contained in: ST/AI/326 *The United Nations Archives*, 28 December 1984. Your development of access and security frameworks will need to take these requirements for both security and accessibility into account.

The sources you examine in Step A will also help you to understand what business is performed in your department/office, how and why it is performed and who is involved. This is important knowledge if you wish to establish better access and security frameworks. Risks and stakeholders are also examined in Step A and both of these may impact on your decision making about access and security requirements.

**Tip:**
Security and access classification is a risk based decision - use your awareness of the risks faced by different areas of your business to prioritise how and where you need to most securely manage your organizational information.

When your focus is on one business function or unit

Even if you are intending to develop access and security regimes for one function or business unit at a time, you should still broadly analyse your organization and its operations in Step A. You can then start to concentrate on those areas that relate to access and security in the particular function or business unit you have identified as a priority.

Legacy records

Remember you may also have legacy records that will require access decisions, so you may need to do some research into the history of your department/office or the particular function or area of business in Step A, and build up a base of knowledge about the sensitivities that may have been involved in the organization's past business activities.

Step B: Analysis of business activity

In Step B you learn about business processes and practices at a more detailed level, and identify the records that are generated from them. This assessment will help you to understand:

- which records require access and security management, and
- where the risks in relation to access and security management lie.

A key product of Step B is a business classification scheme. This is a tool that maps the business your department/office performs, by identifying the functions, activities and transactions that comprise your business operations. Your access and security requirements can be mapped to this framework to help you identify and manage these requirements.

When your focus is on one business function or unit

If you are developing access and security regimes for one business unit or function at a time, you should still look at this analysis broadly, and at least map a preliminary classification scheme before concentrating your attention on one particular area.

Step C: Identification of recordkeeping requirements
In Step C you will need to identify all of the recordkeeping requirements - requirements contained in UN rules, best practice requirements or community expectations - that relate to giving or restricting access. The regulatory environment in which the U.N. operates will establish broad principles on access rights, conditions and restrictions.

If you have completed Step A: Preliminary investigation, this will involve examining in closer detail many of the sources already identified. In Step C you need to consider and assess the risks of not meeting the requirements and ideally you should map these back to your functions and activities (in the business classification scheme if you have completed Step B: Analysis of business activity) to understand the business context in which the requirement applies.

At the end of Step C you will have identified the range of specific requirements that govern access and security in the area or areas you are assessing. You can then start translating these into specific decisions concerning record accessibility or restriction that you want to implement in your recordkeeping system.

Tip: Discuss your recommendations with colleagues
Do not forget to discuss the access and security decisions you come up with in Step C with your colleagues, particularly those in the business areas that will be affected by your decisions.

Tip: Do not forget public access
During the course of your Step A to C assessments, keep your public access requirements in mind. Under ST/AI/326 The United Nations Archives, 28 December 1984, the public is entitled to access any United Nations record in that is over twenty years of age unless it has a security classification of Strictly Confidential or equivalent or is in some other way considered “Privileged” and not to be released to the public.

Ensuring that your recordkeeping systems support access and security

Doing Steps A-C of DIRKS helps you to understand what your department/office’s requirements relating to access and security. Steps D-G of the DIRKS methodology can help you to apply this knowledge. These steps of the methodology can help you to:

- determine whether your existing systems enable your access and security requirements to be met
• employ a range of strategies to identify how you can better meet your access and security requirements
• undertake system design work where necessary, to help you meet your access and security requirements, and
• implement access and security requirements effectively.

**Step D: Assessment of existing systems**

In Step D you examine your existing systems to determine whether they are able to meet the access and security requirements you want to establish.

In your Step D assessments you could determine whether systems:

• employ appropriate metadata that clearly labels records that require restriction
• capture audit trails that document when, how and by whom records have been accessed
• have the capacity to restrict the access to certain records
• have security policies and procedures that explain how particular records need to be managed
• are supported by training programs which educate staff about security management
• have documented business rules which specify which records, or classes of records, need to be protected, and
• are regularly updated to reflect changes in staff and their responsibilities.

This assessment will enable you to determine whether systems need to be designed or redesigned to enable you to implement your access and security requirements.

