Western Cape Government

Western Cape Government: Department of Cultural Affairs and Sport

Report for the Implementation Evaluation of the Enterprise Content Management System in the Western Cape Government

Final evaluation report

16 August 2018

pdg Committed to Development

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Acronyms

AeS	Advanced electronic Signatures
AIIM	Association for Information and Image Management
BA	Business Analyst
BCX	Business Connexion
BNARS	Botswana National Archives and Records Services
Ce-I	Centre for e-Innovation
CMATS	CMATS
CSC	Corporate Services Centre
DCAS	Department of Cultural Affairs and Sport
DEA&DP	Department of Environmental Affairs & Development Planning
DEDAT	Department of Economic Development and Tourism
DHS	Department of Human Settlements
DITCOM	Departmental Information Technology Forum
DLG	Department of Local Government
DOA	Department of Agriculture
DOCS	Department of Community Safety
DOH	Department of Health
DOTP	Department of the Premier
DSD	Department of Social Development
DTPW	Department of Transport and Public Works
ECM	Enterprise Content Management
ECT	Electronic Communications Technology
EDRM	Electronic Document Record Management
EIM	Enterprise Information Management
ELA	ELA
EPTM	Electronic Provincial Top Management
HOD	Head of Department
IA	Internal Audit
ICT	Information Communication Technology
IM	Information Management
ISO	International Organisation for Standardization
IT	Information Technology
KEQ	Key Evaluation Question
MIOS	Minimum Information Interoperability Standards

MISS	Minimum Information Security Standard
MTEF	Medium Term Expenditure Framework
NARS	National Archives and Records Services
PT	Provincial Treasury
RM	Record Management
RMRT	Record Management Request Tracking
SANS	South African National Standard
SITA	State Information Technology Agency
SITS	Supplier Invoice Tracking System
SMS	Senior Management Staff
SOP	Standard Operating Procedure
TAPSC	Transversal Application Steering Committee
TOC	Theory of Change
ToR	Terms of Reference
UFP	Uniform File Plan
WAN	Wireless Area Network
WCARS	Western Cape Archives and Records Service
WCED	Western Cape Education Department
WCG	Western Cape Government

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1 Introduction

1.1 Background and rationale

PDG was appointed to conduct an *Implementation Evaluation of the Enterprise Content Management (ECM) System in the Western Cape Government* for the Department of Cultural Affairs and Sport (DCAS). The 9-month formative evaluation was intended to assess the rollout and implementation of the ECM solution using the E-Filing/Registry Blueprint (2009) and the Business Case (2013) to inform improvements going forward.

The evaluation was commissioned nearly a decade after the transversal, enterprise-wide system was conceived as part of the E-Filing Blueprint. The DCAS pilot project was initiated in 2014 to begin rollout to senior management staff with the intention of expanding and deepening capabilities within departments over time.

Austerity measures and resources constraints were widely acknowledged as being prohibitive to the pace of operationalisation. Nevertheless, rollout continued and at the time of the evaluation all provincial departments (excepting the Department of Agriculture which operates on a different internet network) had either adopted the MyContent platform as an ECM solution or consolidated existing ECM instances under the MyContent platform. Thus, by 2018 the Department of the Premier (DOTP) and DCAS had identified a need to undertake an evaluation of the ECM system implementation to better understand what had worked well and what had not in the course of institutionalising the transversal ECM solution.

1.2 Purpose of the evaluation

As outlined in the Terms of Reference (ToR), the purpose of this assignment "is to determine if the ECM solution has been effectively implemented as per the ECM transversal Blueprint and Business Case in order to inform the redesign of an implementation framework for the next stages of ECM implementation."

In line with the background rationale concisely set out above, the primary purpose reflected in the ToR relates directly to informing improvements in how ECM is designed and implemented in the Western Cape Government (WCG). The report is therefore structured and set out in a manner to provide an assessment: whether the existing ECM solution is appropriate for the WCG; whether the existing ECM solution is adequately resourced; and whether it is being effectively utilised. Answering these questions are considered critical to making a set of recommendations intended to guide improvements going forward.

1.3 Structure of the report

The report is structured into six sections intended to support the reader's understanding of the ECM solution as an intervention before assessing it and making recommendations for improvement. The report therefore is therefore set out in the following structure, as agreed with the project steering committee:

Section 1 provides a concise introduction, background and purpose for the evaluation before explaining how the report is structured.

Section 2 provides an introduction to literature on ECM and related interventions, before looking at some international comparative examples. The conceptual overview and international benchmarking then inform a brief description of ECM in the WCG, before presenting the previously implicit programme theory used to inform data collection and assessment.

Section 3 concisely sets out the evaluation design and analytical framework before providing a methodological overview of the evaluation. It describes the data collection methods used in the review and data collection phases before briefly reflecting on the challenges and limitations encountered.

Section 4 of the report presents the findings and analysis of the evaluation before arriving at synthesized answer to each of the three over-arching evaluation questions and their corresponding assessment criteria. Each of these sub-sections addresses a Key Evaluation Question (KEQ) and each of the agreed sub-questions set out in the ToR.

Section 5 provides a set of conclusions for the evaluation derived from the evidence presented and analysed in the preceding section of the report. The conclusions directly inform the recommendations for improvement.

Section 6 provides a set of recommendations based on the findings and conclusions. This section specifically responds to the final KEQ and the corresponding sub-questions as originally set out in the ToR to provide guidance on how ECM can be improved going forward.

The remainder of the report provides the references, appendices with additional accounts of documents and individuals consulted, analysis and descriptions of the evaluation process followed.

2 Literature and document review

The literature and documentary review section provides a general conceptual and theoretical introduction to ECM before looking at its application in a few key contexts. International benchmarking is then used to inform a comparative analysis of ECM in the WCG before clarifying the ECM programme theory.

2.1 What is Enterprise Content Management?

2.1.1 Overview

ECM is a term used to describe the process of managing information ("content") within an organization. The Association for Information and Image Management (AIIM) defines the ECM as a process that "captures, manages, stores, preserves and delivers information"; the definition further expands to emphasize that ECM systematically collects information and that it should not be limited to a single technology or method but instead it is a combination of various tools and methods (AIIM, n.d.).

While the AIIM definition is a useful one, there is no consensus on a standard definition of ECM amongst academics and industry experts. This is mainly because ECM has responded to, and evolved with, technological and business needs. Other definitions place the emphasis on the particular value offering of ECM. Smith and McKeen (2003) and Cameron (2011), for instance, emphasize ECM's role in managing the information over its lifecycle. Cameron (2011) particularly highlights that ECM seeks to manage information in a "consistent and re-usable" manner (Cameron, 2011). The American information technology company, Gartner, and Kampffmeyer (2009) similarly recognizes ECM as a process that captures, stores and distributes information, but they emphasize ECM's role in managing what is referred to as "unstructured content". ECM allows the organisation to analyse unstructured content and to distribute the appropriate content to the correct user when they need it.

Despite the nuanced perspectives on how to define ECM, the different definitions of ECM highlight key elements which lie at the core of what content management is. ECM is primarily a process that creates or captures, stores, preserves and delivers information. ECM is generally viewed as a coherent approach aimed at managing information from its creation through its archival and eventually to its disposal. Further, there is a general view that it does not suffice to merely "manage" content but instead, content should be managed to support an organisation in achieving its objectives (Intergraph, 2007).

Value offering

The most commonly referred benefit of implementing ECM is cost-saving inclusive of time, energy and materials. Cost-saving is a top priority for most organisations, and ECM's ability to manage information by electronically analyzing and storing relevant content purportedly reduces costs (instead of doing so manually) and serves as the primary incentive for implementing ECM

(Kampffmeyer, 2009). ECM also enables organisations to access and distribute relevant content to users (Mancini, 2010). This in turn improves operational efficiencies and productivity by reducing the loss of documents and decreasing duplication.

Standardisation is another key value that is derived from the implementation of ECM. Access to the right information at the right time assists organisations in ensuring that they fulfil the legal and regulatory requirements for operating their institution in a consistent, reliable and set manner (Kampffmeyer, 2009).

ECM in the public sector

The implementation of ECM in the public sector is distinctly different from ECM in the private sector. Rich Medina (2016) highlights three key differences that impact the implementation of ECM within the public sector, particularly the implementation within government organisations. The first difference is the larger number of stakeholders in government organisations which often requires greater transparency and accountability. Medina states that this means that information has to be archived and readily accessible. The problem that this poses for ECM is that government organisations tend to broadly and ambiguously define what a record is: "almost *everything* is a record" (Medina, 2016). Failure to organize and categorize different types of records often results in inappropriate prioritization of information management (Medina, 2016).

Secondly, government organisations bear the responsibility of complying with legislative prescripts and containing costs while serving their constituents. This, coupled with the scale and barriers to bureaucratic reform within their enterprises, may lead them to implement ECM more slowly than private sector organisations that are incentivized to innovate without concern for the same legal prescripts and public interest provisions. The lack of a profit motive may also render public sector organisations slower to constrain implementation efforts if they are proving ineffective (Medina, 2016). Thirdly, Medina notes that government organisations tend to have tighter budgets which thus increases the margin for error in implementing ECM (Medina, 2016). Budget constraints are prone to delay and prolong the implementation of ECM projects.

2.1.2 Typical ECM design

From the literature reviewed it is clear there are common elements of ECM which find expression across contexts and ECM-related interventions. The following sets out some of those commonalities or regular features of ECM design across environments.

ECM process and lifecycle

The key steps in the ECM process, or lifecycle, has been conceptualised by various industry experts and academics in various ways.

Some experts and scholars describe the process as a three-step process, whereas others conceptualise the ECM lifecycle as a four or five stage cycle, as shown in Figure 1 and Figure 2. The various conceptualisations of the ECM

lifecycle however have three common elements, namely capturing, managing/organising and storing.

Figure 1. Four stage cycle

Source: (Kampffmeyer, 2009)

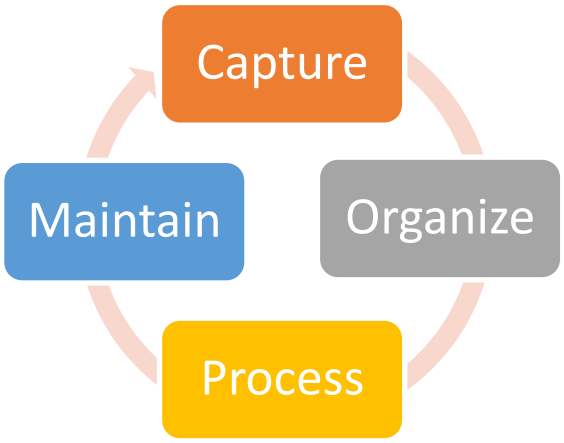


Figure 2. Five component cycle

Source: (Smith & McKeen, 2003)

Capturing is used to refer to all the activities within the ECM process that are dedicated to collecting content (Smith & McKeen, 2003). Capturing content involves collecting different forms of information ranging from paper and electronic documents, emails, and multimedia content (Kampffmeyer, 2009). The second stage, organising, describes the exercise of providing access to the content through categorising and linking content (Smith & McKeen, 2003). The process involves analysing the content that has been collected. Lastly, maintaining or storing is all the activities taken to preserve the content (Smith & McKeen, 2003).

2.2 International benchmarking comparison

This section aims to provide an international context against which to understand and benchmark the South African and Western Cape experience of ECM. While a general overview of electronic records in Africa is provided with additional references to various countries, there is a particular focus on Botswana (as a fellow middle-income Southern African country) and Canada (as a fellow Commonwealth country with multiple spheres of government, and a commonly studied ECM case study).

2.2.1 Africa: Overview

In the African context ECM is most commonly found in relation to the archival function of governments and public institutions. Official administrative records from both the colonial and democratic periods include official documentation around which archival institutions have been built, and tend to be the entry point for literature and related research within with the African context. African archival institutions can be placed on a spectrum, where on the one end there are countries that lack basic archival services, and on the other end are a group of countries with advanced archival services that compare to archival services in developed countries (Mazikana, 1997). Going

beyond archiving, some Southern African countries including South Africa have benefited from adopting electronic solutions in record management (Keakopa, 2006), but in many African countries, "records managers are yet to capture the basics of electronic record management" (Asogwa, 2012) .

Katuu (1999) however notes that there are common features in the history and development of these institutions; as a result these institutions tend to face similar problems and challenges. The first is the lack of skills. Not many African universities offer courses on archives and records management, and those that do (including only three in South Africa in 2014) do not fully embrace the digital side of these fields (Katuu & Ngoepe, 2015).

Secondly, these institutions face austerity measures due to limited financial resources, and already by the late 1990s, the increasing amount of documents that needed to be managed were placing pressure on African governments' resources for managing them (Mazikana, 1997). Katuu attributes these challenges to the burden carried by national governments as central institutions that manage and archive the nation's memory. The result of this has been the slow progression of electronically managing documents and the inability to adequately manage electronic records in cases where it is implemented (Katuu, 1999). In an area of rapid evolution of technology, once can anticipate that once implemented, these solutions can also become outdated because of resource constraints.

2.2.2 Botswana

Botswana, like other countries in Africa, lag behind South Africa in the extent of implementing content management technology. Nevertheless, the Botswana experience provides interesting differences and similarities with South Africa's ECM, which are an important juxtaposition to Canada's more advanced systems (described below).

The passing of the National Archives Act in Botswana in 1978 promoted the establishment of this national archive service which is tasked with preserving and storing public archives (*National Archives Act*, 1978). The country currently has one archival service which is administered by the Botswana National Archives and Records Services (BNARS) (Ngoepe & Keakopa, 2009). The reason for having only a centralised archive service, Keakopa argues, is the size of the country (Ngoepe & Keakopa, 2009). Indeed, while Botswana is vaster in terms of land area, the Western Cape province has more than double the population of Botswana[1]. In terms of population, Botswana as a country, with its regions, is thus more comparable to the Western Cape with its districts.

BNARS is primarily responsible for archiving and managing records throughout their lifecycle from their creation to their disposal (Keakopa, 2006). To fulfil this responsibility Record Management Units (RMUs) have

[1] According to the 2011 Census, the Western Cape had 5.8 million inhabitants (Statistics South Africa, 2011). Botswana's population was estimated at 2.1 million in the same year (World Bank, 2017).

been incorporated into BNARS as active role players in recordkeeping practices (Keakopa, 2006). The incorporation of RMUs was important as these units previously served as traditional registries in ministries and departments ranging from Finance to Housing and Water Affairs (Ngoepe & Keakopa, 2009). Based on the available sources, it appears that they were incorporated in the 1990s.

The scope of BNARS responsibility further includes providing technical support to its staff, a function which was previously administered by a Senior Systems Analyst and was later provided by the Department of Information Technology before being transferred to BNARS (Keakopa, 2006). The country is served by two record centres located in the capital Gaborone, and Francistown (Ngoepe & Keakopa, 2009). Government agencies transfer their records to the two centres which then provide advice on how the departments and ministries can classify their systems and retrieve records (Ngoepe & Keakopa, 2009).

Similar to the South African case, BNARS is located within the Ministry of Youth, Sports and Culture (Ngoepe & Keakopa, 2009). Scholars argue that the location disadvantages the institution by highlighting that not only does it hide the institution's identity as a repository of institutional and national memory but it further compromises its functions and role in managing public archives by diluting it with other functions that are rarely treated as a high prioirty (Katuu, 2015; Ngoepe & Keakopa, 2009). Scholars have advanced an argument that the function should rather be positioned at the centre of government, in the Office of the President, where it will receive more attention and likely more adequate funding, or alternatively in the Ministry of Communications, Science and Technology, given that it is an information-intensive function and does not relate to "cultural artefacts" (as one may assume given its current positioning) (Ngoepe & Keakopa, 2009). In addition, BNARS's challenges in adequately collecting and preserving electronic records are similar to challenges faced by other national archive institutions in Africa, including limited budgets, inadequate staffing and poor infrastructure to ingest electronic records (Ngoepe & Keakopa, 2009). As a result, take-up is limited. A survey conducted by Keakopa as part of the scholar's thesis which provides a comparative analysis of the electronic record management in Botswana, Namibia and South Africa reveals that BNARS was not "felt" in some departments (Keakopa, 2006).

The study further highlights a lack of staff and qualifications required for BNARS to meet the needs of government agencies. While some training had been provided to records officers to manage paper records, the training was inadequate in the management of electronic records (Keakopa, 2006). The key observation drawn from the study is that despite Botswana's significant strides in national archiving and recordkeeping, RMUs were not being provided with the necessary support to manage electronic records.

Nugi Nkwe provides a more current overview of Botswana's e-government status. The scholar describes the challenges facing e-government in Botswana. They include weak IT infrastructure, the lack of skilled personnel, limited management support, problems with collaboration, resistance to change to e-systems and financial constraints. Despite these challenges, the

country has made some progress in introducing electronic document management in various ministries (Nkwe, 2012). Recently, an "e-records management solution", described as an EDRMS intervention, has recently been piloted transversally. Its goal was to computerise all government records (Moatlhodi, 2016). This suggests that the country is at phase two of the three-phase ECM evolution described by Katuu (2012a).

2.2.3 Canada

Canada's record management dates back to the 1800s, when the responsibility of gathering historical records both from the public and private sector fell to the government (Fox, 2008). In 1872, an Archive Branch was established by Cabinet within the Department of Agriculture, which at the time was responsible for arts and statistics (Atherton, 1979). The Branch was tasked with the responsibility of the collecting and copying historical records (Fox, 2008). However, the creation of this Archive Branch contradicted the Records Branch located within the Department of the Secretary of State which was responsible for "keeping all state records" (Fox, 2008). Atherton notes that the Department of the Secretary State saw the creation of the branch as a "threat to their mandate" (Atherton, 1979). Ultimately in 1912, a separate Archives department was created under the Secretary of State.

In 1987, the National Archives of Canada was formed. By this time the records management function had expanded and matured considerably. The archives housed a growing volume of microfilm as well as paper (Fox, 2008). The 1990s saw government records increasingly produced electronically, and in the late 1990s and early 2000s, the Canadian government launched several ICT initiatives. These included e-Government (1999) to digitise government's administration and manage internet in the public administration; and Common Look and Feel (2000), which focused on increasing online accessibility and standardising government's internet presence (Jordan & De Stricker, 2013).

A key initiative, Government Online (GOL), was launched in 1999. This project sought to incorporate 130 major federal services into the electronic environment. The Treasury Board Secretariat (TBS) Information Management sub-committee (TIMS) led the initiative, and the project ended seven years later, in 2006 (Jordan & De Stricker, 2013). In 2011, under a shared services initiative, government's IT services, networks and data centres were consolidated (Jordan & De Stricker, 2013).

These initiatives brought records management, archives (since 2004 implemented by Library and Archives Canada) and various other functions closer together. These functions are collectively referred to as Information Management (IM) because they extend the enterprise management practice to finding solutions for the optimal use of all information. According to a 2012 study, Canada's IM service categories include (Jordan & De Stricker, 2013):

- Records and Document Management
- Data Management
- Web Content Management

- Archival
- Business Intelligence and Decision Support
- Strategic Planning, Policy and Awareness
- Library
- Information Architecture
- Training and Awareness
- Strategic Alignment, Integration and Evaluation

This list suggests that Canada's IM somewhat resembles what the Western Cape Government refers to as ECM, noting the strategic thinking that DCAS has put forth of advancing from ECM to the goal of achieving Enterprise Information Management (EIM) more generally. Several public sector institutions play important roles in performing the above functions. The main IM stakeholders within the Canadian public sector, and their roles, are listed in Table 1.

Table 1. Role players in IM

Institution	Role
Treasury Board Secretariat	Plays a lead role in IM policy formulation and setting standards and guidelines to assist departments in implementing IM policies (Treasury Board of Canada Secretariat, 2012).
Library and Archives of Canada (LAC)	Heads the recordkeeping through the provision of direction and assistance on recordkeeping and by collecting, preserving and ensuring access to the documentary heritage of Canada (Treasury Board of Canada Secretariat, 2012).
Public Works and Government Services Canada (PWGSC)	Provides IT solutions throughout the government for document management, web-content management, collaboration and enterprise search management.
Statistics Canada	Collaborates and provides statistical assistance to departments, this is to avoid the duplication of statistical collection (Treasury Board of Canada Secretariat, 2012).
Departments	Facilitates accountability, transparency and collaboration (Jordan & De Stricker, 2013).

The biggest challenge identified with the implementation of IM is "organisational fracturing of IM" (Brown, 2011, quoted in Jordan & De Stricker, 2013): that most IM services are carried out in various departments and not in designated central agencies (Jordan & De Stricker, 2013). The TBS's annual report noted a "fragmented and poorly defined IM community". Some stakeholders describe silo mentalities between what is considered IT (information technology) as opposed to IM, and say that this impedes their

ability to find and use information. The government has also experienced challenges relating to privacy and security (Jordan & De Stricker, 2013).

Additionally, Jordan and De Stricker highlight the lack of trust and sharing as an organisational challenge within Canada's IM service. The authors cite Davenport who lists user behaviour, an organisation's culture, and politics (which the author collectively refers to as information behaviour) as key factors in the success of an organisation's information ecology (Davenport, 1997, quoted in Jordan & De Stricker, 2013). Cromity and de Stricker further note that the "challenges in knowledge sharing are not caused by technologies or tools, instead the challenges arise from the culture within the organisation" (Cromity and de Stricker, 2011, quoted in Jordan & De Stricker, 2013). The lack of a culture of sharing information is therefore identified as a critical limiting factor in Canada's IM service, with a change in mindset needed from "need to know" to "responsibility to provide" (Jordan & De Stricker, 2013).

2.3 South African experience with ECM

Katuu notes that South Africa is the country that has achieved the most progress with implementing ECM in the African continent (Katuu, 2012a). However, despite this, there is limited research available on the experience of ECM in South Africa.

Historical Background

South Africa has a long history with archiving and record management that dates back to the Dutch East Indian Company (1652-1795) (Ngoepe & Keakopa, 2009). However, it was only under British colonial rule in 1876 when an investigation into how the government manages its documents was undertaken by an ad hoc commission (Ngoepe & Keakopa, 2009). And it was only in 1910, after the Union of South Africa was established, that one consolidated national archive service was created within what was then referred to as the Department of Interior (Ngoepe & Keakopa, 2009). This was followed by the passing of the Public Archives Act in 1922.

The Second World War brought further changes within the government. There was an expansion of government institutions which consequently increased the amount of records that were being created and thus an increased need to facilitate this expansion by managing and disposing documents (Ngoepe & Keakopa, 2009). As a result, this expanded the scope of the National Archives, a Liaison section was created in the office of the Chief Archivist to manage the work and evidently in 1960, the national archiving service was moved to the Culture portfolio (Ngoepe & Keakopa, 2009). The section increasingly played an advisory, guidance and supporting role in record management, particularly in the naming convention of files within the government (Ngoepe & Keakopa, 2009). In 2010, this led to the renaming of the section to what is currently today known as the Records Management Section (Ngoepe & Keakopa, 2009).

ECM implementation in South Africa

By 2012, South Africa already had years' worth of experience with some of ECM's common components including imaging, records management and document management (Katuu, 2012a). Despite this progress, research on the institutional experience of ECM implementation and applications across the country is scarce, but some valuable primary research by Shadrack Katuu (2012) is available and forms the basis of this section.

In a 2012 article, Katuu (Katuu, 2012a) reports on a survey that had been conducted among public institutions in South Africa. A non-representative, snowball sample of ten institutions were surveyed, including three State Owned Entities (SOEs), ministries from all three spheres of government and a charitable organisation (Katuu, 2012a).

The survey yielded three key findings. Firstly, it confirmed that ECM is not a brand new idea in South African public institutions: of the ten surveyed institutions, six entities had implemented their ECM applications for a period of one to five years while the remaining four institutions had more than five years' experience with their ECM application (Katuu, 2012a). The scholar however cautions against assuming that the number of years of experience with ECM implementation is a reflection of the quality of implementation (Katuu, 2012a).

