

STEP G – IMPLEMENTATION OF A RECORDKEEPING SYSTEM

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G.1 WHAT DOES IMPLEMENTATION INVOLVE?

The purpose of Step G is to systematically identify and put in place an appropriate mix of strategies to successfully implement the blueprint or ‘plan’ designed in Step F. That plan provided an overview of how the various system components (processes, procedures, people and technology) should fit together. Step G builds on the initial implementation plan developed as part of that preceding step (See Step F, Section 4.9 – [Prepare initial system implementation plan](#)).

The nature of this step will depend on the solutions you are implementing, whether they are new electronic systems or just new policies and procedures. While this step is slanted towards the implementation of new systems, some strategies and techniques outlined are equally relevant for the implementation of other products.

To complete Step G you need to:

- [select](#) an appropriate mix of implementation techniques and strategies (Section G.4.1);
- [plan](#) the implementation process (Section G.4.2);
- [manage](#) the implementation of the system (Section G.4.3); and
- develop a [maintenance plan](#) for the system (Section G.4.4).

G.2 BENEFITS OF PLANNING FOR IMPLEMENTATION

The integration of new or improved recordkeeping systems with office communication systems and business processes can be a complex undertaking with high accountability and financial stakes. Such risks can be minimised through careful planning and documentation of the implementation process.

By completing this step you will have:

- implemented improved recordkeeping practices with minimum disruption to business activities;
- contributed to organisational requirements for quality accreditation; and
- capitalised on the long-term investment made in Steps A to F.

Outcomes of Step G may include:

- a detailed project plan, outlining the mix of implementation strategies and techniques selected (that is, documentation, communication, training, conversion, regulation and review, quality systems and change management), cross-referenced to relevant risk assessments;
- documented policies, procedures and practices;

- training materials;
- documentation of the conversion process and ongoing migration procedures;
- documentation required for ‘quality systems’ accreditation (if relevant);
- an audit strategy to monitor the performance of the recordkeeping system (efficiency) and compliance with the recordkeeping requirements (effectiveness);
- performance reports regarding the implementation of each system, practice and process; and
- report(s) to management on the implementation process (these may serve as a case study for future implementation projects).

G.3 RESOURCES AND PREREQUISITES

There may be management-driven imperatives to implement new or improved systems for keeping records (or a single component, such as records management software) without fully understanding recordkeeping requirements and organisational constraints. The desire to start at Step G, without the benefit of the knowledge and products arising from the earlier steps, is likely to adversely affect system roll-out and ultimately incur additional, and otherwise avoidable, costs (in terms of staff, time and goodwill).

Before starting Step G you should have:

- analysed recordkeeping requirements and organisational constraints (Steps A to E);
- developed any specific tools to assist your organisation’s records management needs, such as a corporate thesaurus merged with Keyword AAA (arising from Steps B and C) and functions-based records disposal authority (derived from Steps A to C and Appendix 8 – Guide to developing a disposal authority);
- identified the strengths and weaknesses of your existing systems (Step D);
- agreed on a range of tactics to satisfy your organisation’s recordkeeping requirements and organisational constraints (Step E);
- developed a plan or ‘blueprint’ that shows how the various components (processes, procedures, people and technology) fit together in practice, including an initial high-level implementation plan and training strategy (Step F);
- obtained management support and resources to implement the plan; and

- acquired necessary hardware and software.

Given both the need for high accountability and the resource implications of systems integration, it is essential to involve personnel with vested interests in the outcome, as well as specialists, in this phase of the project.

In order to conduct this step you will need, depending on the nature of solutions being implemented:

- a project sponsor representing senior management;
- personnel with strong project and change management skills;
- personnel with recordkeeping expertise;
- personnel with an understanding of corporate governance (eg audit specialists);
- IT specialists;
- system hardware and software, and dedicated office space for installation; and
- knowledge of previous systems implementation projects within the organisation.

