Implementing EDRM: has it provided the benefits expected?

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Abstract

Purpose – To analyse the lessons learned from the Electronic Document and Records Management (EDRM) project at the Public Record Office of Northern Ireland to inform other practitioners.

Design/methodology/approach – Using PRINCE II project methodology the EDRM project objectives were to re-introduce best practice records management following ISO 15489 as the standard, implement software that met the 2002 functional requirements devised by The National Archives UK and provide a detailed lessons-learned report to inform the wider roll-out to 18,000 users in the Northern Ireland Civil Service.

Findings – Develops practical lessons learned and highlights key issues and risks with a project of this nature and identifies some of the initial business benefits that can be achieved.

Research limitations/implications – The Public Record Office of Northern Ireland was a relatively small organisational project and, due to the remit of the agency senior management support, which is critical, was somewhat easier to obtain.

Practical implications – This paper is a useful case study investigation of a project management approach to the introduction of EDRM within an organisation using ISO 15489 as a tool.

Originality/value – This paper reflects practical lessons learned from a successful implementation of EDRM and will help other professionals who are considering or already introducing EDRM in their own organisations.

Keywords Document management, Records management, Project management, Standards, Classification, Northern Ireland

Paper type Case study

Background

The Public Record Office of Northern Ireland (PRONI) commenced a lead implementation project on electronic document and records management (EDRM) in the summer of 2003. PRONI's project was one of three lead implementation projects in the Northern Ireland Civil Service (NICS), and it was Phase 1 of a process to implement electronic document and records management across all Northern Ireland Departments by the end of 2007. The other two lead implementers were the Office of First and Deputy First Minister (a department responsible for policy and strategy in Northern Ireland) and the Department of Enterprise, Trade and Investment (an operational department that had already piloted an electronic document and records management system). PRONI, an executive agency in the Department of Culture, Arts and Leisure, became the third lead implementer due to the considerable impact these projects would have on records management policies and practice in Northern Ireland.

The Public Record Office of Northern Ireland established a project board and team during the summer of 2003. The PRONI project team consisted of four staff, a dedicated project manager and a project support officer, with records management and information technology input identified as critical from the beginning. Increasingly and very quickly, records management input resulted in a member of the project team

being assigned to this role full time, while information technology skills were called on as and when required, and more so during the actual implementation stage. The PRONI implementation was to the entire agency of 90 staff, unlike the other two lead implementers who focused on pilot areas and intend to roll out to the rest of their departments during 2005. A single-site full implementation had its advantages for PRONI – from a technology point of view server installation was less complicated – but it had disadvantages or challenges from the cultural and records management perspectives. The challenges meant the agency had to develop and adopt a complete file classification very quickly and train varying levels of staff to accept the new system and agree to the cultural change of sharing information.

Project objectives and methodologies
The objectives outlined in PRONI's Project Initiation Document were threefold:

(1) to improve our internal records management procedures;

(2) to implement electronic document and records management software; and

(3) to provide lessons learned for the wider roll-out to the Northern Ireland Civil Service.

The project methodology adopted was PRINCE II (Office of Government Commerce, n.d.), a widely used tool in the NICS public sector to manage project work. Built into the PRONI project was the importance of a benefits realisation stage – which will require careful managing now that the project deliverables (such as implementation of the software) have been achieved. One of the main lessons in adopting a project management approach that PRONI has learnt is the commitment within the organisation to build on the project work, integrating the deliverables into the normal business processes. Too often when a project dissolves the lead given to the work process has collapsed and the potential benefits are left unachievable. It has been PRONI's aim to avoid this pattern, and due to our records management remit within Northern Ireland's public sector, we identified that continuing ownership and responsibility for benefit realisation has to lie with PRONI's records management unit.