The second key finding is that the majority of these institutions have moved beyond the three common ECM components namely imaging, document management and record management (Katuu, 2012a). All ten surveyed institutions had implemented the three common components and in addition, half of the institutions incorporated Workflow or Business Process Management (BPM) into their ECM (Katuu, 2012a).

The third finding is that only one institution incorporated Collaboration, Knowledge Management and Digital Asset Management into their ECM system (Katuu, 2012a). Collaboration was the most frequently used component of the six ECM modules within that institution (Katuu, 2012a). Katuu (2012b) argues that research into the number of ECM components utilised by these institutions does not suffice to gain comprehensive insight into South Africa's ECM experience. Instead, the paper suggests that further research into the level of utilisation for each component is required to provide a fair representation of the complete picture (Katuu, 2012a).

2.4 Comparative insights and key lessons

With the introduction of MyContent, the WCG has entered the third and current phase in the evolution of ECM. South Africa stands out among African countries when it comes to its use of ECM, and the Western Cape is no doubt among the most advanced South African provinces in this regard. In terms of Katuu's (2012b) conceptualisation of phases, Botswana has not yet introduced solutions beyond records management and is thus in the first or second phase. The Canadian (national) government appears to be further advanced in integrating the different components of what they refer to as "IM". Still the WCG experience bears instructive similarities both to its African neighbours and the better-resourced Canada.

ECM positioning is a function of history as well as strategy. Historically, Canada grappled with where to position the archives function – does it belong with arts and statistics, or strategically in the department reporting directly to the head of the administration? Canada initially chose the latter. Much later in the 20th century, archives became a standalone department, and was later linked with libraries. Then, with the adoption of electronic solutions, the archives, records management and various other functions came closer together as they became subsumed under the concept of "information management" and these systems and processes became more integrated. The Treasury Board Secretariat is described as the main policymaking entity, and the department for IT also now plays a major role. This means that key departments' roles are interdependent in crucial ways.

Botswana, similar to the WCG, has its National Archives and Records Service in the Ministry of Youth, Sports and Culture. Again, critics argue that it would be better to position it more centrally (e.g. in the office of the president), or in a department less associated with cultural "artefacts" and more with supporting government's business processes. Thus, stakeholders in both Botswana and Canada have expressed the need to position these functions in a department with some transversal linkage across government departments, instead of a very narrow focus. In Botswana, not just BNARS but also the responsibility for providing records management technical support has shifted between departments before becoming the responsibility of the BNARS itself.

The value as well as the challenge of ECM is that it encompasses such a range of functions. The WCG experience mirrors the Canadian and Botswana experience in that multiple departments must take up different responsibilities with regard to ECM. While there are obvious gains to integrated ECM systems and processes, it creates the need for continued clarification and coordination among role players. Canada continues to grapple with a "fragmented and poorly defined IM community". The WCG ECM experience has seen a proliferation of institutional structures discussed in the findings.

There is a need to bridge traditional archives and ECM. The African literature emphasised how skills shortages hamper African governments' ability to digitise. While ECM has emerged to an extent from the archives and records functions and has a clear link to them, ECM requires more advanced ICT skills. In Botswana's case therefore, the RMUs are insufficiently capacitated to support electronic records management. Even in South Africa, by 2014 none of the three university courses on archives and records management comprehensively covered digital records. At the same time, ECM systems are administered by ICT professionals who may have limited exposure to archivists' expertise. This means that the skill set needed for ECM is not currently supplied by the South African education system and instead requires a convergence of distinct professional training and experience.

The cost and possibility of ECM. Austerity measures, both in the WCG and on the continent, are cited as key constraints to tapping into the full potential of ECM. In Botswana, part of the argument for positioning ECM in the

presidency was linked to the potential for greater attention and funding. In the WCG, the location of the archives function meant that DCAS was the natural home for the introduction of ECM. However, this was with an expectation that undertaking an intervention to establish ECM transversally would result in a commensurate allocation of resources to support the institutionalisation of DCAS as the coordinating department with responsibilities for this strategic function.

Institutional change is a prerequisite for effective use of ECM. Beyond the funding to implement ECM systems, effort is required to ensure the solutions it offers are actually taken up and used, or "felt", as intended. The Canadian example highlighted the importance of a cultural shift that needs to accompany the introduction of ECM technology in order to ensure effective sharing of knowledge. Change navigation was also planned for in the WCG case.

Distinguishing between transversal and departmental benefits. With responsibility for ECM typically being dispersed across the administration, and recognition that adopting it requires substantial investment and new skill sets, comes the question of which entities stand to benefit in what ways from ECM. In the WCG experience, before 2009, several departments took it upon themselves to fund and develop ECM solutions that were customised to their needs. In fact, these organic and customised "solutions" appeared to have been very much owned within their respective contexts and instructive in how to approach ECM across the WCG.

2.5 A theory of change for ECM

A theory of change (TOC) was developed for ECM in the WCG to inform data collection and analysis. It expresses what ECM sought to achieve – the intent behind ECM – based on the Registry / E-Filing Blueprint, the Business Case, other documents shared with the team, and the introductory interviews conducted in the Review Phase of the evaluation (see

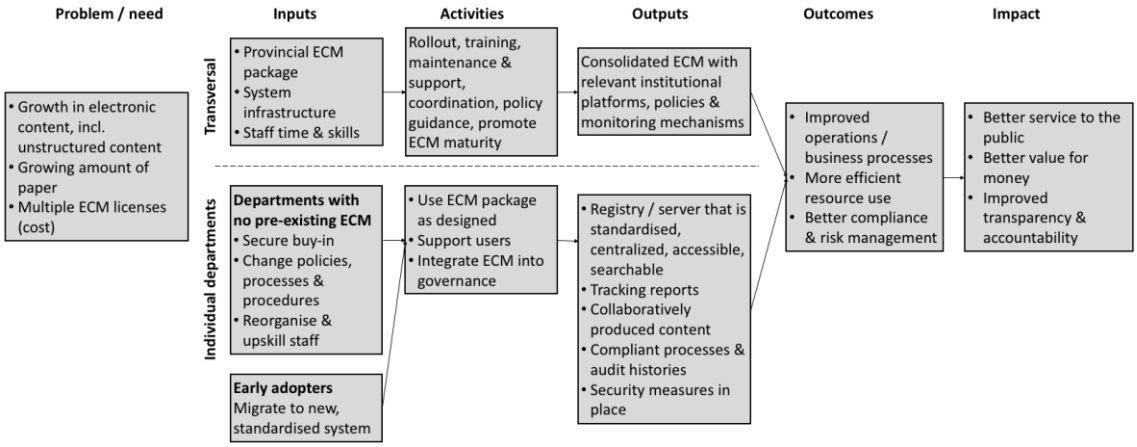
Methodology section 3 for more details).

The TOC can be presented as a series of diagrams. These diagrams are provided on the pages that follow. This is followed by a narrative explanation of the diagram.

2.5.1 Diagrammatic representation

Figure 3 below is a summary of the TOC. As it shows, the introduction of ECM is perceived as operating on two levels / strands – the transversal level and that of the individual departments. Ultimately, WCG as a whole was affected by the problems/need affecting content management around 2010, and WCG as a whole is intended to benefit from the effects (outcomes and impacts) of introducing a consolidated ECM solution.

Figure 3. Theory of change summary



The next page provides a detailed version of the TOC. Because of the level of detail it may be hard to read, therefore it is followed by separate diagrams each showing one of the two strands.

Figure 4. Detailed Theory of Change

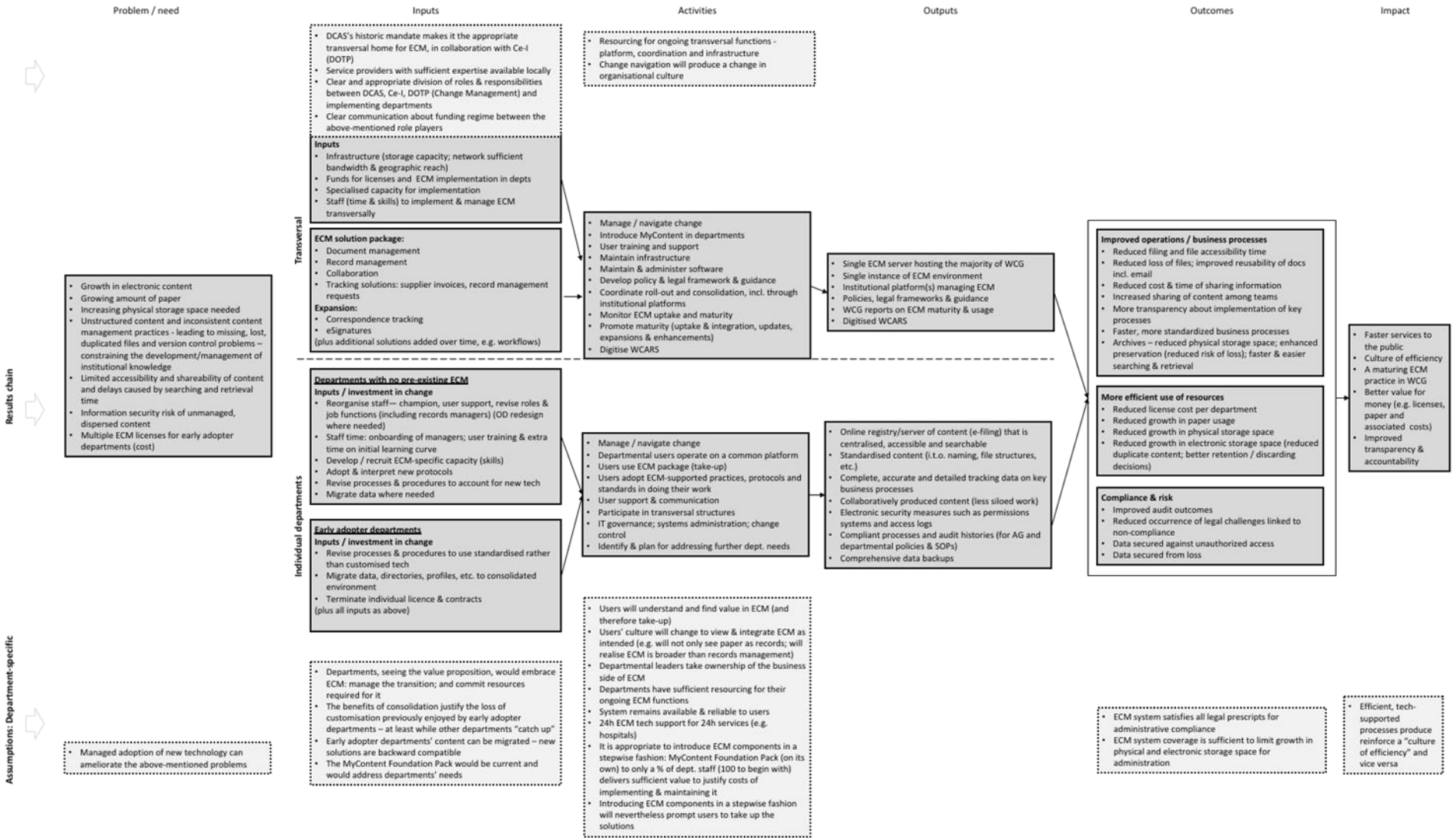


Figure 5. Theory of Change: Transversal strand

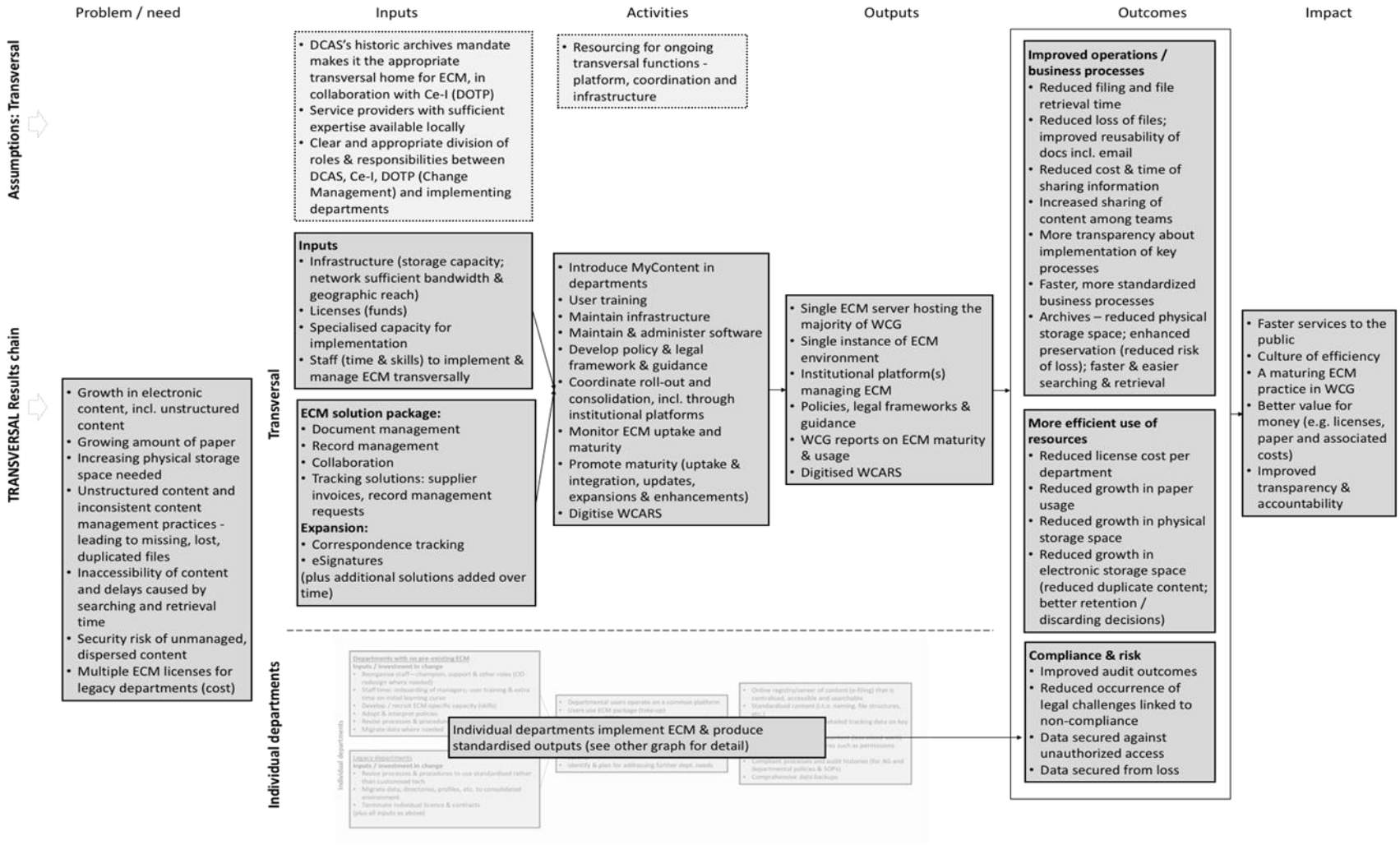
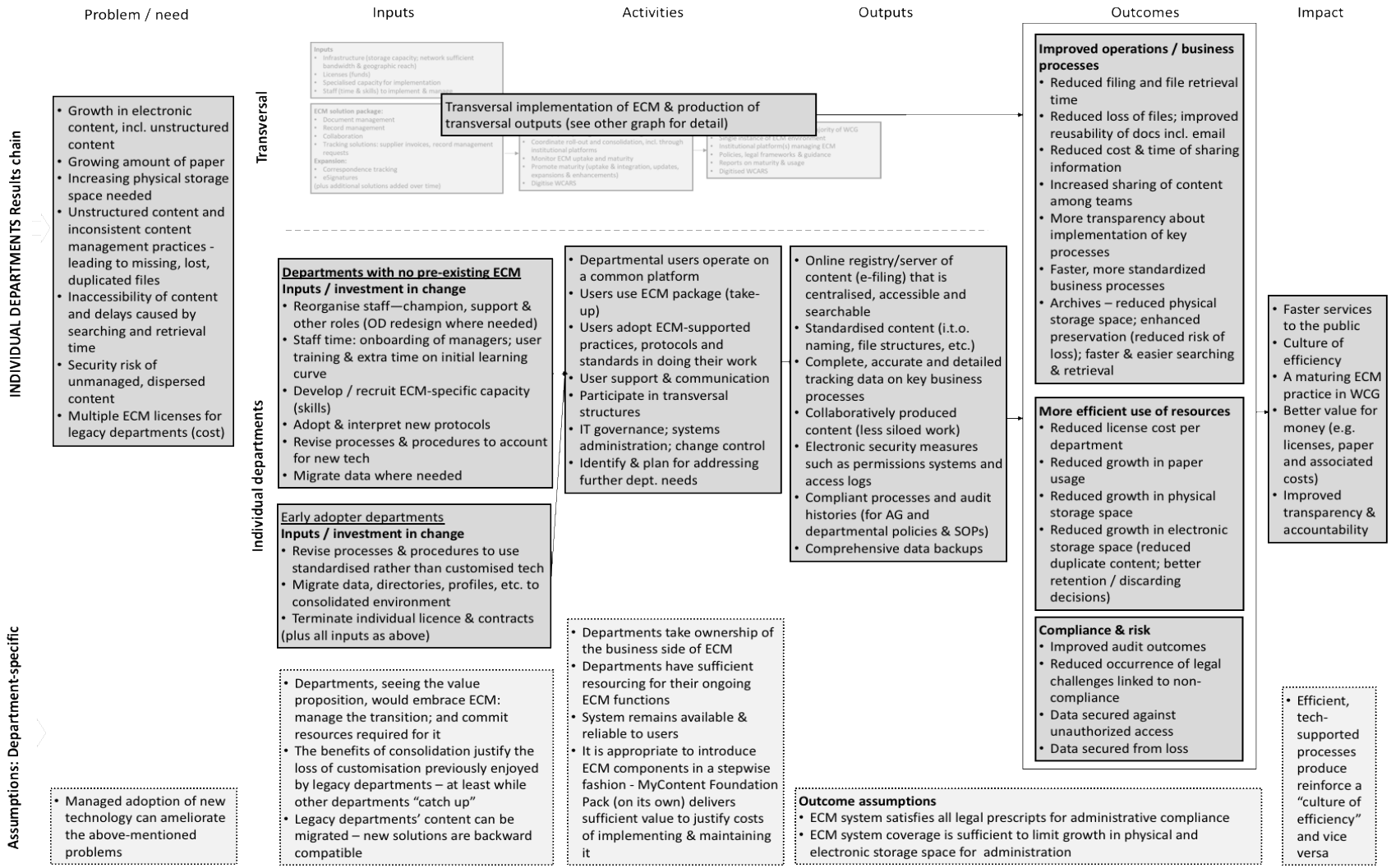


Figure 6. Theory of Change: Individual departments strand



2.5.2 Narrative description

Layout. The theory of change (TOC) diagram presented above is a "results chain" model. It shows the logical flow from inputs, to activities, to outputs, and so on – without adding individual boxes and arrows to show in detail how every individual element relates to the others.

The TOC has two "strands" – a transversal one and a department-specific one. Following Mayne (2015), in multifaceted interventions such as this it can be useful to have "nested" TOCs. These TOCs show how the intervention is expected to operate not just on one level but multiple levels.

The TOC thus commences (on the left) with a shared problem statement. Then, it splits into transversal and department-specific strands. The transversal strand applies across the Western Cape Government implementing ECM – notably the responsibilities of Ce-I (DOTP) and DCAS – in resourcing, implementing and managing ECM. It also shows the outputs that are co-produced transverally by ECM. The department-specific strand shows what ECM implementation means for an individual department. It shows the inputs and activities that each department is intended to undertake; and the outputs this is anticipated to yield. At the input level, it distinguishes further between the inputs required of "legacy" departments and the inputs required of departments with no pre-existing ECM footprint.

At the outcome level, the two strands join back up as the outcomes are intended to be of shared benefit to the individual departments as well as to the WCG as a whole / transversally. The outcomes and impacts relate back to shared problems the WCG was experiencing initially.

The TOC also features assumptions (split into transversal and department-specific).

Problems

The problems that ECM is intended to address, are listed on the left. The basic driver of the challenge was that government was producing a growing amount of content, especially digital content. Traditional ways of managing paper-based content therefore became insufficient. The resulting problems listed in the TOC are mostly inefficiencies and inconsistencies in the way government was conducting its work; and the resulting drain on the public purse, the reduced effectiveness of government's work, and increased risks associated with data loss or leaking.

The key assumption in the problem statement was that the managed adoption of an ECM solution enabled by new technology could address these problems. In other words, there was awareness of an opportunity presented by the evolution of ECM solutions. (If this were not the case, the increasing physical storage space needed (for instance) would have been seen as a necessary reality rather than a problem that could be solved.) It is worth noting that the legacy departments contributed to the awareness of this opportunity, by showing the benefits it could hold.

Inputs

To introduce ECM and then continue to operate it, a range of inputs were required. Transversally, material resources (ICT infrastructure; funds for

licenses, etc.) and human resources were required. The ECM package itself also needed to be designed and procured.

The reader will notice that the "inputs" for the individual departments blur to an extent with their "activities". Indeed, the departments' inputs have been labelled "inputs / investments in change". This has been done in order to show the chronogical progression from preparing for and transitioning to a single ECM solution, to operating it on an ongoing basis.

Departments with no pre-existing ECM footprint were required to commit staff time and to rearrange and revise their resources and processes. Legacy departments also needed to do so, but for them the adjustment was from an existing ECM solution to another. Notably, it was not anticipated that departments would need to commit particular financial resources. (After some negotiation, it was apparently decided that ECM-related funds would be secured transversally.)

The assumptions here place an emphasis on the perceived value of the transversal ECM solution. Because departments needed to commit resources and energy to transitioning to ECM, the theory relies on their buy-in to do so. If they did not do so, the transition may be unnecessarily disruptive, ECM may only be partly adopted, and ultimately yield less benefit.

Another assumption is that ECM consolidation of the legacy departments would be worthwhile. The emphasis here was more on the transversal benefits of consolidation (e.g. saving on licence costs; having uniformity across departments), while it was acknowledged that legacy departments would lose some of the agency and pre-existing customisation that had benefited them.

Activities

Once the inputs have been secured, the first transversal task is to get ECM up and running in the departments. Once the ECM package is in place, the transversal role shifts to change navigation and training. Ensuring an appropriate policy & legal framework and guidance around this, and maintaining the hardware and software required for it is also a key activity. A key set of activities are around ongoing monitoring of ECM uptake and utilisation, and promoting the continued growth in maturity. Digitising the WCARS would also enable certain kinds of content to be managed digitally throughout its life cycle. It is assumed that resourcing is available for these ongoing transversal functions (i.e. it is assumed that resourcing is not merely made available for a once-off transition to ECM).

In individual departments, three roles are discernible when it comes to ongoing ECM activities (see the stakeholder map). Firstly, staff become "ECM users / adopters". It is important that they change their practices – using ECM as fully as possible and adopting the necessary changes in protocols and standards. Managers are key "ECM implementers" and their direction largely determines the extent to which staff will embrace ECM.

For some departmental staff, the ongoing implementation of ECM also means supporting and communicating with ECM users, participating in transversal systems, incorporating ECM into ICT strategic functions, and identifying

further departmental needs. Staff who play these roles are described as "ECM strategists / supports".

The departmental activities are based on certain assumptions. For departmental role players to implement the above activities, it is assumed that they will take ownership of the business side of ECM, so that ECM implementers and users/adopters devote the necessary attention and energy to changing their practices and overcoming challenges. Departments would also need to make resources available, particularly the time and expertise of "ECM strategists / supports" for their ongoing ECM functions.

There is also the assumption that the MyContent Foundation Pack may be introduced (on its own) with further modules added in a stepwise fashion. If it does not seem sufficiently valuable on its own, departments' buy-in may suffer.