**Tip: Don’t forget the security of systems that are managed by contractors on your behalf**

If some of your organizational functions have been outsourced, be aware of the security or confidentiality requirements that affect the records of these functions. It is important to build these requirements into the contracts you establish with your service providers. In your contract you could require that:

• appropriate physical and technical security is exercised over your records
• personal information contained within your records is managed appropriately
• employees of the contracted service provider and their subcontractors are aware of the requirements of the privacy and security controls you have specified, and
• personal information is destroyed using appropriate and authorised retention and disposal schedules by the service provider.

In Step D, you should assess whether the systems your service provider is using
meet your security requirements. You should include in your contract a range of penalties that a contractor will be subject to if they breach the access and security requirements you have included in your contract.

**Step E: Identification of strategies for recordkeeping**

In Step E you decide how to rectify any business information systems that are not adequately managing your access and security needs. In this step you come up with broad ideas for what you want to achieve and how you want to do it. Step E recommends four strategies for turning business information systems into recordkeeping systems:

- policy
- design
- standards, and
- implementation

You can use these strategies individually or in combination to help ensure the effective implementation of your access and security program. The most effective solution is likely to come from a combination of strategies.

**Example:**

In Step E you may decide that for your high risk records, you will design a technical component of your system that does not enable staff members to see the file titles of records they do not have authority to access, as well as the records themselves (a design tactic). You may also decide to introduce an access policy (policy tactic) and a briefing session on responsibilities and rights of access (implementation tactic) to clearly explain security requirements to staff. In combination you are satisfied that this range of tactics will enable your security requirements to be addressed.

If you are seeking to introduce access and security classification schemes across a range of organizational systems, you may have to decide upon slightly different approaches in each system, depending on the records they administer and their:

- size
- role
- technical infrastructure, and
- user requirements.

**Step F: Design of a recordkeeping system**
In Step F you design solutions, based on the strategies you developed in Step E: *Identification of strategies for recordkeeping*, that will enable you to meet your access and security requirements. That is, in Step F you:

- draft policies
- develop technical components of systems to enable you to control access
- develop training programs, and
- draft business rules etc.

**Example:**
If you have adopted the policy tactic, you draft a policy that specifies the different levels of security that operate across the business areas in your department/office. You also draft business rules that specify how and by whom security is to be managed across the range of your organizational business systems. You then implement procedures that require IT staff to update system user permissions as soon as staff leave or arrive in the organization.

**Example:**
If you have adopted the design tactic, in Step F you could develop an application which enables your records management software to inherit the logins and consequent security controls that govern access to your IT systems. This will ensure consistent control is exercised across and will save significant duplication of effort.

**Example:**
If you have adopted the design tactic, you could develop a means to issue a message to all staff at login, that reminds them of their obligations in relation to information security.

**Example:**
If you have decided to adopt the implementation tactic, you will focus on improving the way systems operate in order to improve record security. You may therefore decide to put a lock on the file room door, or move records staff so that they are adjacent to records storage areas to better monitor the security of these areas. Alternatively you could restrict access to the technical components of systems to the staff that have a requirement to use this system as a part of their business activities.
If you have decided to adopt the implementation tactic, in Step F you will develop training programs to educate your staff about security issues. You may decide to develop an induction training program that informs new staff about privacy and other considerations they need to remember in their day-to-day business activities.

**Step G: Implementation of a recordkeeping system**

In Step G you implement the range of access and security solutions you have developed. When implementing this step you:

- provide staff with the policy and business rules you've developed
- present training courses and answer staff questions about security issues, and
- train staff in system use, if the security controls you've implemented have made a significant difference to system operations.

**Example:**

Further examples of the implementation tactic include:

- requiring all new staff to sign a form acknowledging their understanding of obligations concerning the disclosure of information and protection of private information
- providing an update of security issues at monthly staff meetings
- conducting an annual refresher course on security issues and responsibilities.

Be aware that if the implementation of your access and security requirements is poor, staff and others may gain access to restricted records, which could breach UN rules about privacy and security. Breaches could result in high financial costs and public embarrassment for the United Nations.

Therefore, be sure to devote adequate resources that enable your access and security requirements to be met.

**Reviewing strategies for records access and security**

**Step H: Post implementation review**

Don't forget that an important part of access and security programs is to monitor security and access and to update your schemes on a regular basis. In Step H you monitor access and security regimes to ensure they continue to be based on your broad and specific recordkeeping requirements.

Any breaches to security should be used to initiate or inform your monitoring and revision process.

