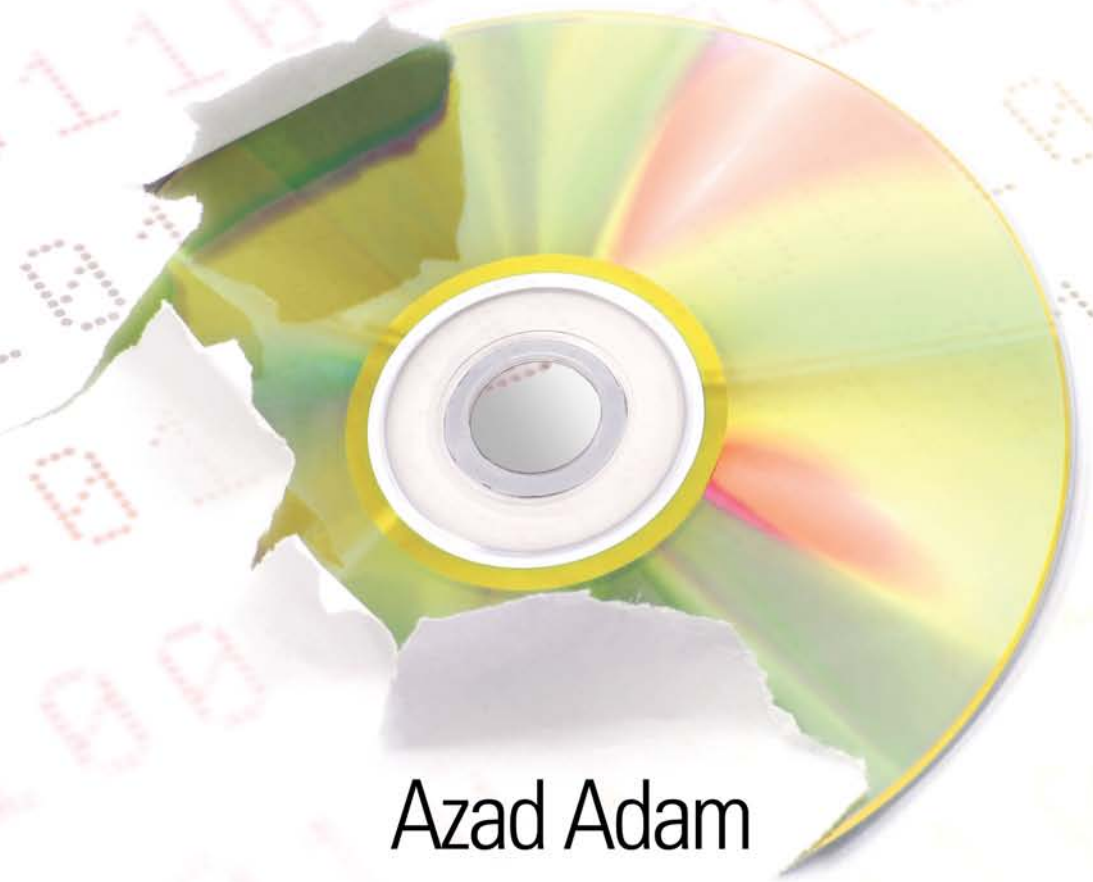


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Azad Adam



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# Dedication

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For Humza, Medina, and Yusuf, may their futures be bright  
and filled with opportunities!

To Mum, Dad, Isaac, and Tariq for helping and supporting me  
through all the ups and downs!

To Olive, for helping me to realise my potential  
and for helping me go for it!

To Andrew, for being there, for standing firm,  
and for all the support you have given me!

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and determination on the project!



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# Preface

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Why write a book about implementing electronic document and records management systems (EDRMS)?

Well, back in early 2003 I was working for a local government organization in southeast England and was given the task of implementing an electronic document and records management system as part of the Implementing Electronic Government (IEG) program, and it soon became apparent that nobody had actually implemented a full blown EDRMS solution across a whole public sector organization, such as local council offices. Hence, implementing EDRMS became a project of being chucked in at the deep end, and also a project of trial and error.

The project lasted for over two and a half years by which time I had realized that I had gained quite significant experience in implementing EDRMS, especially within local council environments, and the initial thoughts regarding writing a book about the topic came to mind.

In January 2006 I decided to take the plunge and prepare a book proposal. To my delight it was accepted, and I then began the long task of writing down my experiences.

During my time working for the local government organization, as we implemented their EDRMS solution it dawned upon us just how important the aspects of cultural change are on an organization with regard to the impact a system like EDRMS can have.

To sum this up, the technical implementation of EDRMS was the easy part. What presented the challenge was getting the organization and the users in the organization to accept the new system and to let go of working with paper files and folders.