Outputs

At the transversal level, key outputs include a single ECM server hosting the WCG and single ECM environment. Ongoing transversal ECM activities also produce outputs to coordinate, promote, and monitor ECM and to provide policy and legal guidance.

Individual departments are expected to gain standardised, centralised content (as opposed to the disparate, inconsistent content they had before). Through the use of tracking solutions, they would gain complete, accurate and detailed tracking data on key business processes. Through document management, record management and tracking solutions it would also become easier to consistently produce compliant processes and audit histories. The use of collaboration tools would lead to more collaboratively produced content. There is also an expectation that, through the consolidation of all work on a central system, it would be possible to produce electronic security measures such permissions systems and access logs (where dispersed content on distinct systems made it hard to manage permissions and access). The centralised system would also allow for comprehensive data backups.

Many of the departmental outputs may have been in place before the introduction of ECM, but would have been more cumbersome or labour-intensive to produce. For instance, a team that works in different physical locations could work collaboratively by frequently communicating or physically meeting, but at a cost in terms of time and resources. However, they are more likely to do so if the MyContent collaboration tools make it quicker and easy to do virtually. In this way ECM reduces the opportunity cost of producing these beneficial outputs.

Outcomes

The above mentioned outputs are expected to produce many valuable outcomes. These benefits accrue to government as a whole (albeit to different role players to greater and lesser extent) and therefore the distinction between transversal / department-specific elements falls away at this level.

The TOC organises them into three clusters. The first is improved operations / business processes. These outcomes have a direct bearing on the quality,

speed, consistency, or accessibility of work. There is a fairly clear relationship between these outcomes and the outputs, so they will not be discussed here individually.

The second cluster of outcomes is around the more efficient use of resources. As mentioned above, it may have been possible for government to achieve many of the improved operations / business processes above without ECM, but at greater cost. (For instance, a highly efficient, rigorous paper filing system may have enabled rapid filing and file retrieval times, but most likely with substantial ongoing staff time going into designing, maintaining and complying with the system.) This is where the ability to save resources while improving operations / business processes is a key benefit. Many of the outcomes in this cluster include the phrase "reduced growth in" because ECM may not reduce resource use so much as slow the need for resources to deal with the growing amount of content being produced.

The final cluster of outcomes are related to compliance and risk. The standardisation of outputs, and the availability to easily track key processes, enables government to better comply with processes and manage areas of non-compliance where they arise. As a result, government's work should be more consistently compliant and easier to audit – however, this is based on the assumption that the ECM system itself is compliant with legal prescripts for administrative compliance. The electronic security measures and backups would also result in better data security.

Impacts

The impacts are the less tangible but highly valuable characteristics that are envisioned for a WCG that has fully embraced ECM. Because of the efficiency gains, a faster service to constituents is anticipated. The availability of time- and resource-saving technology is expected to contribute to a culture that values efficiency.

Another intended impact is a maturing ECM practice in WCG – spurred on by transversal efforts to promote maturity, and by departments' ongoing interest in enhancing their ECM-related practices. Through the more efficient use of resources and reduced legal challenges linked to non-compliance, state funds may be put to better use. Finally, through the contribution of improved accessibility of content and information, government is expected to become more transparent and accountable.

3 Methodology

A brief overview of the evaluation design, analytical framework, methodology and limitations is provided.

3.1 Evaluation design and analytical framework

As outlined in the ToR this assignment is primarily an implementation evaluation that seeks to assess the implementation of the ECM solution against the intentions set out in the Registry/e-Filing Blueprint and Business Case. Developing the previously implicit Theory of Change as part of the review phase (clarificatory evaluation/design component) was necessary to understanding how the ECM solution was intended to be implemented. On the basis of this two part evaluative exercise, the analytical framework was then informed by the Key Evaluation Questions (KEQs) and sub-questions set out in the ToR, aligned to a set of overarching evaluative criteria.

The KEQs are structured and informed by the OECD-DAC criteria (OECD, 1992) of relevance and appropriateness, efficiency, and effectiveness. The table below presents the questions as aligned in terms of a structure of findings. These are also expressed in an evaluation matrix derived from the ToR which sets out the evaluation sub-questions spread across the four KEQs. KEQ4 is covered entirely by the conclusions following the conclusion of the report. The matrix linking the evaluation questions and research findings, as well as a logical framework setting out the various indicators for results are also provided as an appendix.

Table 2: KEQs aligned to OECD-DAC Criteria

OECD-DAC Criteria	***Key Evaluation Questions***
Relevance & Appropriateness	KEQ1. Is the existing ECM solution appropriate considering WCG's requirements?
Efficiency	KEQ2. Is the existing ECM solution adequately resourced?
Effectiveness	KEQ3. Is the ECM solution effectively utilised?

Cross-cutting the above criteria and evaluation questions is the conceptual framing of the Theory of Change. Thus, findings in relation to this implementation story find expression across and intersect with multiple sub-questions.

3.2 Data collection methods

The majority of all primary data was collected during the data collection phase running from 14 May 2018 to 15 June 2018, while some data was also obtained during the preceding review phase and in isolated follow-up interviews. Three means of primary data collection were executed: semi-structured interviews; focus groups; and an electronic survey. In addition,

expenditure data was requested from all departments, as well as current and historic licensing costs.

3.2.1 Primary data

This section refers to data directly collected from respondents by the evaluation team via interview, focus group, survey or structured instrument (expenditure data).

Semi-structured interviews

The following provides an overview of the 35 respondents who participated via semi-structured interviews to date distinguishing between the Review and Data Collection Phases of the evaluation.

Review phase

As part of the review phase, semi-structured interviews were held with key ECM stakeholders with insight into ECM design and introduction as well as those involved in its implementation. Five key stakeholders, representing key perspectives from the Department of the Premier, the Centre for E-Innovation, the Department of Cultural Affairs & Sport and two early adopter departments, were interviewed to provide a descriptive overview of the ECM and clarify the historical design process and rollout in broad terms.

These interviews directly informed the review report and helped to inform the analytical framework and data collection instruments, in addition to the qualitative insights they rendered in terms of ECM design and implementation in the WCG. These interviews were then re-examined as part of the broader data collection undertaken.

Data collection phase

An initial target of 24 respondents was set for this phase (exceeding the proposed scope of 20), and 31 respondents participated via 24 semi-structured interviews during the data collection phase. These interviews included the following groupings of stakeholders:

Stakeholder group	Number of respondents
ECM Implementing Staff (DCAS)	5
Heads of Departments/ delegated staff	18
CSC and Ce-I staff	3
Other ECM stakeholders	5
Total	31

One additional interview with Ce-I was swapped for an additional ECM implementing team member.

In most instances HODs elected to delegate their comment on ECM implementation within their department. In a few cases, the interviews gave

rise to referrals to additional staff who were unable to participate in the focus groups (e.g. Department of Education). In these instances, follow-ups were made by email with targeted questions.

For the full list of the interviewees, please refer to the appendix.

3.2.2 Focus groups

In total 13 focus groups were originally planned as part of the data collection phase, while an additional focus group was scheduled on the request of the HOD: Agriculture.

All departmental focus groups (excepting the Department of Agriculture, after consensual agreement that the session was not necessary following the departmental interview) were scheduled and conducted, although the numbers for participation varied.

The only interdepartmental focus group that was conducted was the Records' Managers Focus Group, which was well attended with nine departments represented in total.

In total, 80 individuals participated in the 13 focus groups conducted. For a full list of the individuals participating in the focus groups, including their positions, please refer to the appendix.

3.2.3 Electronic survey

An electronic questionnaire for ECM / MyContent users was developed for distribution via the Survey Monkey platform. It was agreed that the survey should go out to users in all departments, including the early adopter departments, with explanations where necessary for differences in terminology. For instance, where there was reference to Correspondence Tracking, the survey clarified that this is "referred to as LiveTrack in DTPW".

The entire known population of possible MyContent users (including those who were not active users) was sampled and targeted via e-mail so as to be consistent with the inclusive approach taken for the evaluation.

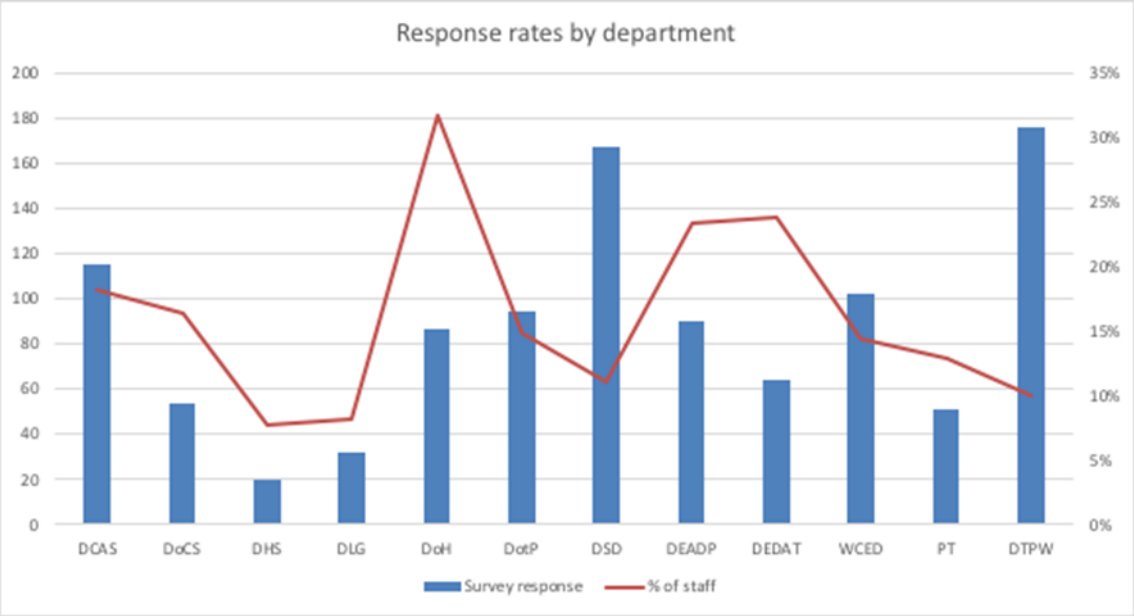
Client department survey respondents

In total, 7592 WCG staff were invited to complete the electronic survey as the total population of registered MyContent users.

Of the total population of 7592 potential respondents, 1492 staff responded and initiated the survey. This amounts to an overall response rate of 19.65% amongst provincial government users. As a general guideline, response rates for electronic surveys administered to external parties usually consider a 10-15% response rate as an average (Fryrear, 2015), with this case falling above the targeted band of 10-15% as an externally administered survey. Not all respondents completed the survey; the final close-ended question was responded to by 934 respondents (12.3%), which is still within the targeted band.

Graph 1 provides a breakdown of the responses by department. It shows the distribution of the different client department respondents as a raw total in the column chart (y-axis on the left) against the proportion of total users in the line graph (y-axis on the right).

Graph 1: Respondent rates by department



In Table 3 shows the response rates in tabular form. As both Graph 1 and Table 3 demonstrate, all departments were represented in the survey (excepting the Department of Agriculture) but some departments were better represented than others. For instance, although the Department of Transport and Public Works (DTPW) had the highest number of respondents with 176, this was only 10.02% of their total possible users (1757). Conversely, Department of Economic Development and Tourism (DEDAT) had only 64 respondents, but this was 23.79% of their total users (269).

Table 3. Response rate per department

Department	*No. Staff Users*	*No. of resp.*	*% of resp. per dept. users*
DCAS	634	115	18,14%
DoCS	331	54	16,31%
DHS	261	20	7,66%
DLG	393	32	8,14%
DoH	275	87	31,64%
DOTP	632	94	14,87%
DSD	1507	167	11,08%
DEA&DP	385	90	23,38%
DEDAT	269	64	23,79%
WCED	709	102	14,39%
PT	397	51	12,85%
DTPW	1757	176	10,02%
No dept. specified	--	440	29,49%
Other	42	--	
Total	No. Staff Users	**1492**	**19,65%**

The variability in response rates can be accommodated in a weighting[2] of the departmental responses on the basis of the proportion of MyContent users per department, so as to avoid distortions owing to the participation of larger or smaller departments in the survey when undertaking an aggregated analysis. Applying the aforementioned proportions will yield the following weightings during our analysis of the survey results:

Table 4: Weighting per departmental respondent

	MyContent users		*Survey responses*	
	No. Staff Users	***% of users per dept.***	***No. of resp.***	***Weighting per resp.***
DCAS	634	8,40%	115	0,768175
DoCS	331	4,38%	54	0,854089
DHS	261	3,46%	20	1,818358
DLG	393	5,21%	32	1,711242
DoH	275	3,64%	87	0,440435
DOTP	632	8,37%	94	0,936824
DSD	1507	19,96%	167	1,257377
DEA&DP	385	5,10%	90	0,596056
DEDAT	269	3,56%	64	0,585654
WCED	709	9,39%	102	0,968534
PT	397	5,26%	51	1,084649
DTPW	1757	23,27%	176	1,391002
No dept. specified	--	--	440	1,00
Other	42	2,82%	--	--
Total	**7592**	**100,00%**	**1492**	**--**

It should be noted that DSD and DTPW have far more users than most other departments. These departments thus have a similarly large representation in the overall weighted results.

A high number of respondents did not complete the survey or skipped out on the question of which department they were in (440, or 29.49% of all respondents) which was listed in the last quarter of the questionnaire. These respondents were weighted on a 1:1 basis where they provided responses for the electronic survey without pre-supposing any departmental allocation.

3.2.4 Expenditure and licensing data

The following departments submitted data in response to requestes for expenditure data from 2008/9 until present:

- Community Safety
- Department of the Premier

[2] Each respondent is given a weighted value so that the sum total of their responses is in proportion to the total % of users from a given department. This only applies for aggregated analysis of the survey findings.

- Transport and Public Works
- Social Development
- Environmental Affairs and Development Planning
- Education
- Provincial Treasury
- Economic Development and Tourism
- Agriculture
- Human Settlements
- Cultural Affairs and Sport

Of those that had submitted this data, it was not available from 2009 more generally and departments were only able to identify the amount of expenditure, rather than the quantity of reams of paper purchased.

Expenditure data was not received from the following departments:

- Health
- Local Government

Licensing data was supplied centrally by Ce-I for all departments with historic ECM instances and data was provided from 2009 to present as requested.

3.3 Secondary data and ECM documentation

In addition to the primary data collected as part of the fieldwork, a number of existing documents, reports and datasets were shared with the evaluation team. These documents were also reviewed, analysed and referred to as sources of data in the evaluation. Documentary evidence provides some balance, corroboration and/or contrast on the historical processes, reflections and perspectives captured during primary data collection. For a catalogue of the list of more than a hundred documents/items under review received in the course of data collection, please refer to the appendix.

3.4 Data collection challenges and reflections

Overall there were relatively minor challenges experienced over the course of this data collection phase.

Participation in focus groups and interviews was generally within the expected band of 5-8 participants that was originally desired. The variety of perspectives secured was consistent with what was intended.

Further, when considering interview and focus group respondents who either were unavailable or declined to participate, the missing respondents were not deemed critical in terms of the variety of perspectives received. With the few qualifications noted, the evaluation is not considered disadvantaged by any lack of engagement given the breadth of perspectives and the responses shared by the stakeholders identified in the review phase.

Additionally, a minor challenge was also experienced in the focus groups with DCAS when there was particularly low attendance. Despite this issue, the department was considered well represented through other engagements. In

the end, these challenges were well mitigated through the amount of data and documentary evidence secured through other means.

The response rate for the ECM survey was higher than the average response rate band but partially offset by the attrition rate of the survey participants which was detected owing to the location of the "Which department?" question for the purpose of questionnaire skip-logic. Nevertheless, the provision of alternative avenues for qualitative input and the subsequent push for completion certainly helped to mitigate these challenges. Spikes in response rates were noted at the time of subsequent reminder emails.

A greater proportion of some departmental staff took advantage of the opportunity to complete the questionnaire than others. That said, lower than desired participation rates in some departments could be indicative of a number of things, including but not limited to: data collection participation fatigue (e.g. concurrent surveys and other research that may have confused respondents or sapped their energy for such surveys); lack of spare time to participate; or lack of buy-in to the evaluation process. Given the approach taken for the evaluation, and the qualitative engagements to date, the latter reason would seem the least likely of the three reasons for the lower than desired response rates.

Lastly, the assistance provided by HOD departmental staff and DCAS in supporting the scheduling of interviews and focus groups was a great enabler of a relatively smooth data collection process, albeit with some minor changes and adaptations along the way. The availability of venues, projector facilities and staff was a benefit to the evaluation team and helped to avoid significant delays to the data collection schedule.

4 Findings and analysis

4.1 Relevance and appropriateness

For the purpose of this evaluation, the ECM intervention under evaluation is judged in terms of the extent to which it is consistent with the needs and requirements of the WCG at the time it was introduced.[3] Specifically, this criteria is reflected in terms of KEQ1. Is the existing ECM solution appropriate considering WCG's requirements? This evaluation question and criterion is addressed specifically by firstly setting out what the WCG requirements are, informed by the e-Filing/Registry Blueprint (2009) and the Business Case (2013), before appraising the extent to which those needs are currently being met, particularly in relation to the role of registries. The findings are therefore structured according to what the stated requirements were, compared with what has been found in practice.

4.1.1 Does the existing ECM solution meet the essential WCG Requirements?

The essential WCG requirements are informed by the Blueprint and Business Case (Department of the Premier, 2009; Jacobs & Mohamed, 2013) which inform the purpose of the evaluation. The following sets out briefly the findings in relation to: 1) what the stated requirement was, compared with 2) what has been found in meeting those expectations in practice. Inevitably, because many of those requirements overlap with other evaluation sub-questions, this looks at the requirements from a high-level and provides an overview while later parts of the report capture key aspects of implementation.

Diagnosis and ECM solution planning

After the provincial government elections of 2009, the new provincial Cabinet undertook an investigation into the challenges that Western Cape Government (WCG) departments faced as part of the "Modernisation Programme" of the new administration (Kamaldien, 2012). A series of workstreams were created to investigate specific areas of work. One of these, the Registry / E-Filing workstream, was led by the Chief Director: Government Information Technology Officer Management Services. Members included representatives of Department of Transport and Public Works (DTPW), Department of Cultural Affairs and Sport (DCAS), and the Ce-I, as well as co-opted members from DSD, DOH and WCED. The workstream produced the *Blueprint: Registry / E-Filing* (Department of the Premier (DOTP) 2009). The Blueprint described challenges regarding content and document management and put forward a costed solution with multiple options for implementation in the WCG.

[3] The report does not seek to comprehensively evaluate the intervention in relation to the WCG's "current" needs, which themselves may be dynamic and evolving over time along with the evaluation process itself. Instead, the evaluation uses the previous identified requirements for the ECM solution and acknowledges where there is evidence that the WCG's needs have evolved or shifted over time. The final section of the report on recommendations specifically looks at what this means next.

The Blueprint was also explicit in drawing from the experience of departments that had already adopted ECM components. These departments, which became known as "early adopters", included DTPW, DSD, DOTP (Cabinet services). Specific units within DOH, including forensic pathology, also used ECM solutions. The Blueprint noted that the solution within these departments lacked a standardised and integrated approach, and that the solution was not running optimally in some of them. This created space for improvement, while also offering lessons for implementing ECM in the larger WCG, which were included in the Blueprint. It is therefore no coincidence that the composition of the workstream committee that produced the Registry/E-Filing Blueprint included representatives from the DTPW, DSD, and DOH at the time who had direct experience of implementing the "early adopter" solutions within their departments and could provide valuable insights for broader rollout.

Between the time of the Blueprint (2009) and the development of the Business Case (2013a) there was broader institutional reform within the WCG which delayed the rollout and prioritisation of ECM as a transversal intervention. Nevertheless, by 2013 managers from Ce-I had drafted a Business Case for the ECM solution (Jacobs & Mohamed, 2013) setting out its purpose, the scope of the ECM solution, roles and responsibilities, critical success factors as well as a high-level cost-benefit analyses.

Purpose and intent of transversal ECM

The primary purpose of the establishment of ECM was set out in the Blueprint "to use ICTs that leverage enterprise-content management technologies to reduce implementation cost while simultaneously shrinking workflow (document management) and labour costs". The Blueprint was clear that the return on investment for ECM "is reduced costs, increased time-savings and improved service delivery" (Department of the Premier, 2009; 6-8).

The transversal consolidation of ECM was therefore intended to reduce the time spent on searching for documents and enable reusability of documents by managing unstructured data across the WCG. This in turn, would improve efficiency, productivity and streamline business processes in each of the departments. This was expected to contribute to a "new, more efficient work culture" beyond time, cost and space savings, particularly from reduced paper usage, thereby saving on the cost of paper as well as freeing up paper storage space (Jacobs & Mohamed, 2013).

In articulating these intentions and presenting a "problem statement" in the Blueprint especially, these problems and the areas to be addressed were presented as self-evident issues apparent across the WCG, without the benefit of quantifiable metrics to inform the status quo and to track progress in relation to addressing these issues. There were claims that:

- "up to 40% of time goes into looking for information;" and
- "a digital document management solution can reduce overall document related costs by 40% in general;" and
- "Paper processes can cost as much as 24 times the electronic route and this is done by measuring how long it takes to process paper today, setting a clear saving objective and measuring again after automation" (Department of the Premier, 2009: 6-7)

Similar claims were repeated in the Business Case, but without an attempt to quantify the anticipated benefit of the intervention:

"Through central coordination and guidance, departments will greatly benefit from ECM Services such as transversal records management, document management, retention and disposal authorities, central storage, efficient and secure access to information. This will result in reduced time searching for documents, better structuring of unstructured data and thereby enabling reusability, improving productivity and streamlined business processes within each of the departments. The corresponding reduction on paper will also reduce the need for storage space. A new, more efficient work culture will also be promoted and current work practices will change." (Jacobs & Mohamed, 2013a; 6)

While these claims were drawn from other ECM-related research and interventions, and supported the overall intent of the intervention, they were not contextualised or quantified for the WCG, nor were there any clear savings targets articulated against which to assess the success of the intervention. This is a design shortcoming underpinning the overall rationale for the intervention, even up to the time of this assessment. If the intention was to achieve: reduced time spent on storing, retaining, accessing and disposing of documents; reduced costs; reduction in paper; reduction in storage space; increased collaboration; improved information access; and more efficient business processes; then, at least some of these intentions should have been substantiated and measurable objectives of the ECM solution in the way of benefits should have been made clear. This issue will be revisited in relation to planning for the monitoring & evaluation of the ECM solution.

Institutional positioning and location

At the time of development of the Blueprint as part of the e-Governance workstream in 2009, the drive and impetus toward a transversal ECM was located with Ce-I in DOTP (I9, I86). As the initiative was part of a broader reform driven centrally from DOTP on the back of the political change in the province, and considering Ce-I was the only actor with a mandate to provide a transversal application solution, this was appropriate in terms of conceptualisation.

The Blueprint project team included representation and participation from the side of DCAS, along with other departments (DTPW) and co-opted team members (DSD, DOH and WCED)(Department of the Premier, 2009) to build on the implementation experience of the "early adopter" departments. It was apparent both within the document and in interviews with key stakeholders that the initial impetus was driven from the side of Ce-I and the vision, motivation and nascent strategy for rollout of ECM initially rested with them. References to DCAS in the Blueprint are limited to its position as a stakeholder department as part of the broader rollout of ECM through the WGC (after Consolidation and a possible pilot deployment, and following WCED). This contrasts with the later Business Case.