**Further information**
For further information about any of the issues discussed in this section please contact ARMS.
Doing DIRKS to ensure records are created and kept of outsourced functions

What is outsourcing?
Why do DIRKS projects for functions that are outsourced?
Identifying recordkeeping requirements that need to be met in your outsourcing arrangements
Further information

What is outsourcing?

Outsourcing is making financial and other arrangements for other organizations to perform ongoing work on an organization's behalf.

Many UN offices outsource common administrative or 'support' activities, such as printing, cleaning, payroll or the storage of semi-current records. Some public offices also outsource core business functions.

Another form of outsourcing is to share common administrative functions such as human resources, information technology and finance, by organising sharing arrangements with other agencies, setting up an internal shared services unit within an agency. This type of outsourcing is always done within a Government environment.

Why do DIRKS projects for functions that are to be outsourced?

Senior management is ultimately responsible for ensuring that the records of the outsourced business are created, maintained and disposed of in accordance with ARMS requirements.

Full and accurate records should be kept of all U.N. activities, including those that are outsourced and all U.N. offices must ensure the safe custody and proper preservation and due return of specified records of outsourced business.

U.N. offices who outsource their services can use DIRKS to identify what recordkeeping requirements should be included in contracts and monitored over time to ensure that the provider of these services meet U.N. requirements.

Identifying requirements that need to be meet in your outsourcing arrangements

Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of requirements you will need to identify in your contractual arrangements for outsourcing.
Step A: Preliminary investigation

It is important to approach an outsourcing project with a good understanding of the regulatory framework that governs information and records management in the United Nations. This framework will establish the boundaries for your recordkeeping obligations as a UN office.

The main requirements you need to identify are described in Step C of the DIRKS methodology. However, you may choose to also conduct parts of the preliminary investigation in Step A so that you can understand the context of the function you are outsourcing; in particular, the risks associated with that function.

Step B: Analysis of business activity

Step B is about analyzing your particular business functions, activities and processes, defining how they are performed and creating a business classification framework. This step is unnecessary if you already have an understanding of the function you are outsourcing and its boundaries with other functions and business processes.

Step C: Identification of recordkeeping requirements

Step C is critical to undertake in a project to outsource functions. You should identify all the recordkeeping requirements associated with the function in question and assess the risks of them not being met. You can then compile a list of recordkeeping requirements for the provider of the outsourced services and include it in the contract to ensure they meet their obligations.

Assessing systems for outsourced functions

To ensure your recordkeeping requirements will be adequately met, you may also wish to examine the business systems that will be used by your service provider. Step D of the DIRKS methodology provide a mechanism by which you can assess these business systems against your recordkeeping requirements. You can use this information to feed further requirements into your contractual arrangements.

Step D: Assessment of existing systems

Undertaking Step D of the DIRKS methodology can enable you to assess the systems intended to support your outsourced activities. In Step D you can examine these systems - their technical infrastructure, procedural support and staff training - as a means to determine whether they are sufficient to support your business requirements. You can then use this step to set criteria or develop a checklist for the systems designed to support outsourced activity.
Alternatively, in Step D you can assess your organizational systems that currently perform the activities that are to be outsourced, and use the knowledge gained from this assessment to develop a checklist for the systems to be used by your service provider to manage your outsourced activity.

In either of these situations, based on an understanding of the recordkeeping requirements pertaining to the outsourced function you could develop a checklist to accompany the outsourcing arrangements that states:

- the business systems supporting this function must be recordkeeping systems. Consequently they must:
  - be sustained by policies and procedures that specify which records should be created and managed and how these records should be created and managed
  - be supported by adequate training procedures to ensure staff performing outsourced functions understand their recordkeeping responsibilities
  - implement recordkeeping tools, such as retention and disposal schedules and classification schemes, that are appropriate to the business function
  - support adequate metadata attribution and maintenance
  - adequately manage disposal class attribution and maintenance
  - restrict record access to appropriate users.

**Further information**

Comprehensive guidance about all other aspects of outsourcing arrangements is provided in ARMS’ guidelines, *Accountable Outsourcing: Recordkeeping Considerations of Outsourcing U.N. Business.*
Doing DIRKS to ensure records are created and kept when business processes and systems are reengineered

DIRKS and process and system redesign
Identifying your recordkeeping requirements
Improving business processes and systems
Reviewing business processes and systems
Further information

DIRKS and process and system redesign

The United Nations committed to the philosophy of continuous improvement. This involves continually assessing and reassessing not only the outcomes of business processes but also the processes and systems themselves to see what improvements can be made to streamline and improve methods.