As well as the importance of managing the cultural change associated with implementing EDRMS, the need for strong project management throughout every single phase of the project also became apparent.

Implementing EDRMS is not just about technology—that’s the easy part! It’s more about people, organizations, organizational culture, change, cultural change, managing cultural change, and good, strong, yet flexible project management.

The book also explores reasons for implementing EDRMS—essentially answering the question, why implement an EDRMS solution?—and presents the reader with compelling arguments to justify the implementation of such a system across a broad range of organizations, discussing the benefits to be achieved, the costs that can be reduced, and productivity gains that can be achieved.

It has been my aim to make this book as practical as possible and, as such, I have included steps that can be followed in determining the specification for the basic component parts of an organization’s EDRMS solution, as well as discussing how to produce key documents such as the business case, feasibility study, functional requirements, and technical requirements. Short descriptions of the EDRMS software offerings are also presented in Appendix A of this book.

In writing this book I have aimed to present the reader with the mix of theory, technology, change management and project management, and key documents required for successful implementation of EDRMS.

---

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---

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---

# Introduction

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In recent years there has been a worldwide shift toward electronic government and delivering citizen services online, using the Internet, one-stop shops, centralized call centers, etc., without the need for people to be physically present at offices. This in turn means that public sector organizations need to be able to access information quickly, easily, and efficiently. The vast majority of public sector organizations worldwide have used paper files and folders for hundreds of years, and hence this has become part of their ingrained culture.

With the emphasis now on delivering citizen services online using modern communications methods such as the Internet and mobile phone-based services, this gives rise to the need for electronic document and records storage in order to quickly and efficiently access whatever information is needed by the citizen (client) in order to deliver the services required.

The vast majority of public sector organizations have not implemented any form of electronic and document records management system (EDRMS) across the whole of their organization. The nearest most have come is in implementing systems within particular key sections, such as social services and welfare. Hence, records and information are often duplicated, and there is no one central source of information. A properly structured and implemented EDM system would address this need, offering quick and easy access to documents and records and serving the whole organization from this one central data source.

In the U.K., the implementation of EDRMS by 2004 was a priority outcome of Implementing Electronic Government (IEG) as outlined by the Office of the Deputy Prime Minister (ODPM), as well as the Freedom of Information Act (FOIA). However, the challenge that faces many heads of ICT (information and communications technology), project managers, and business analysts is they find it quite a daunting prospect to implement

EDRMS, which is essentially a computer system that will contain electronic copies of an organization's paper-based documents and records. Another added complication is managing the cultural change and subsequent business process reengineering within the organization involved in the change from using paper-based documents and records to using electronic documents and records that can be routed across the organization.

This book, *Implementing Electronic Document and Records Management Systems*, will provide readers, whether they are IT managers, project managers, or business analysts, with direction and guidance in implementing EDRMS within their organization. This book draws heavily from the real life experiences of the author who has implemented electronic document and records management systems in a number of public sector organizations in the U.K.

Foremost, *Implementing Electronic Document and Records Management Systems* discusses the reasons why organizations of all sizes across all sectors need to move away from working with paper-based records and move toward implementing an EDRMS, in terms of complying with new legislation and the FOIA (Freedom of Information Act). Increased efficiency and productivity issues regarding the successful implementation of EDRMS are also discussed.

Providing the reader with a step-by-step guide to implementing a successful system, this book is divided into four parts:

Part 1, "Basics of EDRMS," presents the reader with a solid understanding of EDRMS, starting off with the history and then moving on to discuss the fundamentals aspects, and finally discussing the necessary issues of complying with both standards and legislation.

Part 2, "Components of EDRMS," contains eight chapters and discusses the major individual component parts that make up an EDRM system, covering areas such as creating electronic document types, creating the folder structure, e-mail management, search and retrieval, integrating workflow, user interfaces, mobile working, and remote access. Finally the topic of scanning historical documents and records is covered along with two case studies illustrating how organizations have converted paper to electronic images.

Part 3, "A Framework for EDRMS," runs through the specific steps needed to complete an EDRMS implementation from the first concept idea through to implementation and ongoing support for the project. Project management is discussed in detail with the PRINCE2 and PMBOK methodologies explored. This part of the book also covers the critical documents that are needed for EDRMS implementation such as the Business Case, Functional Requirements, and Technical Requirements. EDRMS software platforms are explored in Chapter 18, along with hardware considerations in Chapter 19. Chapter 20 then discusses the need to manage the

cultural change created by EDRMS, and discusses approaches in change management and implementing a change program. Finally, Chapter 21 concludes this section of the book by discussing the ongoing nature of the project.