G.4 IMPLEMENTING A SYSTEM FOR KEEPING RECORDS

The implementation process involves several aspects, namely, selecting a suitable mix of strategies, systematically planning and managing the implementation, and developing mechanisms to ensure that the system is properly maintained. [1]

G.4.1 Select implementation strategies and techniques

There is a range of strategies and techniques you can apply to smoothly and successfully implement new or improved systems or practices within your organisation. Chosen carefully, these will help ensure that the ongoing operation of your system is also managed effectively. These techniques and strategies concern:

- [documentation](#) of practices and processes (Section G.4.1.1);
- [communication](#) (Section G.4.1.2);
- [training](#) (Section G.4.1.3);
- [conversion](#) (Section G.4.1.4);
- [regulation](#) and review (Section G.4.1.5);
- [quality systems](#) (Section G.4.1.6); and
- [change management](#) (Section G.4.1.7).

In order to identify appropriate strategies for implementation, you will need to take into consideration the organisational culture and other environmental

influences or constraints. This will involve drawing on the information gathered in earlier steps of DIRKS to consider the viability of a particular strategy, or how certain strategies may be applied in combination. Conducting risk and feasibility assessments will help you identify appropriate strategies. Appendix 11– [Risk analysis in DIRKS](#) and Appendix 12 – [Recordkeeping feasibility analysis](#) will provide assistance with these tasks.

In a sense, parallels can be drawn here with the process of selecting tactics for satisfying recordkeeping requirements (Step E). Choosing the mix of strategies to use or what emphasis to place on each of them is a business decision that needs to be made in each instance of implementation.

G.4.1.1 Documentation

This strategy refers to the documentation of policies, procedures and practices covering all aspects of recordkeeping systems and practices in your organisation. The documentation should be created or updated in accordance with your organisation’s standards. It should be readily available and routinely assessed as part of normal [audit processes](#) (discussed in Section G.4.1.5). It is important for management to endorse policy statements to demonstrate high-level support for organisational recordkeeping. Statements of this type should anticipate and address any questions or concerns staff may have regarding implementation.

The documentation is likely to contain references to relevant legislation and standards as well as to other systems and policies operating in your organisation. The documentation should serve to:

- describe approved recordkeeping practices;
- explicitly state the roles and responsibilities of employees;
- identify unacceptable or exceptional practices and functions; and
- prescribe the use of electronic business information systems for recordkeeping purposes.

The documentation will help promulgate systems and practices (G.4.1.2), contribute to training initiatives (G.4.1.3) and quality systems certification (G.4.1.6), and provide evidence of compliance with standards (G.4.1.5).

Some examples of documented practices and processes may include:

- a records management policy;
- a procedures manual for records management staff; and
- procedures for general staff relating to recordkeeping responsibilities.

Most of the recordkeeping topics requiring documentation will have been identified in Step E – Strategies for recordkeeping, and further developed in Step F – Design of a recordkeeping system. Step G involves completing the drafting process (where required) and confirming that all topics identified in Steps E and F have been addressed.

G.4.1.2 Communication

It is essential that information about new or improved systems be promulgated to staff both before and during the implementation phase. The information you will need to communicate will include:

- the existence, structure and purpose of the system;
- the recordkeeping requirements and strategies on which the system is based;
- the policies and procedures that direct and support the system;
- individual, group and organisational roles and responsibilities for the system;
- the time frame for the implementation of the system, including projected milestones for conversion;
- the contributions required of staff during implementation; and/or
- any adjustments to implementation, including reasons for amended time frames.

This information is likely to be disseminated in a variety of ways, such as:

- general briefing sessions;
- intranet sites;
- newsletters;
- policies and procedures;
- customised training courses;
- help desk support facilities;
- in-house listservs; and/or
- informal discussion and feedback.

The primary audience for this information will be the day-to-day users of the system (ie records creators). The information should also be made available to senior managers, corporate governance personnel, auditors and any other parties that have a vested interest in the smooth and accountable operation of the organisation, and therefore, its recordkeeping system. Establishing support systems (such as help desks or user listservs) is crucial to successful implementation, especially in decentralised settings. This applies equally to operational staff using the system and those working directly on implementing the system.

Regular communication with staff will foster their involvement in the process, help identify issues arising from implementation, and contribute to problem-solving. You will have communicated extensively with staff in earlier steps as part of your research and to introduce and market the project.

Communication in this step is focused on ensuring that all staff who will be exposed to new systems and practices are informed about them.