At the time of the Blueprint the next steps for implementation were not entirely clear, as a range of options and budget allocations were presented with an estimated timeframe of 4-5 years for rollout. In the period immediately thereafter the transversal implementation of ECM was not meaningfully advanced until 2013.[4] It was at this time that the Business Case (Jacobs & Mohamed, 2013) was adopted and the responsibility for coordination and guidance of the implementation of ECM formally vested in DCAS, with Ce-I's role that of technical and infrastructural support for the ECM platform. The Lemoenkloof Retreat of Provincial Top Management formalised DCAS as the institutional home of ECM within the WCG (Western Cape Government, 2013) and reinforced the stated intentions of the Business Case, still in draft at the time.

Further, a number of senior managers interviewed (I3, I45 and I85) expressed a common understanding that despite the Blueprint being drafted as part of a team coordinating the workstream from DOTP, and the Business Case being written by Ce-I staff, that national and provincial legislation made it clear that DCAS has the mandate and statutory responsibility as the institutional home for the "business" of archives and records management. DCAS needed to take responsibility for ECM implementation because of its implications for archives and records in terms of legislation, the Provincial Archives and Records Service of the Western Cape Act (2005) (which assigns responsibility to the provincial Head of the Archives and Records Service for determining the conditions subject to which electronic records systems should be managed), and the National Archives and Records Services (NARS) records management guidelines, the provincial archive function was located squarely with them. However, this did not mean that DCAS sought the coordinating role, nor that it possessed the capacity to fulfil this role, an issue that will be revisited in the latter sections of the report. This was made explicit in the Business Case as reflected in the excerpt from the table included in the Gap Analysis below:

Table 5: Excerpt from the Gap Analysis table in the Business Case
(Jacobs & Mohamed, 2013)

	Current BASELINE	**Future TO BE**	**Gap Assessment** *Impact of the gap analysis and requirements in order to solve or close it.*
1	Ce-I playing central and coordinating role	Department of Cultural affairs and Sport to takeon the coordination and guiding role	DCAS to be resourced and capacitated to fullfil the guiding and co-ordinating role with the WCG

[4] That is not to say that there was not any progress- both the Western Cape Archives (Corporate) and the DOTP (Human Resource Management) were established on a single instance OpenText in the interim.

In terms of the needs of the WCG, this allocation of the responsibility for implementation of a transversal IT-enabled solution, while falling under the mandate of DCAS, diluted ownership of the intervention and placed a vital transversal intervention under the auspices of a department without an organic champion for the initiative, reducing the ownership, role and responsibilities of Ce-I in the process. It is telling that none of the DCAS staff that served as part of the team for the Blueprint (nor any involved in the Business Case) still serve within DCAS. Instead, only one author of the Business Case is currently with DCAS (still a staff member in DOTP seconded from Ce-I). All of this has served to limit the "positional authority" associated with DCAS' responsibility for the intervention. The effects of how the intervention was introduced have been both perceived and real, as the following quote captures reflections shared by various respondents (I3, I45, I85):

"A consequence was, arguably, that ECM received less attention from Ce-I than those apps which were DOTP-owned. Budget cuts were also affected that can perhaps be linked to the more marginalised position of DCAS." (I44)

This is not to suggest a finding about Ce-I's fulfilment of its roles and responsibilities, but to highlight that in the process of (re-)locating the responsibility for the ECM solution with DCAS, the intervention was placed where there was an absence of provincial leadership on the subject at the time (when compared to DOTP: Ce-I, DSD, DTPW and/or DOH), limited internal capacity, and the potential for diluted focus among senior management given the breadth of DCAS' other functions and responsibilities. Thus, the manner in which responsibility for the intervention came to be recognised and "owned" as the responsibility of DCAS over the period of 2009-2013 did not meet the needs of the WCG in terms of a strategic, transversal intervention of this nature.

Roles and responsibilities

In light of the process of formalising the institutional location of the transversal ECM intervention, clarification of the roles and responsibilities for the intervention only become apparent in the Business Case (Jacobs & Mohamed, 2013). The high-level responsibilities were set out for the three key role-players: DCAS, Ce-I and the various departments (lated roles in rolling out ECM.

Table 6). The Business Case envisioned that these three role-players would each have distinctive and interrelated roles in rolling out ECM.

Table 6. Roles and responsibilities of the three role-players
(Source: Jacobs & Mohamed, 2013)

DCAS	CE-I	Departments
• Central Coordination and guidence • Strategic Direction • Policy • Governance • Procurement • Central Capacity • Monitoring and evaluation	• Server Hosting • Consolidation Infrastructure • Consolidation Support • Software and licencing • Strategic Program Management • Enterprise Architecture	•Departmental Solution Ownership • Implementation Services / Support • Business Requirements •End User Support • Change Management •Building Internal Capacity •Additional Hardware

In line with the gap analysis, and consistent with the institutional positioning, DCAS took responsibility for the overall Strategic Direction, Governance, Monitoring and Evaluation of ECM. Ce-I was tasked with the role of the enterprise's overall architecture and strategically managing the programme. Practically, this meant that Ce-I would be in charge of consolidating the infrastructure, software and licensing, server hosting, etc, while DCAS would develop strategy, provide guidance, plan and implement rollout, and develop capacity for a "centre of excellence" of institutional capacity based at DCAS (Jacobs & Mohamed, 2013a; Mohamed, 2014). The "centre of excellence" was informed by international best practice and intended to provide operational support to ECM platform users as "an important organisational mechanism…aiming at institutionalising ECM initiatives and perpetuating their benefits throughout the organisation in a more centralised approach" (Mohamed, 2014).

Importantly, departments as "beneficiaries" of the ECM solution were expected to have key responsibilities in relation to implementation service and end user support, as well as change management and additional capacity building. Although the Business Case was light on detail on responsibilities, it was envisioned that each department would each take ownership for the ECM solution at a departmental level, support their users and manage their business requirements, and ensure the solution is supported with internal capacity and hardware as needed (Jacobs & Mohamed, 2013). This responsibility is a key expectation, particularly as it relates to the resourcing of the intervention and user experience addressed in latter sections of the report.

The early adopter departments had already taken ownership of their own instances of ECM. The Business Case did not elaborate on what responsibility the early adopter departments would take for consolidation. DCAS staff indicate that this is because the scope of the project (and thus the Business Case) was limited to the rollout of ECM to new departments.

Beyond capacitation and establishing a "centre of excellence" the Business Case was silent on the kind of support DCAS was expected to provide. While

Ce-I has responsibility for "consolidation support", the allocation of responsibilities suggests departments will possess an internal capacity to support end users. As the later findings will explain, this has been far from the case. In fact, the channels for accessing user support have varied considerably and none of the draft ECM strategy or policy documents are clear in terms of the intended lines or sequencing of support.

Governance and institutional structures

With governance of the ECM solution identified as a key responsibility of DCAS in the Business Case (Jacobs & Mohamed, 2013), the clarification and formalisation of governance structures and their relationship relevant to ECM would fall within its remit, even if some of these structures were chaired or coordinated transversally by other actors.

The Blueprint recommended that two forums support ECM: the ECM Forum which had already been established (and initially led by Ce-I) would act as provincial steering committee for implementing the proposed e-Filing / ECM solution; and the Provincial Records Management Forum which had been established by the Provincial Archives and focused on electronic records management (Department of the Premier, 2009).

The Business Case (Jacobs & Mohamed, 2013) proposed a broader set of governance structures, as depicted in Figure 7. Along with the more detailed description of DCAS's role, the Business Case proposed an ECM Executive Steering Committee led by DCAS, and an ECM Change Control Board positioned between Ce-I and DCAS (presumably co-chaired by these two units, or with members from both). Ce-I was envisioned as leading an ECM Technical Forum. These bodies were created to facilitate the integration process as part of implementing a "unified enterprise content management environment" (Jacobs & Mohamed, 2013).

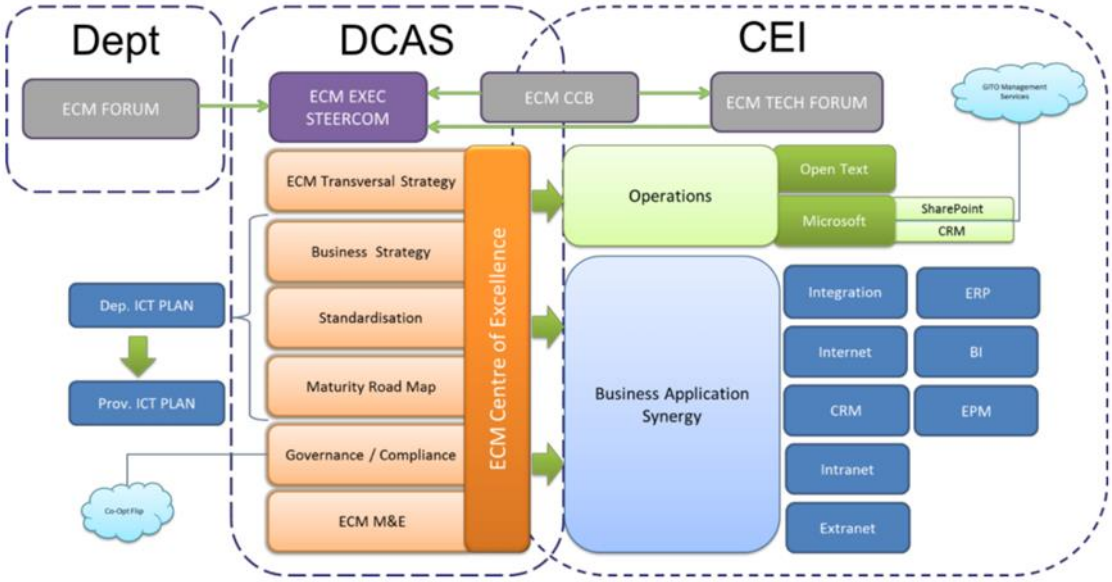


Figure 7. Governance arrangements as per the Business Case
(Source: Jacobs & Mohamed, 2013)

Although it was one of two structures referenced in the Blueprint, the Provincial Records Managers Forum was not listed in the Business Case. Considering DCAS' responsibilities as the business owner, the absence of any reference to or acknowledgement of the Provincial Records Managers Forum is a clear omission, particularly when considered in relation to change navigation.

As the Blueprint had originally envisioned, an ECM Forum was created early on. It became known as the ECM Consolidation Forum. This forum "acted as the governance forum for ECM" for the first one and a half years (I10). It had wide representation; every department was represented by an ECM "champion" on this forum. It has served as the structure through which departments could discuss ECM issues, even after they have completed the rollout of ECM. The ECM Consolidation Forum was chaired by Ce-I until at least March 2016 (Department of the Premier, 2016); subsequently DCAS staff indicate that they "assist in the absence of a properly constituted structure"[5]. This suggests that the structure is not currently as functional as it previously was. There were also critiques from members who had attended it, saying it was too operational in nature, while guidance and direction on important aspects of integrating ECM into business were not addressed. This suggests the Forum could play a more strategic role than is currently the case.

For a period of time, an ECM Technical Forum (as identified in the Business Case) used to report to the ECM Consolidation Forum, but this no longer operates; instead the issues previously discussed here are dealt with by existing departmental IT committees (DITCOMs) and/or TAPS (see below) (I82).

The ECM Executive Steering Committee, first mentioned in the Business Case, was established but its role was eventually taken over by other structures (I10 and I82). When necessary, the ECM Consolidation Forum now refers issues up to the Electronic Provincial Top Management (EPTM) meetings. These are special meetings of the Provincial Top Management that take place approximately once per quarter (I10 and I82).

The ECM Change Control Board, also first mentioned in the Business Case, still exists (I81), but there is limited evidence of its functioning and it appears to operate more on an as needed basis, rather than as a regular structure.

The Provincial Records Management Forum continues to operate. According to interviewees, all departments are represented on this structure through their records managers (I7) and ECM remains a standing item on the agenda of these meetings (I86). However, this forum also includes representatives from other public bodies in the Western Cape (e.g. municipalities) and therefore it cannot make the WCG ECM solution a central focus of its work (I14). A records manager, referring to the ECM Forum, stated: "I am not sure if it still exists, we wanted as record managers to send all the issues to that forum." However, another records manager pointed out that records management remains their mandate irrespective of format and that the ECM

[5] According to correspondence with DCAS staff.

forum cannot supersede that mandate (FG64). Thus there is a recognised need for a structure that can provide integrated leadership for ECM and (electronic) records management.

Another important structure for ECM is the IT Steering Committee, also referred to as the Transversal Application Steering Committee (TAPSC). This structure was introduced after the establishment of the Corporate Service Centre (CSC) and advises Provincial Top Management on matters related to the corporate governance of IT applications. It was initially chaired by the Director-General of the Western Cape Government, and currently by the Superintended-General of the CSC. The formal relationship between TAPSC and the ECM-specific structures is not clear, and the TAPSC agendas usually include ECM rollout progress as an item since the MyContent platform serves as one of multiple transversal applications administered across the WCG.

As part of the stakeholder mapping exercise, the depiction in Figure 8 of ECM institutional structures was developed. The lack of clearly defined relationships and positioning between these forums is indicative of an unclear, inadequate configuration of institutional structures and governance platforms with regards to ECM.

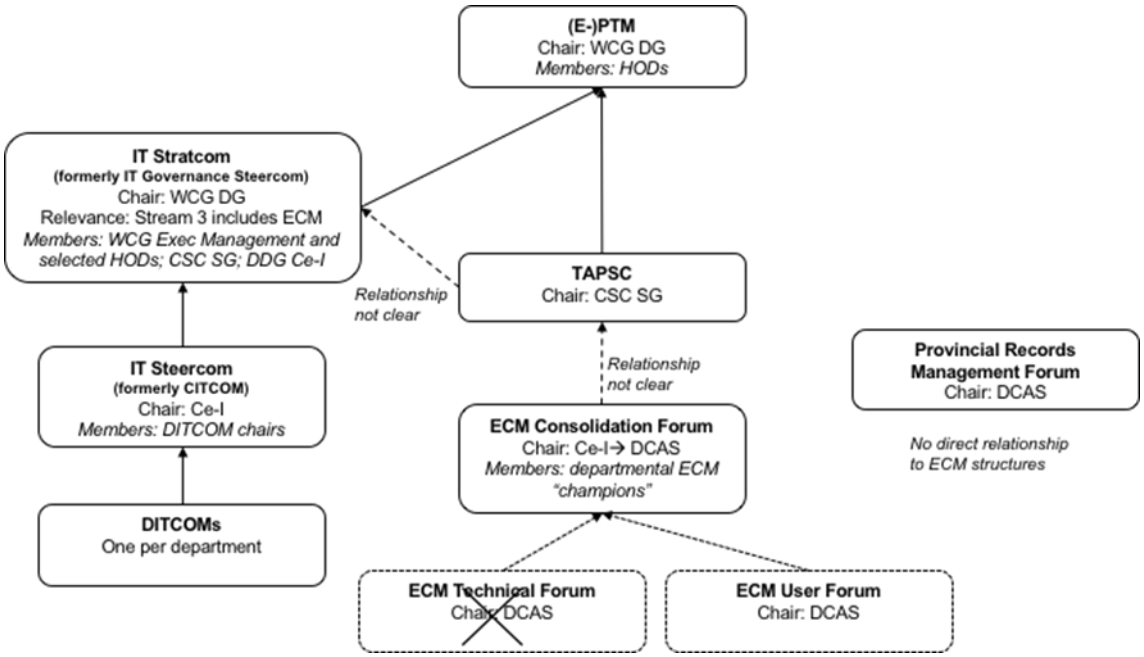


Figure 8: ECM institutional structures

During the course of data collection, reference was made to concurrent discussions and engagements specifically looking at this issue, with a newly proposed configuration (but not yet approved) reinforcing the finding that the governance arrangements and institutional platforms did not meet the needs of the WCG for the introduction of the transversal ECM solution from the outset.

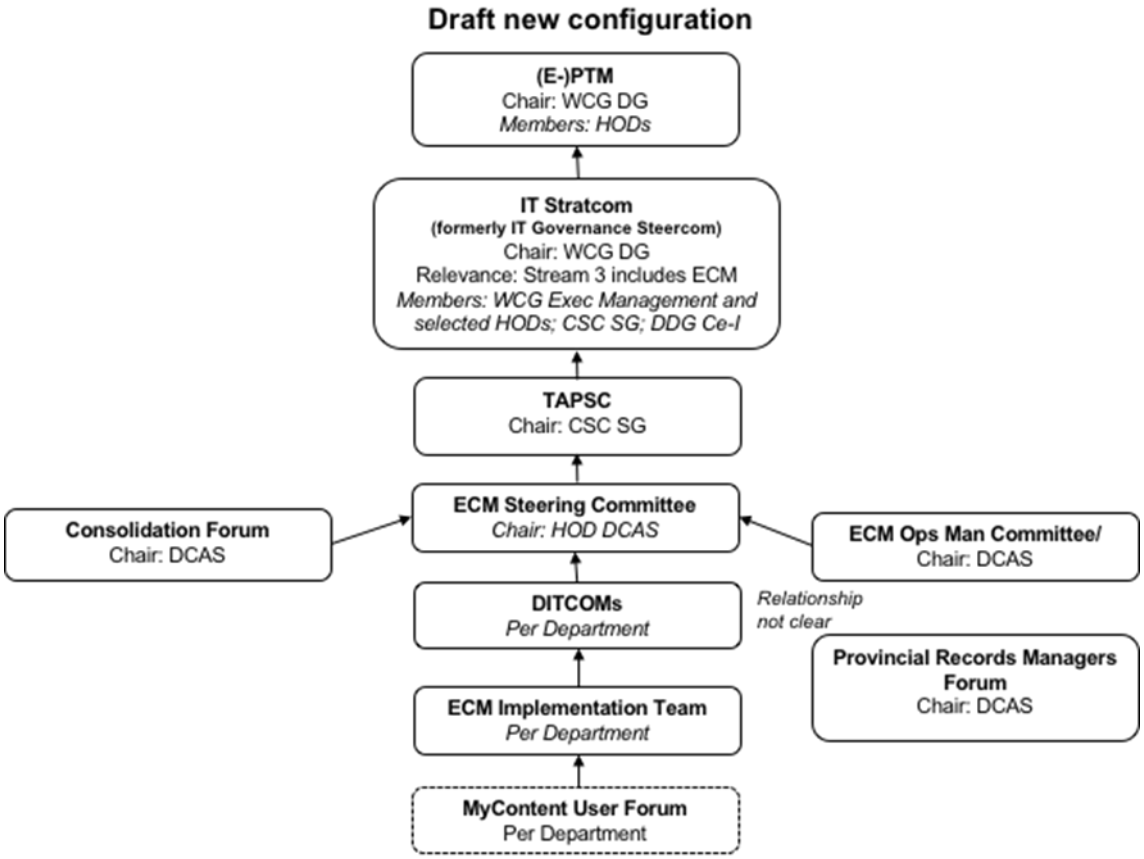


Figure 9: Evaluators' interpretation and rendering of proposed ECM institutional structure configuration

Even considering that the above is merely a proposal, there remains ambiguity and a lack of clarity regarding the distinct purpose and function between these structures- a matter that will be revisited in relation to recommendations arising from the findings and conclusions.

ECM platform alternatives and considerations

Documentary evidence and interviews indicate there was relatively limited consideration of alternatives to the OpenText platform in relation to the WCG's requirements for ECM. From the time of the Blueprint through to the Business Case, both documents present the decision to pursue OpenText as a *fait accompli* "option" more so than the product of any systematic appraisal of alternatives. While questions have been raised by some respondents about whether alternatives were adequately considered, none of the interviewed parties, including the external service providers, were able to motivate for an alternative platform with comparable functionality and support available in South Africa, and the Blueprint does at some length substantiate the case for OpenText based on industry reviews and appraisals by Gartner, among others (Department of the Premier, 2009; 34-36).

While the absence of a systematic and transparent appraisal process before arriving at OpenText as the preferred platform may appear to be a shortcoming of this period in terms of specifying the WCG's requirements in

this regard, it appears to be more a result of a practical but over-riding criterion associated with an ECM solution- resource costs (in terms of time, money and knowledge). Implementing any alternative transversally would have the effect of disrupting the established functioning of OpenText's Livelink within the WGC which was already employed at considerable scale within the early adopter departments. Furthermore, there was an explicit intention to derive license savings through negotiating discounts in terms of an economy of scale. This was reflected by the intention to "Consolidate the licenses used by DTPW, DSD and DOH in a provincial license so that a central pool of licenses is managed optimally" (Department of the Premier, 2009: 38). Part of the rationale for proceeding with OpenText was therefore to leverage the existing foothold to reduce overall costs.

Considering the transversal need for an ECM solution that could work across contexts with the potential for customisation and enhanced functionality over time, and in light of the established footprint and application across existing departments, it was apparent that OpenText best met the requirements of the WCG in this regard. This was communicated clearly in both the Blueprint and the Business case as follows:

"Bottom line- Open Text's Livelink remains and is confirmed as the provincial standard for the PGWC for enterprise content management" (Department of the Premier, 2009; 37)

"As the WCG has already standardised on OpenText Content Server as the de facto ECM, it was not necessary to consider any alternative however, Microsoft SharePoint has being piloted within the WCG and integrates seamlessly with OpenText Content Server" (Jacobs & Mohamed, 2013a:10)

Thus, in selecting OpenText as the ECM solution, MyContent was agreed as the branding for the product. Despite a vast capability, a set of core ECM functions available on OpenText were selected as what was referred to as the MyContent Foundation Pack before being further expanded upon. It should be noted that this exceeded what the Blueprint had labelled as a core set of basic ECM solutions in some respects, although it did exclude imaging and workflow:

- *Document Management*
- *Record Management*
- *Collaboration*
- *Correspondence Tracking*: to capture, manage and track correspondence
- *Record Management Request Tracking (RMRT)*
- *Digitisation of WCARS:* to create a facility where the records that are within the archival holdings will be digitised

The following is the expanded ECM solution offering:

- *MySignature (electronic signatures):* to enable to process of automation

- *Supplier Invoice Tracking System (SITS)*: to monitor the payment of creditors within 30 days from receipt of invoice

After piloting MyContent and rollout of the Foundation Pack, the ECM solution was expanded, including the development of further capabilities: in "mature" departments, solutions such as supplier invoice tracking and advanced electronic signatures (AeS) were introduced.

In light of the above, and considering the overall approach that was adopted, this initial provisioning of the MyContent Foundation Pack via OpenText appears to have adequately met the WCG's requirements in this regard. Some of the latter findings around user experience and functionality speak to issues encountered with implementation of the above, but there does not appear evidence to suggest an absence of needed functionality in provision of the Foundation Pack.

IT infrastructure

The historic Livelink experience in the early adopter departments provided the basis for a network impact assessment of the IT infrastructure set out in the Blueprint (Department of the Premier, 2009). Based on the feasibility assessment undertaken, an additional capacity of 14Mbits/sec on the Wireless Area Network (WAN) was required, along with data lines at a minimum of 2MB to 4MB depending on the users, and as much as 10MB for larger sites.

Importantly, this diagnostic work was incorporated into the IT services workstream which took on wider considerations for the WAN upgrades and made them as part of broader IT upgrades throughout WCG.

The Blueprint also identified hardware requirements for the server environment in order to host the application. These requirements were set out at a high-level in terms of the implications for ECM specifically, and over the course of the ECM solution's rollout, they were largely delivered upon, as is addressed later in section 4.2.1. While the Blueprint is not specific in identifying Ce-I as the responsible party for providing this infrastructure, the Business Case clearly does so, albeit without supporting the details of what this entails beyond "Upgrade the ECM Consolidation Infrastructure at 4 Dorp Street" (Jacobs & Mohamed, 2013a: 7).

One shortcoming of both the Blueprint and Business Case was the failure to consider the implications for DOA at Elsenburg. The planning neglected to appraise the existing network at DOA which resulted in a belated realisation that the department would not be able to benefit from the ECM intervention until broader IT network upgrades had occurred.