Early in the life of PRONI's project the internal records management procedures were examined in detail to enable one of the main objectives for this project – the re-introduction of corporate controls over records management processes. The methodology selected to inform our approach was contained in ISO 15489 (International Organisation for Standardisation, 2001), the international records management standard, and to varying degrees applied. In ISO 15489 there are eight steps regarding the development of a records management system – these are not necessarily linear processes of development, but provide a framework tool for records managers when designing a system. The records management methodology contained in this approach was originally developed in Australia, the first country in the world to develop a national standard for the records management profession. The methodology is often referred to as "DIRKS – A Strategic Approach to Managing Business" (National Archives of Australia, 2001; State Records New South Wales, 2003). DIRKS contains the following steps:

(1) Conduct a preliminary investigation.

(2) Analyse business activity.

(3) Identify requirements for records.

(4) Assess existing systems.

(5) Identify strategies to satisfy record requirements.

(6) Design the records system.

(7) Implement the records system.

(8) Conduct post-implementation review.

As various stages of the PRONI project align with ISO 15489, they will be discussed with reference to these steps.

With regard to the implementation of the EDRM software itself, the Northern Ireland Civil Service took the 2002 functional requirements set by The National Archives UK as the basis for any software tender. Over 400 requirements were evaluated and all mandatory requirements were extensively tested by each of the three lead implementers in view of the proposed wider roll-out to over 18,000 users within the NICS. Scalability remains an issue about which the lead implementers (due to their very nature) could not provide accurate lessons learned, and so the software provider is currently working with the NICS on this issue prior to the departmental roll-out programme.

Project planning – preparation stage

PRONI's lead implementation project had three stages – a preparation stage of 14 months, an implementation stage of three months, followed by an operation stage which formally lasted four months under the project. A central lesson for any EDRM project is that preparation is the key to the project's success. Planning activities, training, raising awareness, time and the allocation of skills and resources are all critical to the preparation stage. It is during the preparation stage that the project is laying the foundations and re-introducing good records management practices to support the organisation's business requirements. A number of records management activities were initiated during PRONI's preparation stage, including an information audit and electronic records questionnaire – both activities contributing to the ISO 15489 preliminary investigation step.

Information audits and communication

The project team took the decision to launch the project to end-users with the electronic records questionnaire, asking staff to indicate quantities of e-mails in various Outlook folders, whether they had any sub-structure to their folders, and volumes of documents held on personal drives. This was all information we could have been extracted from the information technology division easily, but the purpose was to highlight to staff that these electronic documents/records were in fact sources of corporate documentation, and that the project team was going to be tackling all information held at PRONI. The Chief Executive sent out the questionnaire and it really helped to initiate the cultural change battle inherent in this project, as staff started to discuss how much information and duplication of information they were holding. When the results were analysed the project team realised there was a long way to go, with over 18,000 e-mails held in individual's in-boxes alone, and over 14,000 documents held in personal drives. The first in a series of "tidy-ups" commenced, where staff were asked

to check their e-mail accounts and personal drives regularly – printing documents to our registered file system and, where appropriate, deleting.

The Information Audit focussed primarily on existing paper registered and unregistered files held by staff. The project team quickly learnt that clearer definitions of what constituted a current and non-current file were required and that they had to be prepared to follow up the audit with a number of interviews, as deadlines were not met. The audit indicated that there were over 900 non-current files still in circulation within PRONI, the file list was incomplete and seriously out of date, and that there were still files held in the registry which were open and yet the files had not had any papers added to them in the last two years. PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes.

To facilitate the work of the project team and establish a mechanism to further the cultural change, sectional representatives were sought from each work area early in the project. The sectional representatives were regularly updated, consulted and given additional training throughout the project. Communication strategies were developed continuously and included: updating senior management, monthly articles in the PRONI magazine, competitions, awareness sessions, updating the home page of PRONI's intranet, as well as externally updating the other lead implementers and responding to external interest by giving presentations and delivering relevant workshops.

File classification and staff training

In the autumn of 2003 the Northern Ireland Civil Service introduced the concept of a corporate file plan or classification, and asked the lead implementers to develop this within the projects. It is not in the scope of this article to discuss the development of PRONI's functional classification in detail but it is the single most critical component of an EDRM project, and should be highlighted. The time and skills required in the development work associated with classification schemes constituted a significant resource during the PRONI lead implementation project. PRONI aimed, along with the other lead implementers, to create a functionally based file classification, moving away from the organisational and subject based classification that was in existence for the paper file registry. The aim of a purely functional classification was elusive, partly due to the time constraints associated with the lead implementation project, but mainly due to the fact that PRONI had decided not to include any business process re-engineering within this project. Current business processes were investigated and mapped and these were used to inform the development of a file classification which would reflect PRONI's business requirements.