The DIRKS methodology is particularly valuable in assessing how recordkeeping can be built into redesigned business processes and for redesigning business systems to ensure they meet all your recordkeeping needs.

Identifying your recordkeeping requirements

Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of recordkeeping requirements your organization needs to consider when it is reviewing its business processes and systems.

Step A: Preliminary investigation

Step A is an opportunity to look at your department/office broadly to see its goals, how business is performed, who performs it and the reasons why it is performed. In this step risks, stakeholders and other factors that impact on the way business is performed are also examined. Therefore, this step is extremely valuable for business process or system review, as you are able to see the context in which processes and systems operate. This understanding will be refined during subsequent steps.

If you need to only analyze processes or systems for one function or business unit, it is good to start with (or obtain) a broad idea of your department/office’s goals and business in Step A so you have a clear idea of your office's roles, requirements and operations. If there are blurry lines between business activities or areas, or if the systems or processes you are assessing cross between business areas, you will need to ensure your preliminary investigation covers all relevant areas. However, once
you have a handle on the broader issues you can start to concentrate on the area of concern.

**Example:**

One Australian local government authority was undertaking DIRKS analysis to assist in the design and implementation of an appropriate recordkeeping system for the transaction of the council’s human resources function. The project team already had a good understanding of the organization, and disposal coverage for this area but they still conducted some broad research in Step A to look at how the function interacted with other functions. Then they focused their examination on:

- legislation that governs the operation of the personnel function in local government
- privacy management issues
- a broad identification of how personnel management is conducted across the council, not just in the Human Resources Unit
- stakeholders who should be consulted about the review, including business unit managers, each of whom has some personnel related responsibilities
- court cases involving personnel management which the council has previously been involved with.

**Step B: Analysis of business activity**

Step B is an opportunity to look in much greater detail at the functions, activities, transactions and business processes performed which will provide you with a useful basis for other decisions regarding improving business processes and systems. For example, the examination of business processes in Step B (particularly in the sequential analysis) can contribute to the identification of:

- existing inefficient or outdated work processes
- what records are currently created as part of work processes
- activities the your office has a mandate to perform but are not carried out in practice and the reasons why they are not
- ways processes might be streamlined and documented in a standardized way (identified fully in Step E: Identification of strategies for recordkeeping), and
- risks with recordkeeping implications.

The scope of this analysis depends on the project goals. This information can be further defined in later steps of the DIRKS methodology allowing you to develop better business processes, design templates and standard procedures which integrate recordkeeping with the work tasks.

**Step C: Identification of recordkeeping requirements**
If you have undertaken process analysis in Step B: *Analysis of business activity* you will have a breakdown of your current activities and processes and some knowledge of the records captured as part of the performance of these. In Step C you look at what recordkeeping requirements the department/office is subject to - including records you need to keep to meet regulatory requirements, business needs and what the community expects of you. You also look at the risks of not meeting these requirements and devise a list of 'accepted' requirements, which can then be a benchmark for you to assess your business processes and systems against.

**Improving business systems and processes**

Doing Steps A-C and knowing the types of requirements that affect your business processes and systems is important. Steps D-G of the DIRKS methodology can help you to apply this knowledge. These steps of the methodology can help you to:

- determine whether your existing systems enable your recordkeeping requirements to be met
- employ a range of strategies to ensure your business systems adequately support your recordkeeping requirements
- undertake system design work where necessary, to help you meet your recordkeeping requirements, and
- implement revised systems and processes effectively across your organization.

**Step D: Assessment of existing systems**

If you are doing DIRKS to improve specific processes in your office, you need in Step D to target the system or systems that perform these processes. Remember to think broadly when looking for systems and do not only assess the systems you are aware of. Talk to other people who perform the process you are assessing and ask about the systems they use.

Some staff may have developed personal systems to control aspects of the business process, involving spreadsheets and their own personal procedures. Be sure to include any such systems and the records they create and generate in your assessment. Remember too that the systems performing your business process may not all be located within the one business unit. Make sure you include all business systems in your assessment, irrespective of their location.