Planning for rollout of the ECM solution

In light of the findings about institutional location and responsibilities for the ECM solution, it follows that planning for rollout, particularly in the period of 2009-2013, was challenged by a dynamic institutional environment in which both the priority, order and interest of WCG departments in embracing the ECM solution shifted. However, this period was used to begin the process of

consolidation of the ECM environment of departments that had already adopted ECM instances.

In the first quarter of 2013/2014, it was reported that the infrastructure, licensing and individual ECM instances had been consolidated for the WCG transversally. Certain specific components had also been piloted; and a standardised file plan had been developed for use across all departments (Jacobs & Mohamed, 2013).

The Blueprint had originally proposed that the rollout of e-Filing be conducted over 48-60 months (Department of the Premier, 2009) but the Business Case and associated annexures went further in specifying which departments and by when.

Four of the "early adopter" departments were already running their own instances of ECM: DOTP (Cabinet services), DSD, DTPW, and DOH (Department of the Premier, 2009). For these departments, ECM would be consolidated on a common platform, while for other departments it would be introduced for the first time on the same platform that Western Cape Archives and Department of the Premier (Human Resource Management) was established on (The Department of Health also had its own ECM solution and it was agreed that this would not be consolidated with the rest of the province but only be backed up to it) (Jacobs & Mohamed, 2013).

Thus, two fairly different ECM "interventions" were planned: consolidation of disparate ECM instances among early adopter departments; and rollout to new departments over two financial years. Although, who was in which rollout group was itself confused at times as references to DEDAT and WCED appear in different documents as early adopter departments, while they also appear in the ECM Service Requirement Specifications document (Department of Cultural Affairs and Sport, 2013) as part of each others' rollout phases.

Table 7 provides an account of the actual rollout schedule, noting that this differed from what was originally planned in the ECM Service Requirement Specifications (Department of Cultural Affairs and Sport, 2013) in the following ways:

- DOA was entirely de-scoped from both phases of ECM rollout;
- DEDAT was moved from Phase 1 rollout to Phase 2 rollout;
- DOCS was moved from Phase 2 rollout to Phase 1; and
- There were no clear timeframes originally set for the migration of the "early adopter" departments, no was there an indication of what would occur with the partial rollout of ECM in DOH and DOTP.

Table 7. ECM rollout schedule

Consolidation of Early Adopter Departments ECM	Phase 1: Rollout 2014/15	Phase 2: Rollout 2015/16
Department of Transport and Public Works	Department of Cape Cultural Affairs and Sport	Department of Education

Consolidation of Early Adopter Departments ECM	Phase 1: Rollout 2014/15	Phase 2: Rollout 2015/16
Department of Social Development	Provincial Treasury	Department of Economic Development and Tourism
Department of Health[6]	Department Community of Safety	Department of Local Government
Department of the Premier	Department of Environmental Affairs and Development Planning	Department of Human Settlements

The Project Initiation Document (Department of Cultural Affairs and Sport, 2013) was finalised concurrent to the Business Case and provided more detail in terms of intervention deliverables, timeframes, risks and associated with the ECM solution rollout. This document clearly states the project as running for a duration of 3 years from April 2013-March 2016.

In coordination with the vendor appointed to support DCAS, an initial rollout approach of 100 licenses per department was agreed upon informed by benchmarked international good practice (I51, I42) and because of limited licenses available to WCG (Department of Cultural Affairs and Sport, 2014a). However, this specific approach was the source of some frustration during implementation, as it was critiqued for being too shallow in its departmental exposure, thereby limiting the collaborative benefit of ECM and restricting users during a critical period of on-boarding and change navigation. This approach was subsequently revised as part of broader license negotiations, as address later in section 4.2.1.

[6] This refers to Forensic Pathology and select hospitals, while noting that DOH was scheduled for the rollout of Correspondence Tracking only in Year 1.

ECM Project Plan from 2013/14-2015/16 according to the Business Case:

- Year 1 (2013/14)
  - Upgrading the ECM consolidation infrastructure to accommodate the rollout to the departments
  - Fund the ECM consolidation support
  - Develop central capacity to fast-track
  - Implement the foundation pack
  - Create a central foundation pack to support the departments
  - Implementation within the Archive Holdings
- Year 2 (2014/15)
  - Focus on rollout across the province
  - Build internal capacity
- Year 3 (2015/16)
  - Institutionalisation and digitisation of the Western Cape Archive Holdings (Jacobs & Mohamed, 2013).

A Change Navigation Plan was developed and approved in 2014 (Department of Cultural Affairs and Sport, 2014b). This document included a "MyContent Implementation Plan" and table aligning the project stages to a set of deliverables along with associated activity descriptions for each of the deliverables and delegated responsibilities in relation to this.

While there was more general planning and an implementation outline for change navigation for DCAS's transversal rollout to other departments, there does not appear to be adequate change navigation planning provided within DCAS itself. As a key assumption and critical factor of success identified in the Business Case, establishing the "centre of excellence" within DCAS also necessitated internal change management in adopting this new role within the department, capacitating the unit, and achieving new organisational understandings, processes and procedures about ways of working, particularly with archives and provincial records managers. Although the need for change management is acknowledged and referenced more broadly, there appears to be limited internal planning on the part of DCAS, and instead the focus appears upon communication and advocacy of rollout of ECM.

An important omission from the suite of rollout planning was setting out plans for the "early adopter" departments (DSD, DOH and DTPW) as part of the consolidation under MyContent. In much of the documentation there is little in the way of tangible specification as to what consolidation would mean for them and by when, and this is also conspicuous in its absence from the change navigation plan. The absence of this consideration around communication and notification of the process for "early adopter" departments was tangibly felt (I7, I19 and FG52), as there was a sense that these staff were effectively left to their own devices until such time as rollout to new departments concluded.

DCAS capacity and the "centre of excellence"

One of the key human resource recommendations proposed in the Blueprint was the standardisation of organisational structures across departments, including the integration of Knowledge Management, Records Management and ICT (Department of the Premier, 2009: 66). Despite this transversal recommendation, and its identified potential benefits, there was not a recommendation of what the organisational structure of the custodian department should look like until the draft ECM Strategy produced well into the implementation period (Mohamed, 2016), but even that was not officially adopted.

In the Business Case as well as the Project Initiation Document, there was an emphasis on the need to build capacity in DCAS. Specifically, references to establishing a "centre of excellence" for ECM as part of the Business Case, and "DCAS: to lead/drive and build capacity" as a "critical success factor" (Jacobs & Mohamed, 2013). Establishing internal capacity within DCAS was a requirement for successful transversal institutionalisation of the ECM solution, particularly in light of the earlier finding with regards to the institutional location and positioning of responsibility for the intervention in the absence of endogenous departmental demand.

The ECM Project Initiation Document set delivery dates in relation to capacitation for rollout of the ECM solution. This included procuring an external service provider (vendor) as per the ECM Service Requirement Specifications to assist with rollout, training and support. Among the various target dates in the Project Initiation document was that DCAS would obtain central ECM capacity by March 2014, the same time by which it would initiate transversal rollout. DCAS sought to secure a vendor foremost (July 2013) to assist in the establishment of its own capacity (

Table 8). Specifically, this would include defining an ECM support structure within the department, user skill development and support, and development of an ECM "centre of excellence" (to ensure users have access to knowledge sharing and training).

Table 8. ECM deliverables in the Project Initiation Document
Source: (Department of Cultural Affairs and Sport, 2013)

Deliverable	Delivery Date
Vendor Procurement	July 2013
ECM solution – Enablement Support in place	August 2013
Procurement of New Infrastructure	September 2013
ECM solution Enablement Setup Vendor	November 2013
Commencement of the Archives Holdings Project (digitising the Western Cape Archives Holdings)	October 2013
Central Capacity within the Department of Cultural Affairs and Sport	March 2014

Deliverable	Delivery Date
ECM Foundation Pack Solution Rollout to selected Departments	March 2014

Table 8 highlights the key deliverables scheduled in the first year of rollout, particularly as it relates to capacitation and the priority this was supposed to be afforded in terms of the intervention. In terms of an ECM support structure, the ECM Directorate in DCAS was temporarily established (see Figure 10 below) from Director level down to two senior administrative officials.

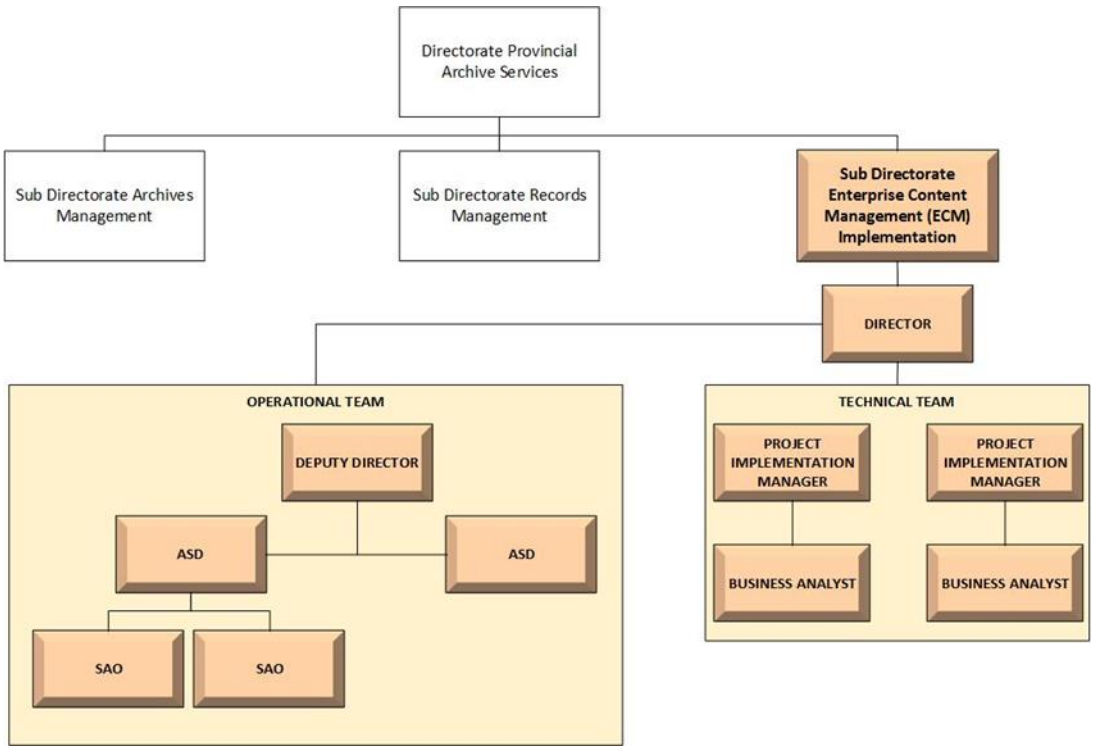


Figure 10. Structure of the Directorate: ECM (Mohamed, 2016)

As at May 2016, the ECM directorate was still additional to the DCAS structure (Department of the Premier, 2016). Despite "Review staff establishment for ECM support (incl. e-Records Management)" identification as critical success factor in the Business case, the proposed ECM structure identified in the draft ECM strategy had still not been adopted.

The Project Initiation Document also refers to an addendum which illustrates how the ECM "centre of excellence" is intended to work.[7] With regards to

[7] Despite this image occurring in the DCAS issued Project Initiation Document it still refers to a DOTP ECM Centre of Excellence. This further reinforces the finding that DOTP had been the driver behind the push for a transversal ECM solution and that this still reflected in the thinking of the ECM solution implementers.

capacity, there is a clear relationship expected between the Provincial Archives and the centre of excellence, at the very least as it relates to records management policy and implementation, but more arguably as it relates to providing leadership and guidance on document and records management as the transversal "business owner".

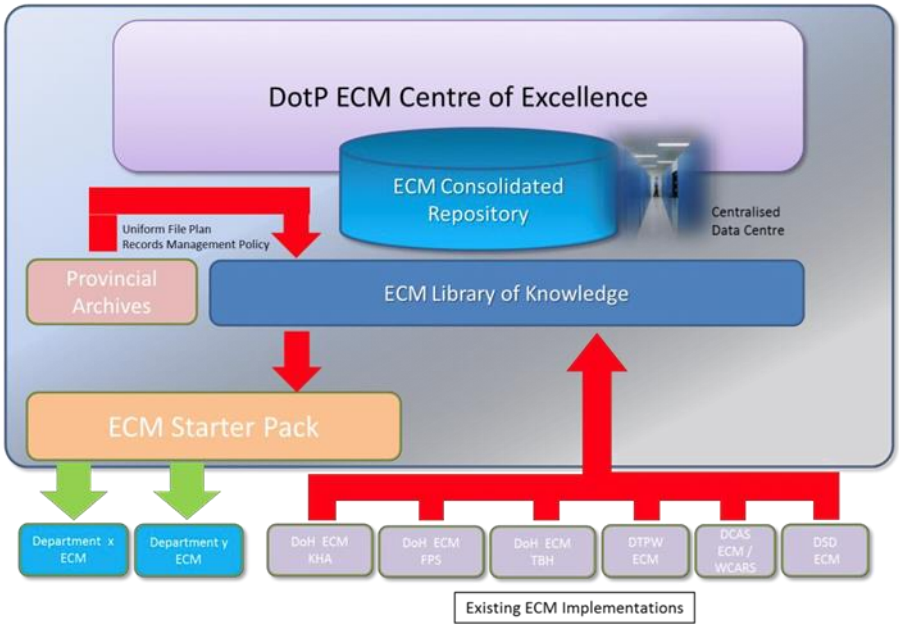


Figure 11: Initial diagram of the ECM centre of excellence
(Department of Cultural Affairs and Sport, 2013)

Figure 11 serves to reinforce two key findings with relation to capacity: 1) establishing a "centre of excellence" was critical to the ECM custodian department being able to drive and provide transversal leadership on the intervention; 2) a relationship (whether formal or otherwise) with Provincial Archives was required for effective functioning of the ECM solution.

Despite these requirements for the ECM solution set out in the documents supporting the Business Case, capacity for ECM has been conveyed by interviewed respondents and documented as an ongoing concern (Department of Cultural Affairs and Sport, 2017). This is a finding that will be further discussed under the efficiency section but based on the WCG's own plans and intentions, it has not managed to establish the necessary internal capacity to successfully deliver the ECM solution as envisioned.

ECM financial resourcing

The WCG set out financing expectations in pursuit of ECM in line with the overriding rationale of the Modernisation Programme. A transversal ECM solution was intended to achieve cost-savings in terms of efficiencies derived through economies of scale for licensing agreements, while also reducing resource costs related to paper, space for storage and time associated with document management.

The Blueprint provided a range of figures associated with potential time and cost-savings, however these were never contextualised or quantified within

the context of the WCG in terms of current spending or a quantified savings target. As a result, meeting the WCG's requirements can only be discussed in broad terms based on the depth of information obtained. To this end, there is evidence that by moving to the centralised negotiation of licenses for the entire WCG that cost-saving has been achieved on a per license basis, as is discussed in more detail in section 4.2.2. Furthermore, there is incomplete evidence that the cost of paper has either plateaued or stabilised overtime, although this is not necessarily the result of ECM. Nevertheless, at a high-level, there is some evidence that the ECM solution can be said to be consistent with the WCG's requirements.

In terms of overall budget the Blueprint estimated the cost of transversal rollout of ECM at approximately R150 million over the MTEF (3-year) period of 2010/11-2012/13, while annual operational costs were estimated at about R30 million per year (Department of the Premier, 2009). In addition, other budgeting estimates and references suggest that an initial amount of R300 million was initially budgeted for ECM over the MTEF but subsequently re-prioritised (I40, I46). Again, because the actual process for rolling out the ECM solution was delayed, transferred between departments and implemented on a somewhat altered basis, there are somewhat incomplete figures in this regard. Nevertheless, it is apparent that given the original budget estimates provided, that the ECM solution has been implemented with less than the original costs projected in either the Blueprint or subsequent accounts. However, this also appears to be on account of re-prioritised provincial budgeting beyond the control of the immediate stakeholders, thus betraying one of the critical success factors of "budget availability" set out in the Business Case.

In broad terms, the existing ECM solution can be understood as meeting the requirements of the WCG in terms of its financial requirements because: 1) it has proven to be consistent with its cost-saving rationale in terms of licensing of users; and 2) it has been implemented at considerably less costs than originally expected, although this has had other implications, particularly as it relates to user support and utilisation rates.

ECM policies, procedures and standards

As part of its findings, the Blueprint identified the need for an information-retention policy which "IT should be responsible for automating the policies that systematically archive or delete old, redundant and useless data" (Department of the Premier, 2009: 17). Similarly, the Business Case specifically targets the mainstreaming of ECM as a means of "enforcement of the records management policy" and sets DCAS' responsibilities to "define and implement ECM policy (including retention policy)" (Jacobs & Mohamed, 2013).

Although an initial draft of an WCG ECM Governance Policy was initiated as early as 2014, and subsequently revised in 2015, 2016 and 2017 (Payne, Meyer, Mohamed & Lawn, 2017), the ECM solution is currently without an official policy. In the absence of an adopted policy, the details of how to handle metadata, file planning, scanning, storage and licensing have not been centrally and consistently clarified to all departments.

The Blueprint and NARS guidelines for the management of electronic records (National Archives and Records Service, 2006) endorse the DoD 5015.2 standard as a well-established standard that has a formal certification process. It is recognised as the de facto benchmark for records-management products and acts as certification for essential product functionality, despite reservations expressed about the applicability of this standard to the South African context (FG64). Similarly, the Blueprint and the NARS guidelines endorse the Minimum Information Security Standard (MISS) issued by the State Security Agency (SSA). The Minimum Information Interoperability Standards (MIOS) are also endorsed with the intention to enable information to flow seamlessly across the public sector, citizens and businesses.

However, in the absence of a set of an adopted set of policies and procedures reflective of the transversal ECM solution, there has not been a clarity as to how they are being applied or monitored. The NARS also endorses a number of national standards based on international good practice, including the SANS 1548: Information and documentation – Records Management. SANS 1580: Electronic imaging – information stored electronic – recommendations for trustworthiness and reliability. SANS 23081: Information and documentation – records management processes – metadata for records and SANS 17799: Information technology - security techniques – code of practice for information security management (Reed, 2014). All of the above-mentioned SANS are guided by standards set by the International Organisation for Standardization (ISO) and could assist in terms of ensuring practices consistent with international and locally endorsed standards for document and records management, however there seems to be a lack of clarity as to exactly how these apply.

This reflects in findings from an internal audit review of the ECM solution which notes the following concerns:

- "a lack of policies regarding naming conventions,
- a disjuncture between the approved file plan and user behaviour,
- a large volume of unclassified documents in the ECM of legacy departments,
- the absence of standard operating procedures on the processing and storage of correspondence and formal submissions and
- inadequate user support combined with occasional system downtime" (Department of Cultural Affairs and Sport, 2017).

Further details on the above "concerns" will be addressed throughout the findings sections, but the planning for the ECM solution created the impression that the application and formalisation of the above policies and standards would flow from the rollout and consolidation of ECM across the WCG under the responsibility of DCAS by now. Nevertheless, to date, this has not been the case and so policies and procedures stand out as one of the areas where the current ECM solution does not meet the requirements of the WCG as intended.

4.1.2 What is the current role of registries in an ECM environment, vis. other role-players, as opposed to what it should be?

As discussed earlier, DCAS has the responsibility for central coordination and guidance of the ECM solution by virtue of its mandate for archives and records and as confirmed by an agreement reached by Provincial Top Management at the Lemoenkloof Retreat. Given this responsibility and the institutional location, the expectation was clear that the transversal ECM solution would be developed in an integrated way with registries, since its value offering was born of a diagnostic and set of proposals that specifically relates to registries and the potential for e-Filing as an improved means of managing records.

Although the Registry/e-Filing Blueprint's point of departure was document and records management, ECM and the associated functions offered through MyContent are much broader than that and are critically enabled through the provision of specialised IT capabilities. Several of the ECM modules are aimed at changing the way business is done and encompass skills and ways of working that are beyond the traditional function and focus of records management. However, several modules also have direct bearing on records management – moreover, the value of ECM for records management was an essential part of the value proposition. Thus, if the implementation of ECM fails to address the records management challenges described in the Blueprint, it fails to deliver on a large portion of this value proposition.

Despite this key dependency on which the intervention relies, it appears that the engagement on the side of records managers in terms of the guidance, coordination and leadership, particularly in relation to ECM's functions in this area, has been comparatively limited. Certainly, the authorship and participation of records managers in the drafting of key planning, policy and strategy documents is conspicuous for its absence. When one considers the evolution of the institutional arrangements in this regard, and particularly the absence of a clearly integrated role for records managers, this further reinforces the finding that from its outset, the potentially formative role that records managers should be playing in the design of the ECM solution as an intervention has been limited.

The strong view across government is that there is currently a disconnect between MyContent and the records management function. Many users point to the lack of policy and process guidance on how to comply with records management regulations when using ECM. They expect that a policy and guidance should go hand in hand with the introduction of an electronic system with EDRM functions. Instead, they note that records managers have not fully bought into ECM:

"[A records manager] is preserving records and not trusting the system… [saying] electronic systems come and go and… it is not a reliable way of record keeping." (I44)

"They are working in a regulation driven place. When they make a mistake they are punished harshly and registry… guys often feel that if they don't have that, don't have a file and [if they cannot] retrieve the file soon enough [it could impact on their audit] when you process automation and propose that working differently, they get resistant" (I46)

"Registries in the WCG must come on board as they are they custodians of records in our government." (Survey respondent)

Another important concern is over the idea that with ECM, "the user becomes the registry clerk" (FG68). Electronic records need to move somehow from a users' virtual "desk" to the department's virtual registry. Users have a "workspace" and there is not yet sufficient guidance for how and when files that need to be kept as records, need to be moved or copied from the workspace to the registry. Furthermore, if users are expected to file their work directly (instead of having a records manager take responsibility for the filing), the records management function becomes removed from the process and their role shifts to that of monitoring and supporting user compliance within the e-Filing system. Confronting this change and its implications appears not to have been adequately planned for and addressed with records managers from the outset. Despite the intentions of the Business Case to "Review staff establishment for ECM support (incl. e-Records Management)"(Jacobs & Mohamed, 2013: 10), this does not appear to have been meaningfully achieved in the WCG.

There are also capacity concerns. It is fairly clear that the introduction of ECM would constitute new and different work for the records management function. It the absence of a more inclusive policy development process around the introduction of ECM, there also does not seem to have been a deliberate strategy to identify the new skills that records managers will need to operate the hybrid or parallel systems that will be needed. This makes it easy to see how, as one senior manager suggested, records managers may "see [ECM] as a threat to [their] existence" (I18) rather than an inevitable evolution of their discipline.

Furthermore, in the interim, while it is necessary to at the very least run a hybrid paper-electronic or parallel paper-electronic system, the volume of work is likely to be more. Again, none of the respondents commenting on the constrained capacity of records managers seemed aware of steps to quantify and address the workload implications of this change, nor is there any evidence in the various change navigation and planning documents that this was adequately provided for as part of the ECM solution introduction.