By Christmas 2003 the project team established a pilot within the Corporate Services Division, asking staff over a two-week period to adopt the existing corporate file plan structure developed for the NICS. It quickly became clear that there were a number of gaps within this structure and that headings related to subjects confused staff as to where was the most appropriate place to file documents. The pilot also emphasised the lack of internal training provided on basic records management issues and that this would have to be addressed by the project team as a priority. PRONI had the records management expertise to develop an in-house course, whereas other organisations may need to outsource and seek alternative training provision – the

specification developed by PRONI was used by the Northern Ireland Civil Service to seek such training provision externally from consultancy. The in-house training course at PRONI was intensive, with a mixture of informative and practical sessions over one day. The course provided the basics in records management and was attended by all staff, from the Chief Executive to the entry-level civil servant. While it was a lot of effort on the part of the primary trainer, the course proved popular amongst staff (85 per cent rated the course content as good or very good while 80 per cent similarly rated the practical exercises) and it was hard to fit everyone in within the two weeks allocated. Competency levels were raised internally but there was a need to follow this up with additional training for absent staff and within a formal induction programme.

As part of any EDRM project, it is important that staff become familiar with the file classification structure, and accept the cultural change of sharing information before implementation of the software, and the best way to achieve this is to involve them in the development process and allow time for this cultural change to embed. PRONI held focus groups (a series of two meetings) with staff from each business area after the records management training course, to discuss file classification requirements and business processes, activities and transactions. Information mapped from the focus group discussions along with PRONI's Corporate and Sectional Business Plans helped the project team to analyse the organisation's business activity and identify requirements for records, both steps in ISO 15489. Enthusiasm and project timescales resulted in the project team not leaving enough time to analyse the focus group information between meetings, and re-scheduling of focus group meetings had to be undertaken to meet availability of staff within each business area.

Data rationalisation process
Decisions regarding whether to adopt a "familiarisation drive", mapping the new file classification in a Windows environment, and the timing of such an exercise, was difficult as there were not very many models or examples to base any informed decision on. PRONI had already decided that it would not adopt a major back-scanning process or mass migration of data from network drives into the new electronic document and records management system – the latter, it was felt, would result in an old mess being transferred to the new system. Familiarisation with the new classification was addressed in PRONI by being part of the data transfer and clean-up exercise during the summer of 2004. Initially staff were asked during July 2004 to review their personal drives, moving any business documentation to their shared drive workspace or simply printing the records to a registered file. A quota limit of 5 MB was to be introduced to the personal drive storage space allocated to staff to encourage this process. During August 2004, all work teams were asked to collectively review the shared drive material held – deleting out of date, incomplete or duplicates of information or printing to paper file business-related records. Any information that work teams identified as possibly requiring transfer to the new file classification had to be specifically identified, a detailed reason given to the records manager as to why the electronic version of the record was necessary and the new file classification area identified. It was this exercise during August 2004 that made staff justify what business information they held and facilitated the data transfer process. In the meantime, work was ongoing on the development of a file classification to suit

PRONI's business needs and retention requirements were also identified, allowing us to start the design of the records system – another ISO 15489 requirement.

The step-by-step process to the rationalisation of the drives at PRONI continued in September with the opening of a "familiarisation" drive, internally called the "EDRM Shared Drive" and the old shared drive becoming read-only. The data transfer process was a big cultural change as staff found it hard to let go of "their" information and it was a slow process for them to accept the corporate value of records. Data transfer in PRONI was kept to a minimum because of the justification process during the previous stages, and priority was given to those who had met the deadlines. While most staff met the deadline, some work areas did not meet it until October, due to the volume of records held.