G.4.1.3 Training

This strategy is designed to ensure that staff affected by the implementation of new systems and practices are informed, supported and equipped with the appropriate skills and experience. Training is integral to the successful management of the implementation process.

Previous steps identified various broad training needs (Step E) and the development of a high-level training plan, including its overall structure, general content and delivery options (Step F). Step G involves the development, refinement and delivery of a comprehensive training package.

Decisions about the level and type of training to offer staff will largely depend on their role in relation to recordkeeping, and the knowledge and skills required to carry out that role. It is therefore important that you collect information regarding current levels of knowledge and expertise in order to assess individual, work group and organisational training needs. Some of this information may have emerged when you analysed your organisation's business activities (Step B) or surveyed existing systems and practices in Step D. Further information can be obtained from:

- interviews;
- observation;
- job analysis;
- quality control and performance appraisal reports; and
- surveys (such as a skills audit).

Conducting a skills audit (or 'needs analysis') of your organisation will help you to determine the role(s) performed by individual staff, work groups or programs, and to identify the gap between the knowledge and skills they currently have and what they need to do their job competently with respect to recordkeeping. The Australian National Training Authority's recordkeeping competency standards, within the *Business Services Training Package* (2001) can help you to identify the kinds of knowledge and skills required to achieve certain recordkeeping competencies. A skills audit can be a complex procedure and qualified staff should be involved in its design and analysis to ensure that problems and solutions are properly identified. For example, a skills audit may identify management as well as training needs. It is important to distinguish these issues and address them accordingly.

Once a need has been established, the specific content of the training can be determined and developed. Delivery options will depend on the nature of the training required and the organisation's capacity to develop and present relevant material. Options may include:

- courses developed and presented in-house;

Conversion may be full or partial and may involve changes between paper and electronic systems. The identification, selection and conversion of vital records is an important part of this strategy. [3] There are four main conversion or changeover methods to consider:

- **Direct changeover** – where the new system is introduced at an agreed time without any gradual implementation. 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.
- **Parallel operation** – where the new and old system run in tandem for an agreed time. This represents a conservative but potentially expensive approach, as dual systems must be maintained.
- **Pilot operation** – where the new system is implemented initially only for a discrete portion of the organisation. This approach is particularly useful when there are potentially high technological or organisational risks associated with the project.
- **Phased changeover** – where only certain modules of the new system are implemented over time and the old system is phased out as functions are successfully subsumed by the new system. This approach may result in a lengthy implementation period, but enables organisations to achieve some benefits from the new system more rapidly than under other strategies. [4]

Irrespective of the conversion method, there are a number of phases in a conversion project, namely selection, pre-conversion, testing, training, implementation and follow-up. Australian Standard AS 4390-1996, *Records Management* outlines some of the issues associated with these phases and can provide further guidance on managing your conversion. [5] Other implementation strategies such as [training](#) and [documenting](#) will also contribute to your organisation’s conversion project.

G.4.1.5 Regulation and review

This strategy relates to the ongoing monitoring or auditing of the recordkeeping system to assess its performance. Such audits help ensure organisational accountability and should be built into normal program evaluations to minimise disruption to business. An audit program should:

- cover all aspects of recordkeeping (ie people, processes, tools, technology);
- specify the performance indicators (or ‘criteria’) used to analyse efficiency and effectiveness – the criteria must be objective, verifiable and quantifiable (to allow for comparison over time);
- assign responsibility for the conduct and reporting of the audit;
- specify the methods for collecting information (eg inspection, observation, inquiry, and computation);
- specify the period and frequency of reviews; and

- provide a structured report that can be used for comparative purposes over time. The report may be as simple as a table that lists the aspects of the recordkeeping system you wish to measure, with columns for a ‘yes/no’ answer and comments. The checklist for performance testing of records management systems in AS 4390 provides a useful example of this report format. [6]

Organisations seeking further generic advice on audit processes should consult th (PDF 93K) available from the NSW Office of Information Technology website.

This strategy is closely linked to Step H – [Post-implementation review](#), and may be considered preliminary work for that phase.