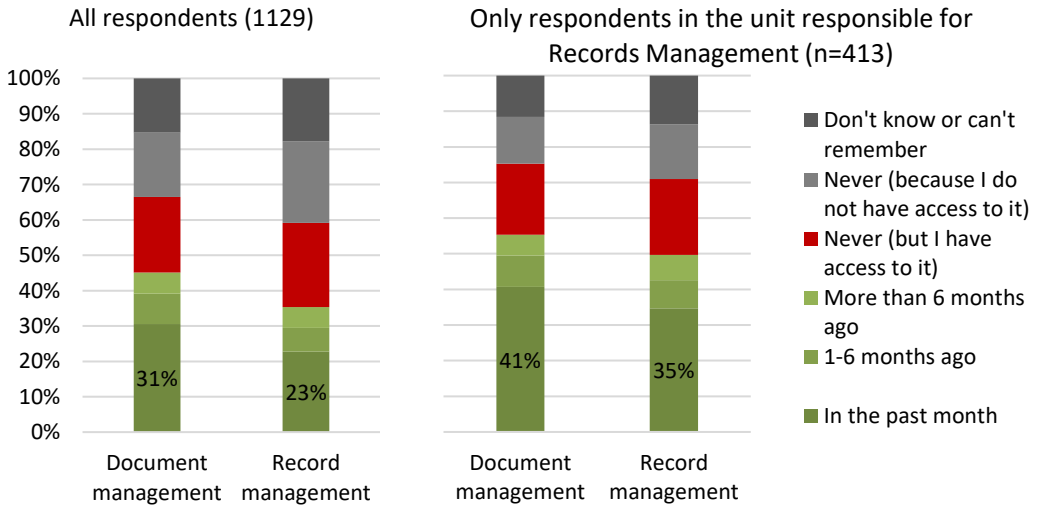


Figure 12. Self-reported use of document and record management functions/modules: all respondents vs. staff in records management units

When considering self-reported use of MyContent for document and records management, it becomes clear that utilisation (or at least awareness of utilisation of MyContent) for these purposes is generally low across all respondents. However, it is particularly low when considering that barely more than half (56%[8]) of respondents in the records management unit[9] have ever made use of the document management function on MyContent[10]. Half of all respondents in the records management unit claim to make use of the record management function (50%[11]), despite the intended value ECM is expected to deliver. And these findings are among users who have been enabled for use of MyContent, yet more than a quarter (25% and 29% for document and record management respectively) do not know whether they have access to this functionality or do not believe they have access to it.

A final concern is around departments' pre-existing compliance with their own paper-based file plans. This issue and particularly the application of the uniform file-plan has left much to be desired. In at least three departments, respondents volunteered that compliance levels are low (I74; I18; I47). In such an environment there is an even greater risk that ECM will perpetuate suboptimal record keeping.

Uniform file-plan

As discussed above, one of the key value propositions of MyContent was records management and at the core of this function is the Uniform File Plan (UFP). The draft ECM policy document creates provisions for a UFP that will be used within ECM for all departments. The UFP is based on a series plan which ranges from 1 to 11 for all departments. Any additions to the series (from series 12 and upwards) are departmental specific – referred to as Line Series File Plans (Payne *et al.*, 2017). The UFP is managed and maintained by a UFP Committee under the supervision of the provincial Department of the Premier. The committee is primarily responsible for reviewing any

[8] Out of 413 responses, a weighted 41% reported using the feature in the past month, 9% 1 to 6 months ago, and 6% more than 6 months ago.

[9] The question used to identify these respondents was "Are you in the unit responsible for Records Management?". 529 out of 1429 respondents selected "yes", which may be a very high number considering the size of records management units across WCG. It is possible that staff interpreted this question widely, perhaps selecting "yes" if their unit has any records management work. However, the qualitative data supports the impression that staff in records management units are not all acquainted with or regularly using these ECM features.

[10] Such a result could be skewed by differences in the number of users per department, especially the large number of DSD and DTPW staff. To check this, this result was disaggregated into Phase I, Phase II and early adopter departments. The percentage is between 50% and 60% for all three types of departments. This aggregate result is thus not significantly skewed by one or other type of department.

[11] If the data is disaggregated by Phase I, Phase II and early adopter departments, this percentage is lowest for Phase II departments (42%) and highest for early adopter departments (54%).

submitted proposed changes and distributing the approved changes to all 13 departments. The Line Series File Plan on the other hand is reviewed and approved by the Western Cape Archives. The table below displays the list of the main series that the UFP is composed of:

Table 9. Uniform File Plan series

Series	Series Name	Series	Series Name
1.	Statutory and regulatory framework	7.	Internal travel and transport services
2.	Organisation and control	8.	Internal information services
3.	Human resource management	9.	Internal communications
4.	Internal financial management	10.	Legal services
5.	Supply chain management	11	Attending and hosting meetings and other gatherings
6.	Internal facilities management		

Based on the draft ECM policy, each department would be responsible for not only complying to the UFP but also ensuring that the storage and filing of records within each department is guided by this plan. However, the system is reportedly not functioning well at present, independent of ECM. There are two key issues that arise from this finding. Firstly, the general trend that people are simply not feeding in information into the system. In other words, the file plan system is not being utilised. Departments reported on infrequency in records being sent by employees to registries.

"I … think people underrated the importance of the file plan and how it fits into their work" – FG74

"Their only lament is people not respecting the file plan as a records management tool." – I14

The quotations above suggest that employees do not recognise the value of the current file plan.

Secondly, in cases where records were being sent there was is a lack of compliance to the file plan classification. The lack of compliance coincides with the above-mentioned finding; if employees see no general value proposition in the file plan as a record management tool then the compliance to the file plan will be limited. Issues with compliance to the file plan have been described as "historical" as shown below:

"That is historical. Even in the manual environment. You can check the records, they don't have file reference numbers, some of them." – I14

4.1.3 How have the needs of the WCG changed since the Registry/e-Filing Blueprint?

Since the drafting of the Blueprint the WCG's needs have changed over time. The following sets out some of the key needs identified.

Institutional positioning

As explained in the preceding findings, it was only over the course of implementing the ECM solution that the institutional location and responsibility was confirmed with DCAS in 2013. This appears to have been done without acknowledgement of both the strategic and practical importance of re-positioning the transversal intervention outside of the DOTP (at least in terms of DCAS' part). The Business Case and much of the supporting planning documentation was developed acknowledging the need to establish and build DCAS's internal capacity, provide leadership and establish a "centre of excellence" without being explicit that there was also an institutional weight and significance attached to this intervention being driven from the centre of transversal coordination in the WCG. Some scepticism has endured among stakeholders as to whether DCAS was fully prepared to own its role as the WCG champion of the ECM solution (I19, I46, I47).

Nearly a decade has past since the Blueprint was drafted and the institutional location was confirmed at Lemoenkloof more than five years ago. However, as the findings in latter sections of this report corroborate, the goodwill, interest and openness to embracing the ECM solution by MyContent users and stakeholders has eroded over time, particularly in terms of utilisation rates. Thus, any improvement to implementation of the ECM solution in the WCG will need to re-assert the strategic significance and "positional authority" associated the intervention. This is one area that the Blueprint did not address adequately and now there is a need to re-assert the significance of this intervention.

Legal and Policy Requirements

The Blueprint envisioned the ECM solution as a transversal means of bringing departments in line with the requirements of the various acts, including the National Archives Act (1996), Electronic Communications Technology (ECT) Act (2002), Provincial Archives Act (2005), and the NARS records-management guidelines. The Provincial Archives Act of 2005 supersedes the National Archives Act and thus plays a key legislative role in this regard as per section 17(4) of the National Archives Act which states that the "…a provincial legislator promulgates provincial legislation in terms of which provincial archives services is established for that province, every provision of this Act shall apply in that province" (National Archives, 1996). The customisation, operationalisation and application of legislation and policies pertaining to Document Management, Records Management and Archiving via MyContent was therefore an expectation of the ECM solution intended to follow from rollout, and identified as key to achieving the desired end state (Department of the Premier, 2009).

The introduction of the ECM solution in practice meant that WCG departments had to apply the existing legal and policy framework around digitisation and electronic records management to new situations. Among others, the use (or prospective use) of ECM raised the question of what to do with paper records once they have been digitised, and how to handle records that were created entirely electronically.

The Provincial Archives Act provides guidance on this by defining a record as "recorded information, regardless of form or medium thereof" (Western Cape Provincial Government, 2005). This means that there is no difference in the management of records whether electronic, audio or print. And while the definition is clear in this regard, what this means in practice and how this is understood among users is not clear.

Further guidance was given in this area through a legal opinion that was provided to DCAS in 2014 on whether a) paper and physical file-based records may be destroyed after they have been digitised as part of the Enterprise Content Management System; b) whether the retention of electronic copies of original financial records will satisfy the requirements of the Public Finance Management Act and c) on the legality of an electronic copy after the original paper and physical based record has been destroyed. The legal opinion found that no general authority had been issued by the head of service for the disposal of records that have been electronically reproduced. Therefore, despite provisions made by the Electronic Communication and Transaction Act (ECT) of 2002 and the Provincial Archives Act (2005), courts maintain a discretion to decide what the evidential weight of digitised documents will be. The implication is that in the "absence of a properly enforced records management policy and reliable and secure record keeping system, there is a risk that the evidential weight of electronic records is being diminished" (Reed, 2014). Rather than a new requirement, this finding actually reinforced the existing need identified in the Business Case to "Define and implement ECM Policy (including retention policy)" (Jacobs & Mohamed, 2013a: 7).

The 2014 legal opinion recommended that the Head of Service issue a directive or instruction on the digitising of records, explaining what standards and requirements need to be complied with when digitising them, under what conditions a digitised record could be destroyed or disposed of, and specifying which types of original records should be kept regardless of having been digitised (the recommendation made a suggestion on which records should be treated as such, based on international best practice). In May of 2015, during Phase 2 of MyContent rollout, the Head of the WCARS's confirmed in writing to all records managers that "this letter serves to confirm that the WCARS endorses the utilisation of MyContent (ECM) for implementation in the Western Cape Government Departments as an Electronic Records Management System" (Robertson, 2015).

Despite this endorsement and the Western Cape Archives' efforts to create readiness for the management of records in both manual and electronic environments, the evaluation team still encountered respondents who believed the ECM solution was not appropriate in terms of NARS guidelines for records management (FG64, FG72). While the letter made it unequivocal that WCARS endorsed MyContent, the letter did not go further to explicitly reference any policies, directives, guidelines or instructions to support the digitising, retention or disposal of records when implementing MyContent (or otherwise managing electronic records). (Further guidance was only provided in 2017 in the digitisation and records management policies – see below).

In October 2015, another legal opinion on the storing of emails noted that DCAS intended to develop a Western Cape Provincial Records Management Policy but that it had not done so yet. The legal opinion noted that this left a policy gap and anticipated that the "Head of Services will have to be approached urgently to determine conditions subject to which electronic records systems should be managed, and to obtain the appropriate disposal authorisations".

In 2017, when the transversal ECM implementation project was near complete, two policies were released that speak to these questions. The first is the Digitisation Policy of Western Cape Governmental Bodies (2017). This deals the digitisation of archival collections and explicitly excludes "digitally born" records. It states that even when such records have been digitised, the original physical records should not be destroyed. The second and most relevant policy is the Records Management Policy of Western Cape Governmental Bodies (2017). The policy is upholds the Record Continuum Model which is a conceptual model that deals with the recordkeeping activities in relation to multiple contexts over space and time and therefore facilitates a holistic view of managing information (Flynn, 2001; Svärd, 2013; Western Cape Archives and Records Services, 2017). The foreword of the policy places an emphasis on the changes and opportunities in records management as a result of innovations in ICT. It also notes a consensus among researchers that "many organisations including government departments pay little attention to management of records" and that the policy seeks to draw attention to the importance of this.

The Records Management Policy (2017) makes a few essential points.

On the question of roles and responsibilities, it states that:

- Records Managers must stay up to date on technology, "evaluate their potential impact on records management, and participate in their selection and use";
- Records Managers "in collaboration with the IT Department must ensure that electronic records in the custody of the governmental body are properly managed, accessed and secured"; and
- The Records Manager's role is to provide guidance, training and oversight to records management practices as per the Provincial Act and Regulations, but that "Records Management is the responsibility of everyone who creates records… Every employee is therefore responsible for creating and keeping such records as may be necessary"

On the question of training and upskilling, the policy states that:

- Records management staff are required to attend specific training (specified in the policy) and train other government officials.
- Records managers and IT practitioners are encouraged "to embark on continuous professional development so as to keep up with changes in records management, legislation and technology".

The role of the WCARS in this regard is to train Records Management Staff. The 2016/17 DCAS annual reports acknowledge the introduction of electronic records management in the WCG and indicates that in addition to the planned Records Management Training, Special Records Management training courses were provided to municipalities and the Department of the Premier and a total of 258 records management staff were trained in the 2016/17 year (Department of Cultural Affairs and Sport, 2016). WCARS has thus made some progress and effort in creating readiness for EDRM within the province more generally, but the extent to which this training is informed by the pre-existing need for guidance within WCG in relation to MyContent is unclear. Despite these efforts, WCG record managers have still not fully endorsed MyContent an EDRMS tool.

Furthermore, the Records Management Policy provides some of the clarity that was urgently needed according to the preceding legal opinions by stating the criteria for a record to have evidential weight and legal admissibility (including a file reference number from a WCARS-approved file plan). It also specifies the criteria that an electronic records management system must comply with in order to be acceptable while reiterating the endorsement of the 2015 letter, that ECM / MyContent is the approved electronic records management system for WCG departments.

Nevertheless, both awareness of this policy and practical guidance on its applications falls short of procedural clarity that is needed to operationalise electronic records management (or MyContent specifically). For instance, a records manager explained: "Then there is digitising… is there a standard? If it is not good enough who makes the call by what criteria? If we scan and change the time and date sequence and if a lawyer comes back to me and has a weak case and finds that the documents are not in sequence, he will say this is not acceptable and use it as a loophole. Unless we have a procedure that says, this is the criteria and this person at this institution authorise this procedure… then we have problem. Those kind of rules can be made by Provincial Archives." (FG64)

Over the course of the implementation of ECM, multiple drafts of the WCG ECM Governance Policy have also been produced (running from the first draft in 2014 to the fourth draft dated February 2017). This has not yet been finalised in an approved policy. The exact reason for this remains unclear.

Unstructured content

One of the consequences of the lack of sufficient guidance and monitoring of the use of MyContent for document and records management has been the proliferation of unstructured content on the server. While the Blueprint anticipated that this would be an issue, it did not consider the extent to which the introduction of an ECM solution could potentially perpetuate this in the absence of sufficient guidance. When considering the consolidation of content from the early adopter departments it would appear the WCG now sits with the challenge of a single MyContent instance, but with a much bigger (or at least consolidated) challenge of unstructured content and without a clear plan on how to address it.

Storage

The Storage Blueprint released in 2012 highlighted that the Western Cape was running out of physical storage space with less than 6 000 of 40 000 linear metres of storage space remaining (Western Cape Government, 2012). The majority of departments were found to not have transferred their A20 (permanent) records to the Western Cape Archives and that if all outstanding documents were to be moved, there would not be enough space to accommodate these records. Another issue that was highlighted was that the exact quantity of physical records in existence is unknown therefore making it impossible to determine how many of these records can be marked for disposal. The blueprint further noted that departments did not practice good records management principles, in addition record management practices are not consistently applied across all departments within the WCG (Western Cape Government, 2012). The key impact for all of the above-mentioned challenges is the potential loss of vital information.

These findings were further reiterated by the State of Archives 2014 report, which found that the state of government record-keeping is woefully inadequate and that public archives were also found to be neither equipped or resourced to provide the record management support as mandated (The Archival PlatForm, 2015). The challenge of storage highlights a key issue relating to the current paper-based record management practices occurring concurrent to, and as yet unresolved by, the rollout of ECM. The ECM transversal solution does not address this challenge which has raised concern over the perpetuation of inadequate user compliance with paper-based classification conventions on the electronic platform.

4.1.4 Synthesis

Considering the WCG's requirements for an ECM solution set out in the Registry/e-Filing Blueprint and Business Case more broadly, MyContent is considered mostly appropriate in terms of the WCG's needs for an ECM solution. While the ECM intervention is mostly appropriate in terms of design, how it has been rolled-out in practice and some aspects of planning for the intervention have been inadequate. The ECM solution motivated and planned for in the Blueprint, Business Case and supporting documents is considered relevant and appropriate overall, while noting there have been considerable deficiencies in terms of process and follow-through.

The purpose and intention of the ECM solution was well-motivated for and consistent with the overarching reform intentions of the Modernisation Programme. There was good reason to pursue such an intervention in light of the potential for time, cost and resource savings that could reasonably be expected based on the available evidence. The decision to pursue OpenText was informed by these imperatives and the practical and guiding imperative of limiting the resource costs, particularly in relation to historic instances. One of the shortcomings of the planning for the ECM solution was that none of the stated objectives were quantified within the WCG, nor were any of the targeted savings. The absence of this baseline information, or any related monitoring, has militated against the substantiation of any long-term claims

of savings benefit in terms of time, cost or paper reduction with regards to the overall objectives and results.

Given the purpose and intent of the ECM intervention, the institutional positioning and location at the outset of the process was logical but not ideal in terms of the eventual ownership of the intervention. DCAS was clearly the custodian in terms of mandate and expertise in the area of document and records management, but Ce-I possessed the IT capability required to enable the intervention. The duration of time it took to eventually install capacity from Ce-I in DCAS, rather than cultivate DCAS' capacity internally, was also problematic and still left the department under-capacitated.

There has been insufficient internal engagement and ownership of planning the ECM intervention design within DCAS by the role-players most directly affected by it, archives and records managers. This is particularly apparent when it comes to the participation of records managers in the aspired "centre of excellence" as well as formalisation of ECM policies and procedures.

The literature review highlighted that both Canada and Botswana grappled with issues of institutional positioning and location, not unlike the WCG. While mandate in the WCG was a key determinant of eventual positioning just like in the case of Botswana, Canada has been more flexible and drawn the strategic linkage under "information management", seeking to integrate a range of functions shared across departments. The WCG has grappled with a similar challenge but has yet to get the right balance of integration of key functions, particularly if it wants to drive best practice institutionally.

The WCG ECM experience has seen a proliferation of institutional structures, with some trial and error, and on-going changes to these between what was planned and what has transpired over time. While roles and responsibilities were set out more clearly at a high-level in the Business Case, they were slow to be owned by DCAS. Taking on coordination and communication responsibilities, both internal to DCAS and external to it, has been lacking, owing in part to the lack of adequate capacity allocated to DCAS and insufficient change navigation internally. Both of these have been critical success factors for the intervention and key assumptions unmet on which the programme theory's success is premised.

Challenges settling the institutional arrangements have clearly affected governance of the ECM intervention and hampered the ability to implement it against the design. Through a combination of reduced funding allocations and under-spending relative to the originally projected figures, the assumption of adequate budget availability has not held in practice and this has in turn restricted the capacity of DCAS to fulfil its responsibilities in addressing its own stated intentions of developing policies, providing guidance and supporting the realisation of record and documentation management standards using the MyContent platform.

The role of registries in terms of MyContent implementation, has been inadequately spelt out in the ECM planning documentation and this has resulted in insufficient engagement institutionally and internally to DCAS. As the role-players intended to benefit from time and cost-saving, there has

been insufficient and belated attention paid to their role and how to ensure electronic records management does not become a hybrid or parallel system, duplicating the document and records management work that ECM was intended to streamline. Similarly, there is a risk that shortcomings in the current application of the UFP are perpetuated into ECM if there is not closer cooperation in problem-solving. Cultivating the electronic records management capacity in this new environment is not easily done and the literature has highlighted that this requires building a skill-set and capability from within. Despite this, there has been an absence of leadership and guidance provided at the centre of the intervention and existing related issues, such as those of physical storage, remain inadequately addressed. This has contributed to some doubt about the ECM intervention, which appears to have been transmitted between records managers within departments more generally.

Lastly, over the duration of rollout and implementation the needs of the WCG have shifted and become clearer. The WCG requires the ECM solution to be driven as a strategic, transversal intervention with stronger leadership, enhanced capacity, and procedural guidance if its electronic records management are to meet the prescribed standards in practice. At the same time, this will require reversing the current trend of declining utilisation and participation in the system through a reinvigorated rollout approach and plan that will tackle the accumulated challenges arising from the difficulties in implementation to date and the growth in unstructured content in particular.

4.2 Efficiency

For the purpose of this evaluation, the ECM intervention under evaluation is judged in terms of the extent to which it has economically applied the resources and inputs available to it. Specifically, this criterion is reflected in terms of KEQ2. Is the existing ECM solution adequately resourced? This evaluation question and criterion is addressed by firstly setting out what the WCG's resourcing is in terms of the IT infrastructure and support. It then looks at the training and support of users, before addressing issues of financial and human resources applied to the intervention and the implications of this.

4.2.1 Is the IT infrastructure for ECM adequate? Is ECM adequately supported?

The theory of change notes that ECM is dependent on infrastructure: sufficient storage capacity, network bandwidth and geographic reach. A previous section has described what infrastructure was intended to be provided, and that it is the responsibility of Ce-I to provide it – although departments would take responsibility for "additional hardware".

The Business Case reports that by 2013, the infrastructure (server and ECM instances) used by the "legacy" (early adopter) departments had been consolidated to a central environment. The plan was to upgrade this consolidated infrastructure at 4 Dorp street in order "to cater for additional rollout to departments".

However, by the time the rollout of the foundation pack started in 2014/2015, the server capacity was not yet entirely in place, because of delays in procuring the needed infrastructure through / from SITA. A May 2015 presentation therefore noted that infrastructure was a key risk, with an impact on system performance and rollout. The presentation noted, however, that WCG had procured hardware and was installing it (Samaai, Begg & Mohamed, 2015) and later in the same year it was reported that the WCG datacentre had been capacitated and extra storage procured[12]. Thus, in practice, it took longer for the needed infrastructure to be put in place than originally intended, possibly slowing down the rollout of MyContent, and impacting on the user experience of the system. However, by the middle of the 2015/2016 financial year, it appears that there had been sufficient server capacity for ECM. From this point there is no further mention in documentation of server capacity constraints.

In terms of network capacity, there was a project to upgrade bandwidth across the WCG which was being implemented concurrently with the rollout of ECM. Before this upgrade, qualitative data suggests that ECM was severely hampered by the slow network speed, but as better bandwidth was put in place, the system's speed has generally improved. The qualitative data

[12] Thus a decision had been taken not to procure this hardware through SITA. An interviewee indicated that the hosting infrastructure requested from SITA was never developed.

suggests continued disparities in users' experience of network speed from one building / location to another, which need to be further investigated.

As noted earlier, the Department of Agriculture also operates on a separate network (Agri Net), which according to the DCAS staff did not comply with the WCG IT Network Standards at the time. This resulted in the department being de-scoped from the Phase 1 and Phase 2 contract. This department by all accounts seemed poised to embrace MyContent and drive the change with full buy-in of their senior management records management department. The fact that their unique network situation was not initially taken into account in planning and rolling out MyContent resulted in a missed opportunity to demonstrate what is possible when there is this level of buy-in. There is now a solution and an agreement to implement a web-based version of MyContent to that department.

If licenses are considered part of "infrastructure" more broadly, then it is relevant here that it took time until the number of licenses were increased to a more sufficient level for the transversal implementation of ECM. When rollout of MyContent to new departments began, there were about 13 500 (Department of the Premier, 2015) and usage reports show that just under 10 000 of those were being used for the pre-existing instances of ECM that were running in DTPW, DSD, DOTP and especially DOH. For the time being, the policy was to make 100 licenses available to (primarily senior managers in) each new department.

An enterprise license agreement (ELA) was then concluded via a SITA contract[13], which increased WCG's access to about 32 000 OpenText licenses. This only came into effect in April 2016/2017, when Phase 1 and Phase 2 rollout had been concluded. This meant that, even if the first 100 users were enthusiastic and lobbied for their department to be assigned more licenses (as the 100 user approach envisioned), there were limits on how many licenses they could be given within the first year or two.

The licenses now appear sufficient. Theoretically, the total number of potential MyContent users were 52 045: about 31 000 in WCED; 14 000 users in DOH; and 7 000 users in the other departments combined (Department of Cultural Affairs and Sport, 2015). It was agreed to focus the WCED rollout to about 2 500 admin and clerical function staff[14]. If one limits WCED's rollout to this number, then WCG now has enough licenses for ECM to be used transversally by all departments.

4.2.2 Does WCG have adequate resourcing? Is resourcing sufficient to maintain a growth in ECM maturity?

Financial resources

[13] A Ce-I respondent noted that given the number of licenses it was procuring, government was able to negotiate a significant saving in the cost per licence; this will be discussed further under the section on whether ECM has fulfilled the original vision.