If you have worked your way through the methodology and assessed your organization in Step A: *Preliminary investigation* and done a detailed assessment of the business and how it should be conducted in Step B: *Assessment of existing systems* and Step C: *Identification of recordkeeping requirements*, you will have a good idea of how systems should perform by the time you reach Step D. Use all this knowledge you have gained as a means to assess the effectiveness of the systems that are currently in operation.
Tip: Be comprehensive in your system assessment

If you are assessing the way a specific function is transacted or examining all business systems in your department/office, you need to be comprehensive in your assessment and make sure all appropriate business systems are examined. Systems can be rapidly developed in ad hoc ways. Automated systems and processes can evolve rapidly across the organization. You therefore need to be vigorous when looking for systems as you may not be aware of all systems currently used to transact and document your business.

Questions to ask

Specific questions about systems that you may want to ask could include:

- does the system meet the specific business requirements that apply to it?
- is the system easy to use?
- do all appropriate staff have access to it?
- are all relevant business rules applied within it?
- is the system adequately maintained?
- do procedures explain how it should be maintained?
- can the system adequately manage the records it generates?

This range of questions will help you to determine the appropriateness of the systems your organization currently uses to transact its business.

Assessing all organizational systems

If you are doing a full review of all systems in your department office, you will need your Step D assessment to be comprehensive, but attainable. To help you achieve this, your Step D analysis can be rolled out gradually across your department/office.

If you are doing a full scale DIRKS assessment, you may wish to undertake your system assessments incrementally and gain a thorough understanding of a business system and its strengths and weaknesses before you move onto the next system.

Alternatively, to keep your work manageable, you may want to use the knowledge you have gained in Step B: Analysis of business activity and Step C: Identification of recordkeeping requirements to help you prioritise aspects of your Step D analysis. If you’ve undertaken an assessment of business in Steps B and C and gained a broad organizational understanding as a result of Step A: Preliminary investigation, you will have all the information you need to undertake a risk assessment of your organizational business operations.

Doing such an assessment will allow you to identify those areas of your business that perform crucial or litigious functions, as well as those areas that are less subject to difficulties or legal investigation. You can then use this risk analysis to prioritise your system assessment.
You will need to ensure that all relevant systems are assessed, in the areas you have chosen to focus on. Talk to action officers and use your knowledge of business process. Use interviews to determine how action officers would like to see business done. Have a very good understanding of the specific recordkeeping requirements that apply to the business areas you are assessing.

See the section above on the assessment of specific business systems for an outline of some of the questions you may choose to ask when you are ready to conduct a specific system assessment.

**Step E: Identification of strategies for recordkeeping**

Step D: *Assessment of existing systems* enables you to determine how your organizational systems currently operate and to identify the problems that may result from standard operating procedures. In Step E you will utilise knowledge of existing practices, and the problems associated with these practices, to determine a range of strategies that will enable you to solve these problems.

Step E outlines four strategies - policy, design, standards and implementation. Working through this step will help you to choose the strategy or combination of strategies that will enable you to redress the inappropriate system performance identified in Step D.

Once your choice of strategies has been identified, in Step F: *Design of a recordkeeping system* you will start to design solutions based on the strategies you have chosen, that will enable you to rectify the system flaws you’ve identified, and allow you to start to meet your recordkeeping requirements.

**Step F: Design of a recordkeeping system**

If you are undertaking DIRKS to improve business processes and systems, in Step F you will start to implement the recommendations you have been building during the course of your DIRKS analysis. In Step F you will design all components of your system bearing in mind all the lessons you have learned about how to improve your business processes through the incorporation of better recordkeeping.

**Step G: Implementation of a recordkeeping system**

A project to improve business processes or systems will impact greatly on the day-to-day work of staff members. Its success also relies greatly on staff acceptance of the changes. The change management mechanisms recommended in *Introducing DIRKS* and the promotional strategies recommended in Step G may contain useful suggestions to assist in your implementation.

If you are only looking at work process changes, you will need to consider how you are going to move from one way of conducting business processes to the new way, and what effect this will have on operations. If you are making changes to systems, conversion strategies are very important to consider.
Reviewing business systems and processes

Step H: Post implementation review

Step H is an opportunity to measure how the implementation of new business processes or system changes has fared and whether they meet expectations outlined in project planning. It also provides the opportunity to take corrective action regarding faults detected in the process or system.

Further information

Business process and system assessment is referenced throughout the DIRKS Manual (particularly in Step B: Analysis of business activity, Step D: Assessment of existing systems, Step E: Identification of strategies for recordkeeping and Step F: Design of a recordkeeping system), so read the manual for more guidance.