G.4.1.6 Quality systems

Organisations seeking to comply with international quality management standards need to be aware of requirements for the creation of ‘quality records’ (ie documentation) to support the operation of ‘quality systems’. This means that the systems and processes that generate ‘quality records’ must themselves be adequately documented. The current International Organization for Standardization (ISO) 9000 family of standards outlines a range of factors that denote ‘quality records’ for accreditation purposes (particularly ISO 9000: *Quality Management Systems – Fundamentals and Vocabulary*, ISO: ISO 9001: *Quality Management Systems – Requirements*, and ISO 9004: *Quality Management Systems – Guidance for Performance Improvement*, see the [International Standards Organization](#) website).

Documentation of recordkeeping system [policies, procedures and practices](#) (Section G.4.1.1) as well as the documentation of the [system implementation process](#) (Section G.4.2) will contribute to your organisation’s ability to meet requirements for quality accreditation.

Organisations are encouraged to consult [Standards Australia](#) for further information.

G.4.1.7 Change management

Recordkeeping projects inevitably involve various changes in organisational responsibilities, work practices and procedures. The capacity to actively manage these changes will determine the success of any implementation process. Both individual staff and the organisation as a whole will tend to be comfortable with old and familiar ways. Organisations must be aware of the issues involved in change and be prepared to deal with them. Training (ie user education), documentation and communication are important ways to foster acceptance of change. Organisations seeking further advice on marketing and managing change should consult Part 1, Section 7 – [Before starting DIRKS](#).

G.4.2 Plan the implementation process

The implementation process, like any other project, requires sound management to ensure that it is conducted efficiently and effectively. Most organisations will be familiar with principles of project management and may have their own methodologies and management standards in place. Organisations seeking further advice should refer to Part 1 – [Users guide](#) of this manual or consult the [Project management guideline](#) available from the list of guidelines on the [NSW Office of Information Technology](#) website.

The implementation plan itself should be adequately documented, communicated and accessible to staff. Changes made to the plan at any time must also be identified and documented for accountability and auditing purposes.

G.4.3 Manage the implementation

The actual implementation of the recordkeeping system will vary from organisation to organisation. Nonetheless, a number of activities are likely to be relevant to all organisations. These include:

- informing staff about the implementation timetable and how it affects them and the organisation as a whole;
- distributing endorsed policies and procedures to staff;
- reviewing the skill levels of staff and making decisions on training;
- selecting and appointing staff with records management responsibilities, and implementing a new staffing structure within the records management area;
- training records management staff and establishing a help desk and any other support structures and products in preparation for user education;
- conducting training programs for staff;
- converting existing systems (depending on conversion strategy), including vital records;
- establishing an ongoing program for appraisal and disposal (eg sentencing, destroying or transferring existing records in accordance with disposal authorisations and organisational priorities);
- establishing procedures for the intellectual control of records (for example, using metadata standards and a corporate thesaurus merged with Keyword AAA);
- assigning access rights to records according to types and levels of security;
- reviewing storage facilities for physical records, and storage media for electronic records;

- surveying the current location of physical records, transferring essential metadata in the records system, and establishing an ongoing census program for physical records;
- instituting and testing a disaster response plan;
- testing each system, practice or process;
- preparing and circulating progress reports to staff; and
- preparing regular progress reports for management, noting any resourcing issues. [Z]

G.4.4 Develop a maintenance plan

The implementation plan must incorporate provisions for the ongoing maintenance of the recordkeeping system. This need should be largely fulfilled by the development of specific [policy and procedures](#) (Section G.4.1.1) as well as by [performance testing and audit](#) strategies (Section G.4.1.5).

The maintenance plan should cover all the tools that have been developed to assist in recordkeeping, not just the electronic systems. It is necessary to develop procedures for the maintenance and updating of:

- business classification schemes;
- corporate thesaurus;
- recordkeeping requirements;
- disposal authorities;
- policies and procedures; and
- training materials.

G.5 ISSUES

As with Step F, it can be difficult to determine where implementation begins and planning/design stops. Nonetheless, you must eventually make the decision to begin the implementation process and stop refining the design, whether you choose to design, review, test and implement small components of the system one at a time, or to complete the design of the total system prior to moving on to implementation.