[14] Information provided by DCAS ECM unit.

The Blueprint estimated the cost of transversal rollout of ECM at approximately R150 million over the MTEF (3-year) period during which ECM would be implemented. This included digitisation of general records but excluded digitisation of massive line function areas like patient files. Additionally, the annual operational costs (annual licencing, hosting, and maintenance and support) would be approximately R30 200 000 per year. The estimate assumed limited rollout to DOH and WCED (the two largest departments) and some rollout to municipalities via DLG (Department of the Premier, 2009). A 2016 report then stated that R300 million had been allocated over the MTEF starting in 2013/2014 (Saban, Begg & Samaai, 2016) and this is confirmed by data made available for the evaluation which states that the initial ECM allocation was R300 million.

Recent data shows that in the first three years of ECM transversal implementation, only R105 million was actually allocated – only a third of the intended R300 million. After six financial years, the cumulative allocated funds still only amount to R207.9 million. (The table also details transfers from DCAS to Ce-I in some financial years.)

Table 10. ECM budget allocations, 2013/2014 to 2018/2019

	Total	Allocation to depts.		Transfer (Section 33)	Allocation after transfer	
	Total	DCAS	CEI		DCAS	CeI
2013/14	R 10 400 000	R 1 200 000	R 9 200 000		R 1 200 000	R 9 200 000
2014/15	R 44 500 000	R 30 600 000	R 13 900 000	R 972 458	R 29 627 542	R 14 872 458
2015/16	R 50 524 000	R 36 143 000	R 14 381 000	R 18 000 000	R 18 143 000	R 32 381 000
2016/17	R 30 932 000	R 16 057 000	R 14 875 000		R 16 057 000	R 14 875 000
2017/18	R 34 780 000	R 19 161 000	R 15 619 000	R 4 805 000	R 14 356 000	R 20 424 000
2018/19	R 36 797 000	R 20 272 000	R 16 525 000	R 11 712 215	R 8 559 785	R 28 237 215
MTEF Budget	R 207 933 000	R 123 433 000	R 84 500 000	R 35 489 673	R 87 943 327	R 119 989 673

Qualitative data suggest that the substantially lower budgets are a result of budget cuts. Budgets have been cut across the WCG over this period, but some stakeholders also consider the cuts to the ECM budget to reflect a lack of priority assigned to it.

From discussions of the funding with Ce-I and DCAS officials, one can infer the following effects of the lower than expected levels of funding.

Firstly, some stakeholders have suggested that the service provider's implementation budget (and therefore scope) was too limited to thoroughly embed MyContent in departments (I49).

Secondly, the decision to rollout MyContent to only 100 users per department was at least partly driven by these budget constraints. While the enterprise licence agreement took longer than expected to negotiate, the 100 user policy was also a means of limiting the MyContent implementation service provider's scope to down because of the limited size of the service provider's contract.

Thirdly, it is possible that the absence of business analysts (even on contract basis) in the DCAS ECM unit is a consequence of this lower budget. Two

project managers as well as two business analysts were included in the DCAS 2013/2014 budget, but currently the unit only has two project managers.

Finally, the rollout to the final department without an ECM footprint, Agriculture, seems to be on hold until DCAS can procure a service provider for it; it is not clear whether funding constraints or other factors are serving to delay this.

Ce-I meanwhile covered the cost of infrastructure (licencing, hardware and hosting). It should be noted that Ce-I was upgrading its infrastructure not just for ECM and the expenditure on this has not been studied.

More detailed data was also made available on WCG's ECM licence expenditure. While this expenditure may not be directly comparable from year to year given the variety of licenses procured, it is notable that the average annual cost per licence was only R606 over the three-year period of the EIM Flex Agreement (2015/2016-2017/2018)[15]. By comparison, the average cost per ECM licence in the 2009/2010 financial year was about R796. This supports the original argument that WCG could negotiate a more favourable contract if it procured licenses centrally rather than on a department by department basis.

Part of the strategy for implementing ECM with a tight budget was to provide only a "vanilla" (generic) version of ECM. If an individual department wants to customise its ECM solution, for instance by developing unique workflows, it is expected to fund this customisation out of its own budget. For DTPW and the other early adopter departments, much value was derived from being able to tailor the solution to their needs. Most of the "new" departments undoubtedly see the potential value of customisation – as evidenced by their discussion of this in interviews and focus groups. Indeed, some assert that ECM is not worthwhile to implement in their department if it cannot be customised to be more compatible with their business. However, the evaluation has not identified any instances where, after the introduction of MyContent, departments have successfully budgeted and commissioned such customisation.

As has been documented since the beginning, additional hardware are also for departments' own account. Most departments need to acquire one or more scanners that have OCR functionality – these are a considerable investment (R40 000 (I93) or R60 000 (I28) or R98 000 (FG57)) which have to be budgeted for. Departments' end user equipment (computers etc.) are varied in terms of age and type; some equipment needs to be upgraded or replaced in order to be compatible. The extent to which departments struggle to provide this hardware appears to vary widely from department to department.

[15] This calculation is based on the assumption that WCG could use up to 32 000 licences per year on this agreement – as stated in the minutes of the meeting where the enterprise licence agreement was approved (Department of the Premier, 2015). See appendix for the data and calculations.

Human resources

While budgets may have been limiting, the lack of human resource capacity is arguably the single most limiting factor in the WCG's efforts to promote ECM in government. As mentioned earlier, the Business Case had proposed an ECM "centre of excellence" that would support and drive ECM implementation and ongoing improvements in ECM maturity. The "centre of excellence" was nominally established, but it consisted largely of vendor resources, and left WCG dependent on the vendor and with a "skills continuity… risk because of insufficient in-house ECM skills" (Saban *et al.*, 2016). It appears that the "centre of excellence" being referred to is the DCAS ECM directorate but it is argued that a partially filled staffing contingent does not fulfil the spirit of a "centre of excellence".

The vendor contract has now come to an end, leaving only the DCAS ECM unit. As discussed earlier with reference to Figure 10, the DCAS ECM directorate consists of five staff positions which appears still to be additional to the establishment. The deputy director post has remained vacant until now. The two assistant director positions (project managers) have been contracted to DCAS from the service provider. With these four individuals, DCAS effectively has the responsibility to drive all aspects of ECM except for the infrastructure.

Thus, the number of individuals in DCAS are not sufficient to support ECM across all thirteen departments. Apparently for this reason, the directorate has focused its support primarily on the "new" departments, as opposed to the early adopter departments. It may also be that the slow progress in institutionalising ECM – such as the fact that the foundational documents for transversal ECM are still in draft form (e.g. ECM strategy; ECM governance policy) – is a result of the limited number of staff in the directorate.

Furthermore, in terms of skills, the ECM Draft Strategy argues that the ECM team in WCG should have core skills of project management and "ECM savvy business analysts". While the current staff of the ECM directorate have project management skills, they do not have business analyst (BA) training. Several officials in interviews, focus groups and surveys raised this as a gap in the way ECM has been implemented so far. They argue that without an individual who can get to know the department's business and work with them to make use of what ECM offers, their processes cannot benefit from and embrace ECM as was intended.

It is further notable that none of the DCAS ECM directorate staff have a records management background. This means that they are not well positioned, on their own, to ensure the adaptation of records management practices from paper-based to ECM-based systems – nor to work out the regulatory, practical and software-related implications of departments de facto running parallel paper-based and electronic records management systems for the next few years. The fundamental assumption that ECM will transform records management, therefore can only be realised if the ECM directorate staff liaise closely and constructively with their records management colleagues in the larger DCAS archives directorate, and with

records managers in the user departments. To date, this has not occurred sufficiently to the detriment of the intervention.

Finally, change navigation was clearly recognised as a crucial determinant of ECM success in WCG (see previous section). However, the ECM directorate has no staff with a background in change management. Instead, a number of departmental senior managers were expected to fulfil roles as change agents and the service provider was tasked with operationalising change management, while it was also recognised that ongoing change management would be needed around ECM. For this reason, change management support was to be offered by the transversal change management unit in DOTP (under the CD: Organisational Design). Until now, the cooperation between this unit and the ECM unit has not occurred as intended (I81). This left the ECM solution without the needed human resources to plan and implement change management processes in departments, so that change management "collapsed" (I81) and became "one of [the] biggest challenges" with MyContent (I13). Without sustained transversal change management process around the introduction or continued promotion of ECM, it is unsurprising that departments have taken on the responsibility to manage this change to highly varying degrees, with early adopter departments more attenuated to importance of this.

Progress reports over the last year indicate there was a renewed decision for the DCAS ECM and DOTP change management units to work together with regard to change management (Mohamed, 2017). If this is to be more effective going forward, it should not be approached separate from practical implementation issues - as one stakeholder pointed out, it is important to understand that change management "needs to advise on and guide actual implementation processes, they need to get their hands dirty… they should play a leading role in developing an integrated implementation plan" (I97).

The mixed track record on ECM support is also attributable, at least in part, to insufficient human resources. Ce-I (which is responsible for third-line support) is widely reported to provide poor technical support when it comes to MyContent, with their staff not sufficiently acquainted with MyContent to resolve technical issues. Users across the board have experienced a lack of response to certain types of ECM technical support requests (see later sections on user experience). Some users have also experienced being sent back and forth between DCAS, Ce-I and the service provider (I7). The fact that users are not given clear and effective direction on where to go for support, may also be an indicator of stretched capacity or misallocated capacity between DCAS and Ce-I to design, communicate and operate a seamless support system. It is also not lost on stakeholders that DTPW, rather than DCAS, is being approached to offer MyContent training to other departments (FG52).

Together, these human resource constraints have a significant effect on the ECM interventions ability to achieve its objectives:

"The system can work, but it's people and lack of support." (FG57)

"ECM is operating with next to nothing; they don't have resources. [*The project manager]* has been seconded (from Ce-I) and is operating on a contract basis. If they are to rollout to all 13 departments they won't be able to provide the support. It is frustrating and also affecting progress with the rollout of MyContent. After *[initial implementation]* they won't be able to support the system if they are operating the same way." (I88)

"The mandate says roll this out to all, but people don't know what to do with it. Without intervention it's never going to go anywhere… [*DCAS has*] limited time because it is 2 people [*project managers*] dealing with so many departments." (I6)

"I have a lot of users asking me, "When do I use sharepoint and when do I use ECM?" There is no support and we don't have IT units in our departments. How do we determine which value we could derive from ECM? We have no support, no BA coming in to give use advice. I think that is how we can derive benefit from ECM." (I7)

Also within departments, the widespread view is that internal capacity is insufficient to fulfil ECM functions, as Table 11 shows.

Table 11. Focus groups' agreement with the statement: "Our department has adequate internal capacity (skills and time) to fulfil the Enterprise Content Management function"

Department	*Response (consensus)*	*Key points raised by respondents*
PT	Disagree	Participants had different views on whether the challenge is related to skills, time, or both.
DOTP	Strongly Disagree	
HS	Strongly Disagree	
LG	Strongly Disagree	Limited use of MyContent. Participants cited the small size of the records management unit as a capacity constraint for the adoption of MyContent.
DEA&DP	Strongly Disagree	
DEDAT	Disagree	MyContent-related responsibilities were described as being added on to staff's existing responsibilities, stretching their capacity.
DOCS	Agree	Because of the limited implementation of MyContent in their department, participants felt that the MyContent-related workload was reasonable for now.
DOH	Strongly Disagree	
DCAS	Agree	Note: only one participant
DSD	Disagree	Participants distinguished between capacity for driving ECM implementation in the department (sufficient skill levels but workload is a challenge) and users' capacity to use the system as intended (possibly insufficient skill, particularly among staff on the ground such as social workers).
WCED	Strongly Disagree	

Department	*Response (consensus)*	*Key points raised by respondents*
DTPW	Disagree	Participants cited various functions for which DTPW's capacity is insufficient: user support; e-registry clerks; remote user training and change management.

As respondents point out, DOH and DTPW, over their years of implementing their own ECM solutions, did put in place dedicated human resources to support ECM (I13; I7). These are two large departments that introduced unique versions of ECM when there was no transversal support. It may not be necessary to appoint more staff in all departments just to support MyContent, but the responsibilities associated with ECM must be clearly assigned and the effect on workload considered.

It is alluded to above that records managers have a crucial role to play in adopting ECM for management of electronic content. Policies and procedures need to be amended, electronic file plans need to be developed, guidance given to users, and corrective steps taken if user behaviour on ECM is not in line with what is required for compliance with records management regulations. It seems clear given the current legal and policy context that the upskilling of staff to enable the adaptation of electronic document and records management will be a gradual process, playing out over the medium term, with gradual shifts in records managers' roles.

But many records managers have by their own admission not taken full ownership of MyContent, nor have departments planned for the human resource implications of the transition from paper to electronic records management. The approved Registry/e-Filing blueprint (2009) proposed a prototype structure which was envisioned to be used by all the departments (as shown below):

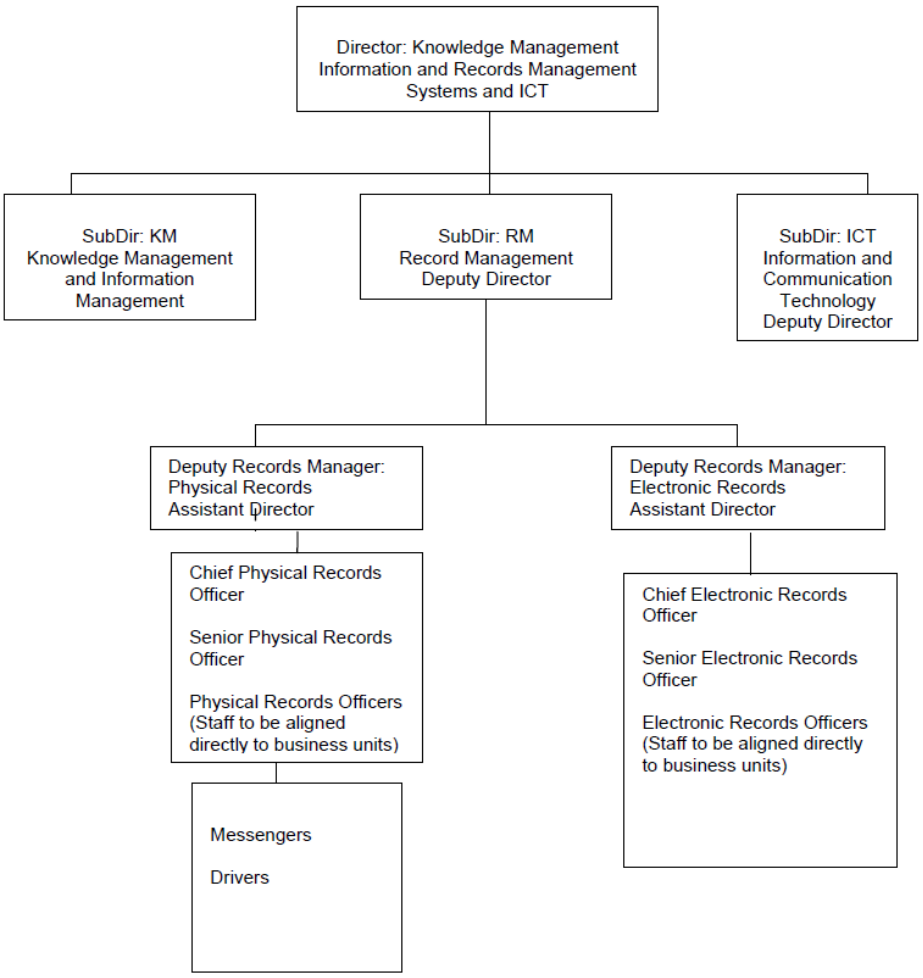


Figure 13. Proposed prototype structure
(Department of the Premier, 2009: 66)

Qualitative engagements (FG68, R81, R9) referred to a structure that was approved via the Blueprint, however it was noted that the structure had not yet been practically realised in departments.

There is a variety of reasons for this – including perhaps the limited involvement of records managers in the conceptualisation and introduction of MyContent. There seems to have been an assumption that the ECM implementation project would derive sufficient records management expertise simply by being positioned under Archives and Records within DCAS, and that their periodic engagement with the Records Managers' Forum would be sufficient in terms of communication with records managers, but this has not proven to be the case. The Records Management Policy clearly states records managers' responsibility to participate in the "selection and use" of electronic records management systems and then to ensure electronic records are properly managed. Despite this policy position, many records managers have not fully bought in MyContent and have therefore not driven its adoption in their departments. The Policy calls for records managers to collaborate with the "IT department" and one can argue that the DCAS ECM unit is the equivalent in terms of the policy intent. The Policy was however only introduced in 2017, after MyContent was rolled out. The human resource

implications of ECM for departmental records management units remain to be worked out and may require upskilling in order to work effectively on the electronic system.

4.2.3 Is the training and support of users adequate?

Training and confidence

As discussed earlier, user training on MyContent has been provided since the rollout started – first by the service provider and more recently by DCAS's own staff. Training efforts have recently ended, pending the conclusion of this evaluation.

The training provided between 2016 and 2018 by the service provider, according to a DCAS ECM project manager, usually consisted of a morning on MyContent Essentials (basics to get started on MyContent) and an afternoon of induction on Correspondence Tracking.

A more recent training report with an attached list of participants shows that 2064 WCG individual staff have received some form of MyContent training (some received more than one module). Most of these individuals have only attended MyContent Essentials and/or a combination of MyContent Essentials plus Correspondence tracking. Only 97 DTPW and 51 DSD individuals are listed as having undergone training. Excluding them (since training was not aimed at them in terms of DCAS and the service provider's scope), the training has reached about 44% of the total 4328 users in the rest of the departments. Thus somewhat less than half of the users. In the service provider's reports, participation is consistently listed as an issue, i.e. the venue and team have capacity to train more participants than are coming to the training.

Table 12. DCAS trained MyContent users vs. Registered MyContent users
(Source: Department of Cultural Affairs and Sport's WCG MyContent Training report (April 2018))

Number of participants trained (excl. DSD and DTPW)	Number of potential trainees (excl. DSD and DTPW)	Percentage
1916	4328	44%

It is also interesting to note, from the latter source, that 450 individuals are listed as having undergone training on other modules (listed below).

Table 13. Additional training modules
(Source: DCAS MyContent Training Report April 2018)

Module	Nr of individuals
MyContent Electronic Records Management	45
MyContent Scanning Essentials	269

MyContent Super User/Administrator	86
MyContent Support Training	50
Total	450

The WCG staff in the survey were also asked whether they received any formal training in how to use any of the MyContent features/functions/modules. The question was asked and applied to WCG employees that had previously within the survey indicated joining their current department prior to 2016[16], and Figure 14 illustrates that 60% indicated that they had received formal training. This is somewhat higher than the percentage above, but should not be compared with it since not all users completed the survey. What is interesting, however, is that seven percent were either not sure or did not know.

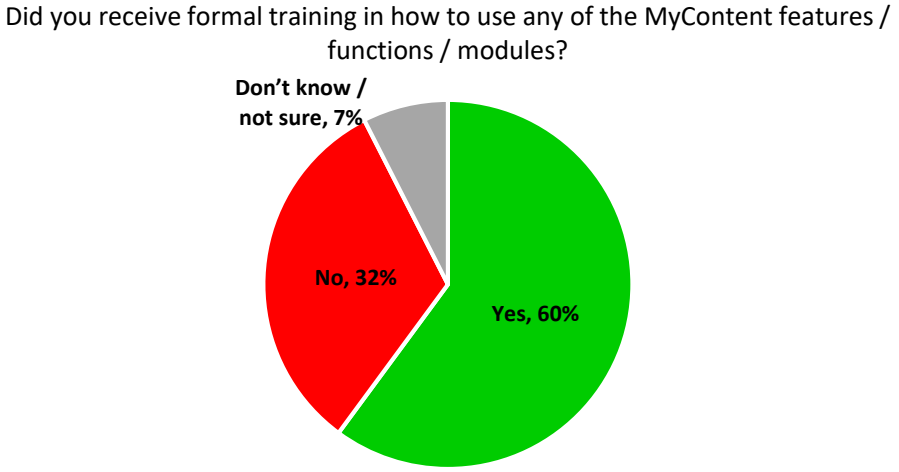


Figure 14. Pre-2016 employees formal training (n = 1041)

[16] Post-2016 appointees were not asked this question because it was possible that they were simply to new in their department to have received the training.

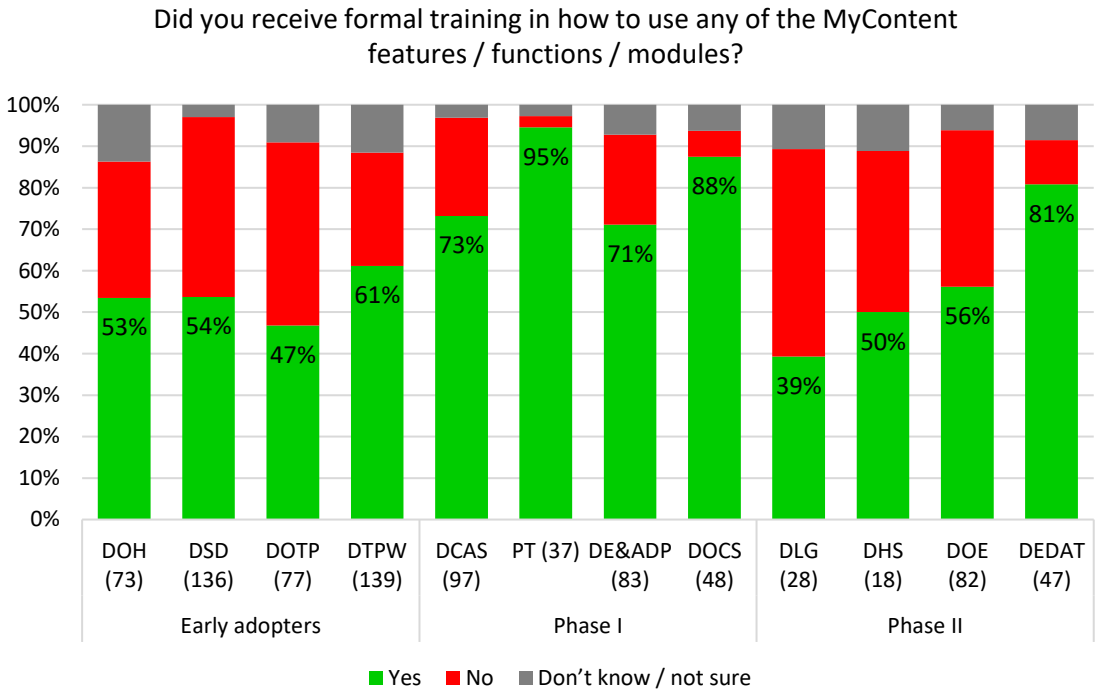


Figure 15. Pre-2016 employees formal training per department

Figure 15 disaggregates responses to the training question by department (the number of responses per department is indicated in brackets). Although the graph illustrates varying levels of self-reported training across the departments, the key highlight is the amount of users that reported to have received formal training within the Phase 1 departments. It also shows that the users who selected "don't know / not sure" were concentrated in the early adopter and Phase 2 departments. Early adopter (DOH, DOTP and DTPW) staff might be unsure because they are not sure of the distinction between training on MyContent vs. their historic training on their department-specific instances of ECM. For the Phase 2 departments it is less clear why they would not be sure whether they received formal training.