Other recommended sources include:

- a *Australian Technical Report: Work Process Analysis* released by Standards Australia's IT/21 records management committee. This document is known as AS 5090 and is available for purchase from Standards Australia from April 2003.

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Doing DIRKS to select and implement off-the-shelf records management software packages

What is an off-the-shelf records management software package?

Identifying recordkeeping requirements that your software package should meet

Assessing, designing and implementing your software package

Reviewing your software package

Further information

What is an off-the-shelf records management software package?

An off-the-shelf records management software package is a piece of software that you can purchase to help you meet a number of your records management needs. They are pre-configured software systems that undertake a range of key records
management activities such as registration, indexing, tracking and disposal. These software systems can generally interface with a range of other business applications.

Particular off-the-shelf records management software packages have been recommended to certain public sector organizations, based on a rigorous selection process undertaken by the relevant government department.

An off-the-shelf software package could be used:

- across your department/office
- across a range of business areas, or
- within a specific business unit.

The scope of this project can therefore be flexible, depending on your business needs and budget.

The DIRKS process can be used to establish the requirements you want your records management system to meet. It can then be used to establish the training and other strategies you need to effectively implement the software system across your department office.

**Tip: Off-the-shelf packages are not the ultimate solution**

Remember, an off-the-shelf software package is not a complete solution to your organization’s records management issues. It can definitely help with the management of records and will improve the accessibility of organizational information. However these systems need to be supported by policies, procedures, training and recordkeeping tools, in order to be effective in your organization.

Over time you should also consider the recordkeeping needs that your organization may have in other business systems, particularly those that are not or cannot be connected to your records management software. The DIRKS Manual can help you to develop adequate recordkeeping strategies in such systems.

**Identifying recordkeeping requirements that your software package should meet**

Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of requirements you will need your software package to satisfy.

**Step A: Preliminary investigation**

In Step A you should assess your functional area where you wish to implement your records management software. You should examine:

- what business is performed?
- how is it performed?
- why is it performed?
• what risks are inherent in this business?
• what technical infrastructure is present?
• what compatibilities are required to integrate with this infrastructure?

Establishing this context will give you a good overview of the environment in which your software package will be implemented and will begin to give you an understanding of the functionality the package must possess.

**Step B: Analysis of business activity**

In Step B, you examine your organizational business activities more closely. You will particularly focus on the activities you want the software package to support, in order to gain a thorough understanding of these activities. As part of this assessment you may also want to determine:

• what records are generated in the course of business activity?
• who generates them?
• are they in different forms and formats?
• how are these records currently managed?

Understanding issues such as these is important to help you determine the specific functionality you need within your records management software.

**Step C: Identification of recordkeeping requirements**

In Step C you determine the recordkeeping requirements - requirements for evidence and information, or requirements for the management of information - that your department/office needs to meet. When you are looking at purchasing software, you need to ensure that the software you are considering is capable of meeting some or all of these requirements.

**Example:**

You may transact a lot of business via your website and the online services it offers. Your department/office has a significant recordkeeping requirement to capture evidence of these online transactions. If looking at off-the-shelf packages, you need to ensure that they can capture records of these online transactions.

Recordkeeping requirements can be derived from regulation, business needs, business practices, community requirements or best practice standards the organization may choose to meet. They can relate to a wide range of issues. For example, legislation can require that specific types of records are created, or it can specify that particular records must be managed in a specific way. Be sure to identify the full range of requirements that affects your department/office.

**Assessing, designing and implementing your software package**
Steps D-G of the DIRKS methodology can help you to assess existing systems and potential software packages to determine their ability to meet your needs. They can also guide you through the process of system configuration or design and system implementation.

**Step D: Assessment of existing systems**

In Step D you can:

- assess business information systems currently used in your department/office, and/or
- assess the software package or packages you are considering.

In either case, you would use your recordkeeping requirements as a benchmark. You would assess your current systems if you wanted to identify problems that are experienced as a result of your current business systems. This may be useful background information for your purchase of a new system as it will identify a range of issues that you want to rectify. Your system evaluation process may also demonstrate that your current systems operate well and actually do not need replacement - staff just need a good training program to introduce them to the system's full functionality.