Implementation projects rely on a combination of human, financial and technical factors. Any of these variables may affect the smooth integration of new or improved recordkeeping systems and potentially jeopardise the organisation's entire operations. Most of the issues affecting implementation, such as time lags, cost overruns and user acceptance, can be minimised by conducting risk and feasibility assessments *before* the design (Step F) and implementation (Step G) phases are begun. These investigations cannot prevent problems from occurring, but can raise awareness about their likelihood and provide for contingencies.

See Appendix 11 – [Risk analysis in DIRKS](#) and Appendix 12 – [Recordkeeping feasibility analysis](#) for assistance in identifying and evaluating risk and feasibility factors. Case studies of other implementation projects can also highlight potential problems. Some references are provided in the endnotes. [8]

The impact of any schedule ‘slippages’ will vary depending on the complexity of your recordkeeping project. Prudent planning, including critical path analysis, will help minimise adverse effects. Obviously, management should be informed of any slippages that are likely to have cost implications for your organisation.

G.6 CHECKLIST

Before proceeding further check that you have:

- engaged a representative of senior management to act as sponsor;
- established a project team and/or steering committee that includes relevant stakeholders and experts;
- selected an appropriate mix of implementation strategies and techniques based on risk, cost-benefit and feasibility assessments;
- identified all the activities associated with each of the strategies;
- developed a project plan to manage the implementation process;
- implemented and tested systems, processes and practices according to the project plan; and
- formally reported on the implementation process to the project sponsor, steering committee and staff.

G.7 WHAT’S NEXT?

After you have completed this step and implemented your recordkeeping solutions you should proceed to Step H – [Post-implementation review](#), to evaluate the efficiency of the development process and the effectiveness of your organisation’s new or improved recordkeeping practices.

ENDNOTES

1. There are many authoritative texts on the various aspects of system design. The following sample provides useful background on generic implementation issues.
 - Burch, J G, *Systems Analysis, Design, and Implementation*, Boyd & Fraser, Boston, 1992.
 - Martin, W, Brown, C, DeHayes, D, Hoffer, J and Perkins, W, *Managing Information Technology: What Managers Need to Know*, Prentice Hall, Upper Saddle River, New Jersey, 1999.

- McConnell, S, *Rapid Development*, Microsoft Press, Seattle, 1996.
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- Shelly, G B, Cashman, T J, Adamski, J and Adamski, J J, *Systems Analysis and Design*, Boyd & Fraser, Boston, 1991.
- Taylor, D A, *Business Engineering with Object Technology*, John Wiley & Sons, New York, 1995.
- Whitten, J L, Bentley, L D and Barlow, V M, *Systems Analysis and Design Methods*, Irwin, Burr Ridge, Illinois, 1994.

For case studies on systems implementation specifically relating to recordkeeping, see Judith Ellis (ed.), *Selected Essays in Electronic Recordkeeping in Australia*, Australian Society of Archivists, Canberra, 2000.

2. For further information on technical obsolescence and the importance of non-proprietary standards see Charles M Dollar, *Authentic Electronic Records: Strategies for Long-term Access*, Cohasset Associates, Chicago, 1999.
3. For further information on the identification and protection of vital records, see Jay Kennedy and Cherryl Schauder, *Records Management: A Guide to Corporate Recordkeeping*, 2nd edition, Longman, South Melbourne, 1998, Chapter 11.
4. The conversion process is a routine component of systems development projects. For a brief overview see W Martin, C Brown, D DeHayes, J Hoffer and W Perkins, *Managing Information Technology: What Managers Need to Know*, Prentice Hall, Upper Saddle River, New Jersey, 1999, pp. 403–4.
5. Australian Standard AS 4390–1996, *Records Management*, Part 3: Strategies, Appendix B.
6. Australian Standard AS 4390–1996, *Records Management*, Part 3: Strategies, Appendix C.
7. These activities are based on Australian Standard AS 4390–1996, *Records Management*, Part 3: Strategies, Appendix A, Clause A2.5.
8. Implementation issues are canvassed in C Sauer, *Why Information Systems Fail: A Case Study Approach*, Alfred Waller Ltd, Henley-on-Thames, 1993.