The project team found that the deadlines imposed during this process helped focus the minds of staff – but it then followed that despite difficult policy decisions, the deadlines had to be implemented to continue the momentum that had been established. Time commitment from all staff was a big issue throughout the EDRM project, and in particular during the data transfer and tidy-up processes. While senior staff had a natural interest in PRONI to support the objectives of this project, it was difficult to gain commitment of their time for meetings or the tidy processes – this was time they did not have. The time commitment from senior management and every sectional team should have been indicated in the corporate and business plans in order to recognise this resource implication. This is particularly important due to the fact that senior management are often a group with high levels information resource requirements. The project team realised that the Chief Executive and his Personal Assistant would in fact require additional one-to-one training focussing on searching requirements and an overall use of the corporate file plan – this training will be an ongoing issue.

E-mails were not included in the transfer to the "EDRM Shared Drive", as the process of capturing e-mails was considered too complicated for all staff to follow consistently. It would also be one of the major advantages of the EDRM system itself, allowing staff to easily catalogue e-mail messages along with Word, Excel, and other documents. A preliminary guide to e-mail management had been issued to staff earlier in the year at the records management training course and monitoring of Outlook folder sizes continued, with individuals straying above certain limits being requested to tidy up and actively manage their e-mail accounts.

Implementation stage

The implementation stage started in October 2004, with the EDRM software supplier for all three lead implementers being announced (Tower Software's TRIM Context; Tower Software, n.d.) and a configuration workshop held. The configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated. During the implementation stage at PRONI, the project team had one-to-one sessions with the sectional representatives to explain how to import information from the "EDRM Shared Drive" into the new electronic document and records management product. The EDRM product was welcomed by the section representatives as an advance from the "EDRM Shared Drive" and its limitations in searching, cataloguing facilities and the inability to save e-mails easily.

The PRONI sectional representatives were called "power users" by the software supplier and were trained prior to Christmas last year. The software training was

perhaps too early, prior to the agency go-live in January 2005, but was offset by provision of model office computers and a database for familiarisation work. The project team used the implementation stage to identify strategies to satisfy records requirements and the design of the records system, both ISO 15489 requirements, by working closely with the other lead implementers to develop common policies and procedures. Internal policies were then developed in PRONI for specific requirements and a series of appendices went into the procedural detail about e-mail management, registry arrangements, document naming conventions and our training strategy.

Interim arrangements for PRONI's paper file registry were put in place prior to going live with the EDRM. The old file classification (based on organisational and subject classes) would be closed when the EDRM system went live on 17 January 2005. Any new paper files required (for incoming correspondence or confidential material) would be opened with the same reference code and title as the equivalent folder in the EDRM – a proper hybrid classification. Paper files were recalled to the Corporate Services section for closing and a review of the old classification was set for June 2005 – to facilitate staff who might need to refer to the older information. We did not engage in any major cross-indexing – but added to the metadata properties of folders information about the existence of a corresponding paper file, and there is also a notes field available to staff if they wish to indicate old file codes for cross-referencing purposes. A one-off schedule will be introduced for the old file registry information, while the new PRONI disposal schedule will refer to all the EDRM records and any corresponding paper files, as well as structured electronic resources – making it a comprehensive scheduling of all PRONI records.

It was during the implementation stage that ongoing management and roles were discussed – with continued records management input being recognised as essential and an administration/management role being identified as well. Information technology staff were quite happy to take a background support role in PRONI, recognising that the primary knowledge about the EDRM system had to be located with records management and an administrative support role being established within Corporate Services. System administration training by the software providers was given to the project team members and selected sectional representatives. The staff selected for system administration training had been deliberately chosen because they were likely to remain in PRONI, thus ensuring some continuity of knowledge. However, the training at this level was felt to be too complex. There was also a conscious decision that system administration training would not only be given to information technology staff but rather to administrative and records management staff, who would be providing the ongoing management of the EDRM system within PRONI.