If purchasing an off-the-shelf package, it is very important to do a thorough assessment of the functionality of a number of different packages. Compare them to your recordkeeping requirements. Can they do all that will be expected of them? How do they compare in terms of price? What kind of post-implementation support is offered?

**Tip: Liaising with software vendors**

Compile a list of your recordkeeping requirements. You may choose to prioritise them and make some mandatory and others desirable. Give the list to the software vendor whose products you are considering and ask them to demonstrate how their product meets your specific requirements.

For example:

- if you have a legal requirement to maintain your personnel records for seventy-five years, ask the vendor to demonstrate the migration strategies they have built into the system that will help maintain your records for the required fifty years.
- you are required to use authorised retention and disposal schedules for the destruction of records. Can the packages you are considering implement and incorporate ARMS’ Retention and disposal schedules?

Completing Step D and undertaking all these assessments should enable you to select an appropriate records management software package for your office.
**Tip: Document your assessment and any undertakings**

Be sure to fully document your recordkeeping requirements and your software assessment process. Document vendor responses to your questions, and any undertakings they have given you.

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**Step E: Identification of strategies for recordkeeping**

Once you have chosen your records management package, you need to determine the best way to implement it. To do this you need to choose from the range of Step E strategies - policy, design, standards or implementation - to determine the approach that will work best in your workplace.

The research you undertook in Step A: Preliminary investigation and Step B: Analysis of business activity will help you significantly in this step. Be sure to consider your business environment, corporate culture and other issues when determining the mix of strategies that will work best in your office.

**Example:**

You decide that the best way to ensure your recordkeeping requirements are met and all people are using the system appropriately, is to:

- put the software package on everyone's desktop
- interface between the software package and other common applications
- establish a policy which says all staff must capture appropriate records into the records management package
- develop basic guidance that says what 'appropriate records' are.

You decide on this approach in Step E. In Step F you start developing these rules and interfaces.

**Step F: Design of a recordkeeping system**

In Step F you make your plans a reality. You liaise with IT to undertake any system changes or interfaces you require. You draft policies and guidelines and develop any training materials you would like to support your new system.

**Step G: Implementation of a recordkeeping system**
In Step G you unveil your new system and roll it out across your department/office. You may undertake a pilot program before making it available to all staff. You may choose a staggered implementation schedule or release it to all staff at once. In Step G you also make any policies, procedures or other rules available to staff, and undertake training programs if these are required.

**Reviewing your software package**

**Step H: Post implementation review**

In Step H you evaluate your software choice and implementation. Is it working effectively? Do staff know how to use it? Is it meeting all your requirements? Do the vendors need to come in and do any remedial work?

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**Tip: Remember to undertake a post-implementation review**

Step H is a very important one if you are implementing off-the-shelf software packages. Make sure everything is correct and working as it should before you give vendors the final payment and sign off. Try to include a period of official evaluation and any remedial work necessary in your contract with vendors, so that you can ensure that all your requirements have actually been met.

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**Further information**

System assessment, development and implementation is referenced throughout the DIRKS Manual, so read the manual for more guidance.

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**Doing DIRKS to develop new systems with adequate recordkeeping functionality**

New business systems
Identifying your recordkeeping requirements
Improving system design and implementation
Reviewing your new business system
Further information

**New business systems**
The United Nations frequently purchases or develops new business systems to help the transaction of business.

Frequently these business systems are ad hoc creations, developed to meet a specific business need, without a full understanding of the recordkeeping and management requirements that surround the crucial business data generated by these systems.

Any system which conducts organizational business activities from which you require evidence of its operations needs to be a recordkeeping system. A recordkeeping system is one which is able to create, maintain and produce accountable and useable records of its operations. The vast majority of business systems should be recordkeeping systems but unfortunately for business accountability and performance, they are not.

American consultant Rick Barry at the 2002 Records Management Association of Australia conference made this point, stating that organizations possess many record making systems, but only a very small proportion of these systems are actually recordkeeping systems. [1] Consequently, the records made within these systems are generally inaccessible, vulnerable, inappropriately destroyed or impossible to authenticate because the systems are not configured to adequately manage them for as long as they are required. Through not possessing adequate recordkeeping systems, the United Nations is therefore placing itself at significant risk.

It is important to ensure any new business system that you purchase or develop is able to meet your recordkeeping needs.

Working through the DIRKS methodology is a means to ensure new systems are able to be developed with the functionality they need to work efficiently in your workplace.