Part 4 presents the reader with a number of case studies that examine how various organizations across the globe have implemented EDRM systems. Appendix A contains listings of EDRMS software vendors with short descriptions of their product offerings, and Appendix B contains a glossary.

To get the most from this book and any possible EDRMS implementation, it is recommended that you read it in its entirety first before working with the processes and procedures discussed.





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# About the Author

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Azad Adam is a freelance IT consultant specializing in the area of electronic document and records management systems, mainly working within U.K. public sector organizations where he undertakes systems design and implementation projects connected with EDRMS solutions.

Azad started his career in IT in the 1990s, at a relatively young age, by first offering computer support services to small business owners in London. From there, he progressed to working as a freelance IT contractor specializing in Web development and Web content management solutions, and has worked as a senior Web developer across a variety of organizations from wide-ranging sectors such as charity, retail and investment banking, new media companies, and government organizations.

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# **Part 1**

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# **BASICS OF ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEMS**



## *Chapter 1*

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# History and Background of Electronic Document and Records Management Systems

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### **Earliest Systems Known to Humans**

The task of managing documents and records goes far back, even before the beginning of civilization. Our early ancestors, the cavemen, used to draw pictures on the walls of their caves, depicting events of their times. This can be thought of as the earliest known form of record keeping, i.e., recording events for future reference. Egyptian hieroglyphics are another example of primitive record keeping. In both these cases, historians have been able to obtain information indirectly about the environment and activities of people from bygone eras.

### **Modern Systems**

Let us fast-forward to modern times: In the 1980s, most of the systems available were Document Image Processing (DIP) systems, essentially the electronic equivalent of a filing cabinet, with the facility for documents

to be scanned, indexed, and stored in the system, so they could later be retrieved for viewing on screen or printing.

Some of the more advanced DIP systems also included elements of workflow, which allowed the organization to route scanned documents (images) around the organization. For example, an organization could scan their incoming mail, and then those scanned images could be routed to designated staff to process. Electronic Document Management Systems (EDMS) as well as Electronic Records Management Systems (ERMS) emerged in the 1990s.

EDMS generally integrated with applications such as Microsoft Office and allowed users to actively manage documents, which could be stored and indexed in a document repository. They could be checked in and checked out and versions and revision cycles tracked using versioning control. Some of these systems also included DIP functionality, which allowed both conventional paper and electronic files to be scanned, indexed, and archived.

ERMS first started appearing in the 1990s. These systems mainly managed the physical location of paper-based records, essentially an electronic index for paper files and folders. Gradually, these systems developed into systems for managing electronic records and electronic documents, providing DIP and workflow functionality, as well. However, these new hybrid systems of records, documents, imaging, and workflow were relatively new and immature without any definite standards for record-keeping compliance.

During the mid-to-late 1990s, standards for ERMS started to be developed. In the United Kingdom, the Public Records Office (PRO), which is now The National Archives (TNA), initiated a project with central government to develop a set of functional requirements for electronic record-keeping systems. The first version of these requirements was published in 1999. In 2002, TNA issued a new version of the functional requirements document for ERMS with more detailed information regarding metadata standards, developed as part of the e-government program of the United Kingdom.

In the United States, the Department of Defense (DoD) 5015.2-STD, "Design Criteria Standards for Electronic Records Management Software Applications," was first released in late 1997. The standard was developed by the DoD, updated, and reissued on June 19, 2002. The standard sets forth mandatory functional requirements for ERMS software, as well as guidelines for the management of classified records. DoD 5015.2 is currently the de facto standard in the United States.

In 2001, the International Organization for Standardization (ISO) released its standard for records management, ISO 15489, based on the Australian standard AS 4390-1996. Later, the Australian government withdrew AS 4390-1996 and replaced it with ISO 15489. In addition to the

ISO standard, a European standard known as MOREQ, developed by the IDABC (Interoperable Delivery of European eGovernment Services to public Administrations, Businesses, and Citizens), has also been released.

So from virtually no standards back in the mid-1990s, there are now a number of standards relating to records management. Those most in use are the TNA 2002 in the United Kingdom and DoD 5015.2 in the United States. Both TNA 2002 and DoD 5015.2 define the functional requirements for ERMS. Most of the major EDRM vendors comply with at least one of these standards, if not both.

## **Future Market Trends**

Currently, there are mature standards for records management and no shortage of software vendors offering document and records management system solutions, so where is the market going?

There is no doubt that nearly all the software vendors offering combined electronic document and records management solutions, as well as separate document and records management solutions provide these as part of a bigger Enterprise Content Management solution.

Enterprise Content Management is a framework of applications, including content management, document management, records management, Web content management, scanning and imaging tools, and collaboration tools, as well as workflow and business process reengineering tools. Enterprise Content Management solutions are normally aimed at larger organizations.





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