End-user training was outsourced by PRONI to SureSkills, but the project team provided the trainers with a lot of information regarding our business needs and what end-users would be required to know on completion of the training. Due to the seasonal time of year it was decided to wait a few weeks and to go live on 17 January 2005 – the software being uploaded to every staff member's PC while they were at their training course, an essential lesson we had learnt from other implementations. The timing and amount of external floorwalking was another issue the project team had been alerted to from others' experience, and it was decided not to introduce this too early when staff would not be able to properly avail themselves of this support mechanism. Instead,

initially floorwalking was undertaken by the project team members – which was very time consuming but meant that any immediate issues/problems were highlighted quickly and forced the project team to think on their feet – literally. External floorwalking was provided ten days after PRONI went live and then only for half a day – as this was either still seen as too early or staff felt happier contacting the internal project team about queries, signalling some success in the internal change management strategy.

Document naming conventions became a significant issue during implementation, with each work area, via their sectional representative, asked to consider local procedures and develop guidelines. There were also a number of common or corporate documents, like team meetings, and records management had to provide central guidance in this area. As the implementation progressed the project team developed a "handy hints" document, which was then delivered to staff during a follow-up programme of floorwalking and uploaded to the home page of PRONI's intranet. Internal documentation like the "handy hints" reflected current staff queries and therefore it was not much of a surprise that 94 per cent of PRONI staff who completed a post-implementation survey rated the "handy hints" document as satisfactory to very good. This compared to 77 per cent of staff who similarly rated the user manuals. In general the user reaction has been positive at PRONI, with approximately 60 per cent of staff using EDRM on a regular basis. In PRONI this level of EDRM usage was expected from the outset, as it had been calculated that approximately 40 per cent of staff did not have filing requirements as part of their daily job, but rather would need training on the system to enable access to documents stored in the system.

Operating stage
PRONI's lead implementation continued in an operating stage formally for four months following go-live with the EDRM software. This allowed the project team to provide the necessary floorwalking and support activities to users and contribute to the beginnings of the wider NICS roll-out phase. Essential to the lead implementation objectives was the development of a lessons learned report to inform the NICS of the challenges, issues and planning requirements necessary for EDRM projects. By conducting a post-implementation review, as required in ISO 15489, PRONI was able to compile a lessons-learned report on the project activities and develop some initial thoughts about benefits realisation. Records management skills were essential to re-introduce corporate controls over procedures which had long been neglected in PRONI, as in other organisations. Change management aspects, such as communication, negotiating and interviewing skills, team working, provision of training, development of awareness strategies and ability to deliver presentations were critical to help to introduce a culture of sharing information and gain user acceptance. To embed this change within PRONI and provide advice to the wider public sector in Northern Ireland, further work has been identified, including specific training sessions, development of schedules and records management guidance, input into the NICS roll-out phase and promotional activities to promote the lessons learnt in PRONI's lead implementation. E-mail management strategy has also been investigated in detail with a pilot to test automatic deletion of e-mails from Outlook after they are three months old, which will to be introduced at PRONI this summer. The project team have regularly informed staff that e-mails must be managed as business records and now

that EDRM is available all business information must be stored there – Outlook is essentially a temporary home for information received, similar to an old fashioned post box or in-tray.

Project – conclusions

What benefits, if any, has PRONI gained by being an EDRM lead implementer in Northern Ireland? Internally, like any other organisation, PRONI has benefited from an analysis of its records management procedures and the re-introduction of some control over corporate business records. PRONI now has a policy covering EDRM and registry arrangements, an up-to-date classification scheme which reflects the agency's business processes, less duplication of information and varying levels of trained and competent staff in recordkeeping. A culture of sharing information (unless there is a specific legal or privacy requirement) has been successfully introduced to PRONI by giving full access to the entire classification by default. However, the real benefit to PRONI being involved as a lead implementer was that, as an agency with executive responsibilities to advise on records management best practice, this project gave PRONI the opportunity to get its own house in order first. PRONI can now practise what it has preached – allowing a stable foundation of records management expertise to be established, which will in turn benefit the NICS and wider public sector bodies in Northern Ireland.

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Note: The views expressed in his opinion piece are personal and do not necessarily represent the views of the Royal Household where the author is employed.

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