Tip: DIRKS can be scalable

When considering or developing new business systems, remember that DIRKS can be a scalable process. If implementing new business systems, there are a number of options available to you:

1. If your office is considering the purchase or development of a new system, you may want to just do Steps A-C of the methodology so that you can get a good understanding of your recordkeeping needs and build these into your system tender documentation or design specification.

2. If new business systems have already been purchased, you may want to undertake all steps of the methodology, to understand what recordkeeping requirements the system needs to meet, and then to develop strategies to alter the new system so that it is able to meet these requirements.

3. Alternatively, you can undertake all steps of the methodology to develop firstly a full understanding of the recordkeeping requirements the system needs to support, and then use the latter steps of the methodology to work through the actual development and implementation of the system. The guidance below supports this approach, but it can be tailored to accommodate
Identifying your recordkeeping requirements

Undertaking Steps A-C of the DIRKS methodology can help you to identify the types of recordkeeping requirements you need to consider in the design and implementation of its new business system.

**Step A: Preliminary investigation**

Step A is an opportunity to look at your department/office broadly to see its goals, how business is performed, who performs it and the reasons why it is performed. In this step, risks, stakeholders and other factors that impact on the way business is performed are also examined. Therefore, this step is extremely valuable for designing new systems, as you are able to see the context in which the system needs to operate and what factors will impinge on its operation. This understanding will be refined during subsequent steps.

**Step B: Analysis of business activity**

In doing Step B you will learn more about the specific business processes that your system will be required to support. You will also identify the records that are currently generated in the transaction of this business.

**Step C: Identification of recordkeeping requirements**

In Step C you look at the recordkeeping requirements that apply to the area of business you are assessing, that is, the area of business your new system will support.

This assessment enables you to identify the records your system will need to keep to meet regulatory requirements, your business needs and to meet any community expectations that apply to this area of business.

Step C analysis also involves an assessment of the U.N's exposure to risk.

**Improving system design and implementation**

Doing Steps A-C will help you to know what your system should be capable of. Steps D-G of the DIRKS methodology can help you to develop further understanding of what your new system should be capable of by focussing on your existing systems, and learning from the problems associated with these.

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These steps will also help you to identify and develop all components of your system - policy, procedure, personnel, tools and technology. They will also guide you through the implementation of your new business system.

**Step D: Assessment of existing systems**

Step D will provide you with a good understanding of your current business practices and the problems these may cause. If you are developing a system to completely replace an existing solution, be sure to study the existing system and identify all the positive and negative aspects of its operation. This assessment will provide important context for the development of your new system.

Your Step D research will not need to be as detailed as if you were seeking to redevelop the existing system, but you should include some examination of current practices to make sure you do not build existing mistakes into your new system.

**Step E: Identification of strategies for recordkeeping**

Step E will involve you looking at the functionality you require, and determining the best way this can be implemented within your workplace. You may have a range of requirements you need to meet - in Step E you can identify a combination of strategies, from the development of a policy, to the design of technical components, through to the implementation of training programs, to ensure your system is effective and make sure it is understood.

Certain strategies may best suit your objectives and budget. Step E will help you to determine what these are.

**Step F: Design of a recordkeeping system**

If you are seeking to develop a new recordkeeping system, Step F is where you actually develop its component parts. Based on the knowledge of organizational requirements and previous mistakes that you have learned about through the course of your DIRKS analysis, you will begin to develop all aspects of your system and incorporate any recordkeeping tools you have developed in the course of your DIRKS project.

**Step G: Implementation of a recordkeeping system**

A project to develop new systems will impact greatly on the day-to-day work of staff members. Its success also relies greatly on staff acceptance of the system. Therefore, it is essential to perform Step G. The change management mechanisms recommended in *Introducing DIRKS* and the promotional strategies recommended in Step G may contain useful suggestions to assist in your implementation. You will need to consider conversion strategies to move from the old to the new system, and what effect this will have on operations.
Reviewing your new business system

Step H: Post implementation review

Step H is an opportunity to measure how the implementation of new business system changes has fared and whether the system meets the expectations that were outlined in project planning.

Post implementation review also provides the opportunity to take corrective action regarding faults detected in the system, which will help to protect your investment of resources.

Further information

System development and implementation is referenced throughout the DIRKS Manual, so read the manual for more guidance.

Footnotes


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