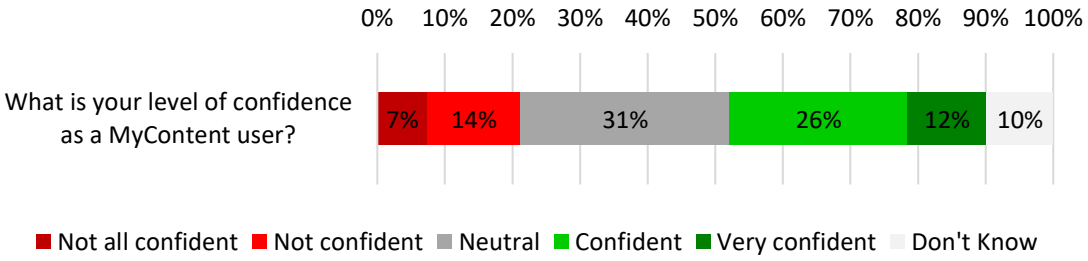


Figure 16. MyContent user confidence level (n=1130)

Figure 16 expands on the user training experience. The survey asked users to rate their level of confidence on a scale of no confidence at all to very confident. Of the 1130 users who answered the question, the graph above indicates that nearly four in ten (38%) of the users expressed some confidence in using MyContent. A large portion of the users (31%) were

neutral, while a combined 21% expressed a lack of confidence (not confident or not all confident). These results are concerning considering the intention to get transversal take-up of the system.

One would expect that the training provided to users would have improved their confidence in using the system. Yet there appears to be an inverse relationship between having received training and feeling confident with MyContent. Among respondents who reported not being trained, confidence levels are generally higher, as shown in Figure 17. This may be explained by the confidence developed by users taking responsibility for their own utilisation of the system in relation to specific functions or needs. Nevertheless, the fact that a combined 23% of trained users still express a lack of confidence and 29% are neutral, indicates that the training currently offered is insufficient on its own to ensure user confidence.

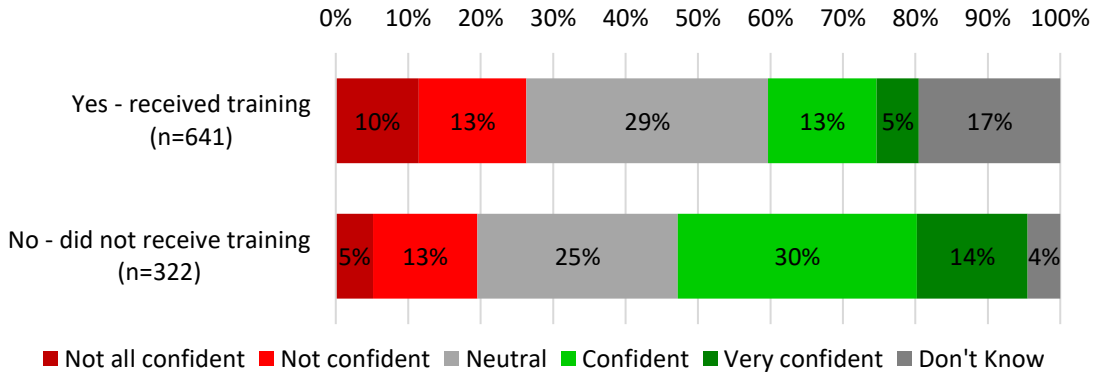


Figure 17. MyContent users' level of confidence – trained vs. non-trained users

Confidence also varies widely by department. Figure 18 reflects users' responses to the question on confidence, except in this case the responses have been disaggregated into different departments.

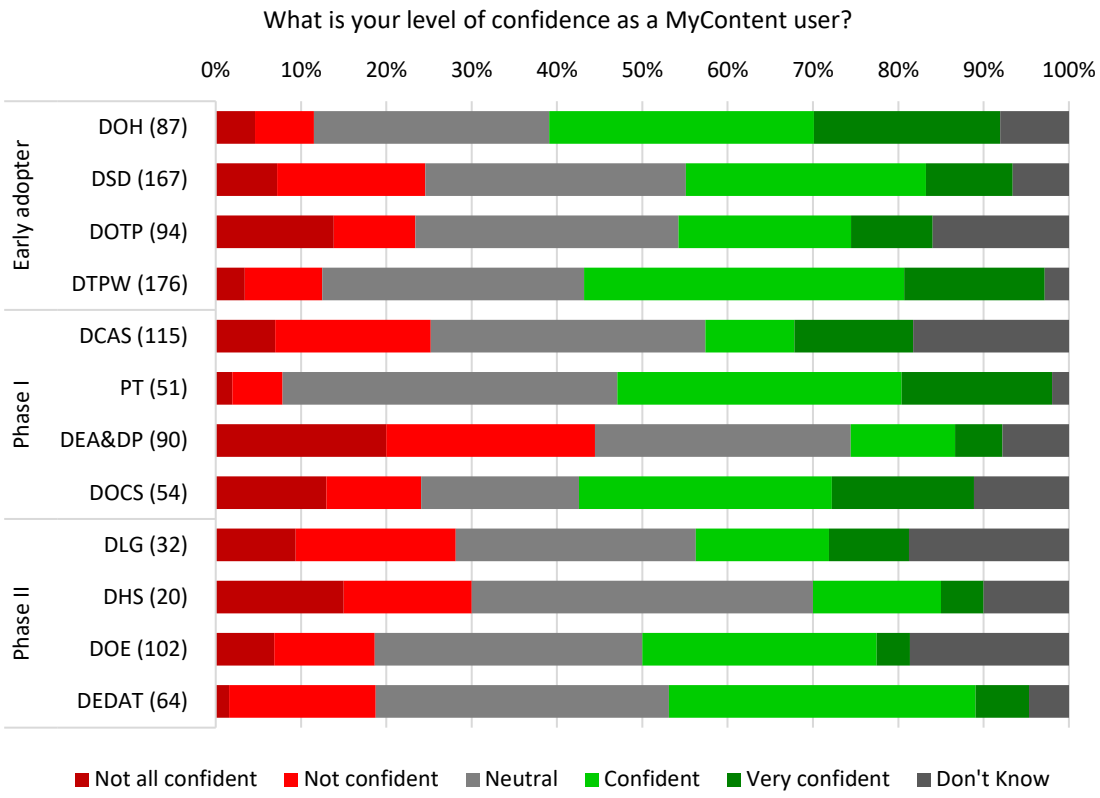


Figure 18. MyContent users' level of confidence per department

The low levels of confidence shown in Figure 16 can be better understood by examining the various opinions shared by respondents in the qualitative data collection process. Respondents expressed the following issues with the training that was provided:

"When we received training on MyContent, it was via a presentation and not hands-on training where each trainee has a computer to train on (as is the case with Microsoft Excel training for example), so it was difficult to grasp how to work within My content" – FG75

"Not well as the training is basic and don't tell the user how it can be implemented in their work environment" – I26

"We got training in 2014, like I said we were trained and a month later I couldn't tell you what we did. We don't recall, it was a presentation." – FG68

"Besides the presentation the training that was provided was quick and rushed through, when we got back to the office we didn't practice the training we received. Between the time we received the training, and the rollout there was a time lapse. By the time we rolled out we have forgotten the things we learnt." – FG64

Thus, respondents' statements on the actual content of the training and the type of training provided, reveal some degree of frustration with the training, which may be a key factor in explaining the significant amount of "neutral" responses. This is surprising, since the user training Monthly Highlight Reports (for training provided to "new" departments only – not DSD and DTPW) reported a consistent user satisfaction rate of above 90%. The short

questionnaires from which this user satisfaction rate was calculated included relevant statements on whether the users understood the relevance of MyContent, felt that they would be able to use what they learned in their work, and had felt encouraged to participate and ask questions. It is unclear what explains the contradiction between the positive ratings at the time and the survey data.

The graph presented earlier further reveals that DTPW MyContent users have the reported highest confidence rates, with 54% of the users who undertook the survey rating their MyContent usage confidence level as either confident (38%) or very confident (16%). This corresponds with qualitative data; it was even reported that DTPW provides training to other departments and to DCAS itself as the custodian department of MyContent. This may be explained by two things. Firstly, the department is an early adopter and had a pre-existing ECM OpenText solution prior to the introduction of MyContent thus employees within the department have been exposed to an ECM solution for a longer time.

Secondly, the department's own recent internally driven initiative may help to explain DTPW users' confidence. As part of the department's migration plan, a MyContent revitalisation project was launched in April 2017 under agenda 29: "address post issues and risk" of the department's plan (Barbier, 2017). The department had migrated its ECM OpenText solution to the MyContent platform, however migration process resulted in a decline in user activity figures. The project was thus a response to and aimed to address the decline in user activity figures. Part of this project included providing MyContent training to local and regional employees of DTPW; this training was completed at the end of October 2017 (Barbier, 2017).

DOH[17] and PT respondents are close behind, with 53% and 51% of respondents expressing confidence, respectively. PT also has the lowest percentage of respondents expressing an actual lack of confidence (only 2% "not at all confident" and 6% "not confident"). It is notable that despite the overall inverse relationship between training and confidence, PT users, of whom over 90% reported to have received training, are the most confident among the "new" departments. This should be seen in light of the qualitative descriptions of PT as the "new" department with the highest levels of buy-in and regular use of the system.

Since it was anticipated that formal training may not be the only factor accounting for user confidence, survey respondents that identified as "very confident" MyContent users were further asked to provide additional comments on what encouraged or empowered them to use MyContent other than formal training. A large portion of comments from survey respondents across all the departments directly attributed their increased amount of confidence to frequent usage of the MyContent system:

[17] It was noted that DOH users work very regularly with a small subset of the ECM solution's features. Their responses may primarily refer to their confidence on this, not on the full suite of features / functions and so should be interpreted with this limitation in mind.

"I became confident because of working on my content on a daily basis."

"I use My Content on a daily basis so I have to know the in and out of where to search for documents and downloading them."

"I think that by actually using MyContent on a daily basis, therefore becoming more familiar with the system."

The reasons for frequent usage were mostly linked to users' job responsibilities. Users were either administrator or responsible for implementing MyContent within their departments hence this created a need to know and "master" the system.

Furthermore, users also referred to self-teaching as a deliberate act that they undertook and has directly contributed to their high level of confidence in using MyContent. The following survey responses reflect this:

"I taught myself by going through the MyContent page and also with assistance with some colleagues that worked for a while on it when I got stuck, I did not receive any formal training on it and that is such a big schlep....."

"I am technically minded and always teach myself on any software."

It is clear that the mere attendance of training does not ensure users' ability to confidently use MyContent. In addition to the significant amount of "neutral" responses and reported dissatisfaction with the training that was provided, this conclusion is supported by respondents' comments on their high confidence levels which was driven by frequent usage, various self-teaching mechanisms or internal departmental driven initiatives.

Support

As Figure 19 shows, survey respondents had mixed views on whether the guidance and support offered at the time of rollout was sufficient – only 38% expressed agreement with the statement while 32% expressed disagreement. This reinforces the findings around the insufficiency of the formal training that has been provided, but also suggests weaknesses in the broader support offered, such as written guidance, user / technical support and informal support from colleagues.

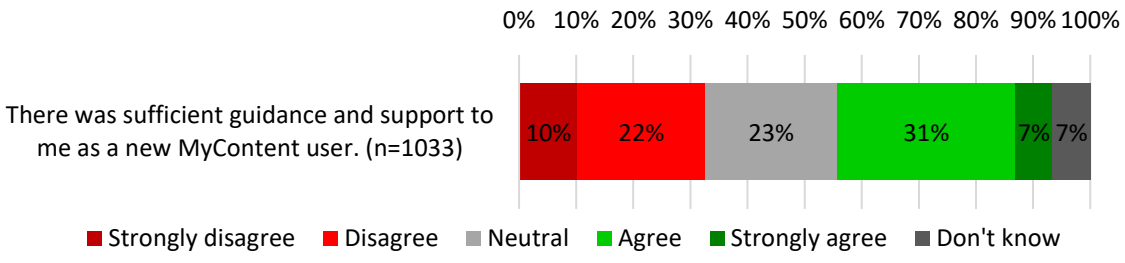


Figure 19. Survey results on the sufficiency of guidance and support to new users

To understand why users experienced guidance and support as insufficient, it is necessary to understand what guidance and support was planned and implemented, in the departments as well as transversally.

As part of creating an "ECM organisation", the establishment of a user support team and technical support team were identified as some of the critical success factors as per the draft ECM Strategy Document (Mohamed, 2016). The technical team was to be tasked with keeping the ECM system up and running (a 3rd line of support). The role of the user support team was to provide 2nd line support to the end user community by working closely with the technical team to identify issues, trends and prioritise system fixes, while the first line of support would be the point of contact with the issue, whether the Help Desk or internal to the department. The strategy does not explicitly mention the establishment of these teams within each department. In the absence of an approved policy or guideline in this regard, this is not entirely clear and different respondents have offered different descriptions of how the 1st, 2nd and 3rd lines of support work in practice. This lack of clarity is also expressed in the survey responses presented below and is at odds with the Business Case's delineation of roles and responsibilities between DCAS, Ce-I and Departments as previously presented in Table 6

Table 6 which allocates departments with the responsibility of providing end user support.

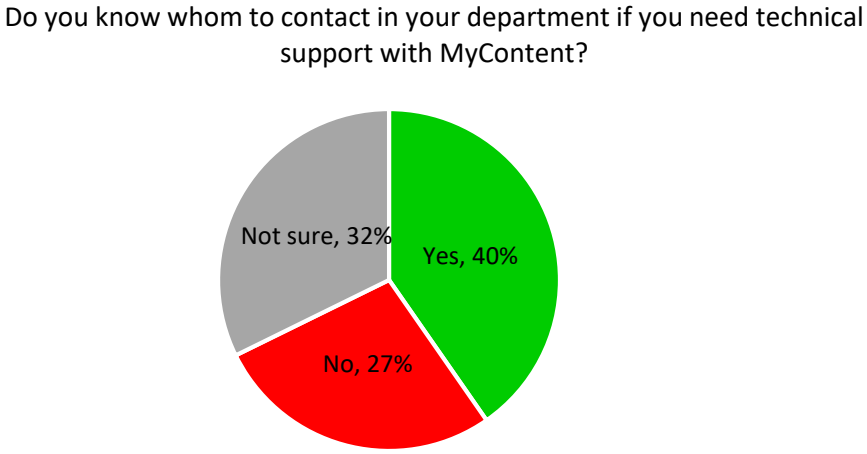


Figure 20. Knowledge of whom in the department to contact for technical support (n=1123)

As a gauge of the quality of internal departmental communication about MyContent support, survey respondents were asked to indicate whether they know whom to contact within their department if they needed technical support with MyContent. The graph indicates that less than half (40%) of the surveyed users know whom to contact within their department, 27% indicated that they did not know, while a significant portion of 32% reported that they were not sure.

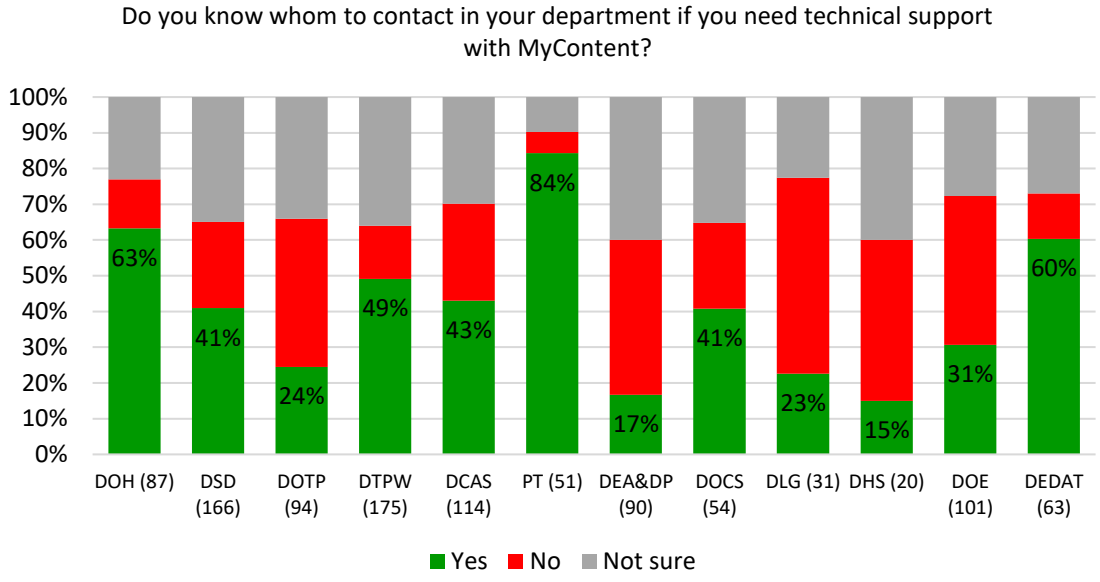


Figure 21. Knowledge of whom in the department to contact for technical support, by department

Again the disaggregated responses to this survey question are telling. Only in three departments (DOH, PT and DEDAT) do more than half the respondents indicate that they know whom to contact. DHS and DEA&DP

respondents appear particularly poorly informed. This is most likely linked to the very low take-up of the system in their departments coupled with the lack of clarity around who has these responsibilities in practice.

As for requesting technical support from outside their departments, a large number of respondents, both those who undertook the survey and in the qualitative sessions, reported that they (informally) contact a MyContent team member from DCAS as opposed to logging a call electronically (which would go to Ce-I and either be resolved by them or sent to DCAS depending on the nature of the request). The informal channels that MyContent users follow to get technical support reflects their general frustration with the technical support provided.

One of the enduring challenges related to support is the absence of a clear directive or guidance in this regard. Since both DCAS and Ce-I provide support to ECM users, first-hand experience has proven more illustrative of how this has occurred over time. An official explains that:

"The 1st and 2nd line is a bit disparate at the moment because while Ce-I provides 1st and 2nd line support to a number of departments via service desk, because the MyContent mandate was handed over from Ce-I to DCAS 4 years ago, they also took with them responsibility to provide 1st and 2nd line support in terms of their implementation of the product. However, given certain governance and supply chain capacity challenges, Hilton and his team have also supported them with 1st and 2nd line support. Primarily, the role still resides with DCAS," (I50).

A few users have shared their frustrations with this arrangement. A participant states:

"Support that needs to be provided during implementation is lacking. Lack of staff in the MyContent team understandable, however, one must ensure support is in place. You can't start a rollout in 12 depts and have no support," (FG57).

"There is a slow pipeline, hardware and networking constraints. Ce-I has limited staff, for them to isolate their building and solve the problem is an issue. With Treasury the issues were with software and aging infrastructure, they requested this to be updated but it takes a financial year. Province's response to challenges is not as fast as it should be because of bureaucracy. It often takes 6-12 months to solve it.," (I15).

Another participant explains that:

"With regards to the software, this is where we face a hiccup lately we have had hiccups, the system is offline, people can't view the screens, users send us screenshots of their issues and then I don't know if you should contact DataCentrix or Ce-I or the MyContent team. There is no clarity on who is the line manager or support and who is the point of contact. We will contact Ce-I then they will tell us to contact the MyContent team, which will then tell us to contact DataCentrix and the turnaround time is long. With Ce-I it actually takes 4 days" (FG64).

Due to these difficulties, most departments have capacitated themselves either by having a 'super user' teach other staff members or a training team within the department in-house instead of having to rely on the help desk. A participant state that:

"we roughly know what to do in simple cases. It's better to resolve in house than flood the help desk," (FG56).

4.2.4 Synthesis

This section has considered the extent to which the transversal ECM solution in the WCG has benefited from the necessary inputs of infrastructure, support and resources.

This section has described server and network infrastructure that was initially constrained, but was upgraded and augmented during the period of ECM rollout, so that they are now more adequate transversally, while noting some locality and department specific issues. Similarly, too few licences were available in the initial stages of rollout, but with the approval of the ELA, licences no longer appear to be a constraint. There is also now a feasible way forward for implementing ECM in DoA, whose exclusion from earlier rollout phases was a result of network limitations. Considering these issues at a departmental level, the initial rollout does not appear to have met one of the key assumptions that the stepwise and incremental rollout of the MyContent Foundation Pack was appropriate as initially implemented, although this has been rectified to an extent.

While it is hard to judge the sufficiency of financial resources available for ECM implementation, the fact that Ce-I was able to fund the above-mentioned infrastructure suggests that it eventually (if somewhat belatedly) obtained sufficient resources to fulfil its responsibility with regard to transversal ECM infrastructure. It is harder to gauge the same for DCAS, which procured the services of a service provider for the rollout to departments while also taking on some functions in-house. It is clear that the expenditure (whether due to reduced budget allocations, under-spending or a combination of the two) was not commensurate with the originally planned amounts and this has been identified as an inhibiting factor in the realisation of the ECM interventions objectives. This resonates with the experience of Botswana and Canada which has also identified austerity as one of various constraints to effective rollout and implementation of ECM.

Transversal human resources are extremely constrained, especially now that the service provider's contract has come to an end. The human resources available to fulfil DCAS's role fall considerably short of the needs and intentions described in the planning documents. Not only does the ECM directorate have a small and mostly contract-based team, but the team does not include a business analyst, records manager, or change management specialist. DCAS has the ongoing responsibility to support these crucial aspects of ECM implementation; the directorate must therefore secure the

cooperation of other units, which it has only succeeded in doing to a limited extent.

The individual implementing departments also appear not yet to have made the necessary human resource management adjustments to account for the introduction of MyContent, particularly as it pertains to records management. The success of the initiative also rests on departments taking a degree of responsibility for user support and communication and internally, but as the survey has demonstrated, this is clearly still lacking.

In light of the extremely constrained human resources for ECM, it is perhaps not surprising that the survey shows mixed results on the training and support offered to users. Up to half of ECM users have had some formal training on MyContent, but the survey shows that the kind of training offered is not unanimously considered valuable, and does not guarantee users' confidence as MyContent users. Ongoing user support is provided by DCAS and Ce-I, but users experience challenges particularly in the service from Ce-I, and in a back and forth between them.

In conclusion, the transversal rollout of ECM has been, and continues to be, constrained by resources – with human resource constraints being particularly debilitating. The reality is that the WCG, much like in the case of Botswana, does not have an organic pipeline of the bridging skills for electronic records management. In the WCG's case it does not seem to be adequately facilitating that bridging of skills, nor building the institutional capacity requisite for it to sustain the proposed "centre of excellence" which has not materialised in practice.

4.3 Effectiveness

For the purpose of this evaluation, the ECM intervention under evaluation is judged in terms of the extent to which the objectives of the ECM intervention have been achieved. Specifically, this criteria is reflected in terms of KEQ3. Is the ECM solution effectively utilised? This evaluation question and criterion is addressed by firstly setting out the extent to which users have adopted MyContent, before unpacking users' experiences, including successes and challenges. The evaluation then presents findings on the extent of utilisation and what this means for the overall level of ECM maturity. The findings identify the key value of ECM and some of the best practices to date, as well as reflections on the extent to which the legal requirements for records management have been met. Finally, the section concludes with findings on the extent to which the vision set out in the e-Filing Blueprint and Business Case has been met.

In line with the theory of change, there are inputs and activities that each department is intended to undertake; which results in an anticipated output yield for the full optimisation and usage of ECM. In order for the full adoption of ECM to be realised, departments would need to have:

- Departmental users operating on a common platform
- Users using the ECM package (take-up)
- Users adopting ECM-supported practices, protocols and standards in doing their work
- User support and communication
- Participation in transversal structures
- IT governance, system administration and change control
- Identification of plans for addressing further departmental needs

4.3.1 Have existing users effectively adopted ECM?

Rollout experience

Transversal rollout of ECM

As mentioned before, rolling out a transversal ECM solution required two fairly different ECM "interventions": consolidation of disparate ECM instances; and rollout to new departments. These are discussed here in turn.

Previous sections have discussed the value proposition of ECM and argued that it was largely valid. However, staff were somewhat uncertain of the idea of ECM, as demonstrated (Figure 22) by less than half (48%) of the survey respondents that agreed with the statement that the potential value of MyContent was clear to them by the time it was given to them. Furthermore, slightly more than half (52%) agreed that MyContent is better than older ways of doing things (although more than a quarter of respondents either didn't know or didn't have an opinion). Therefore, there was the potential for departments to adopt such a system.

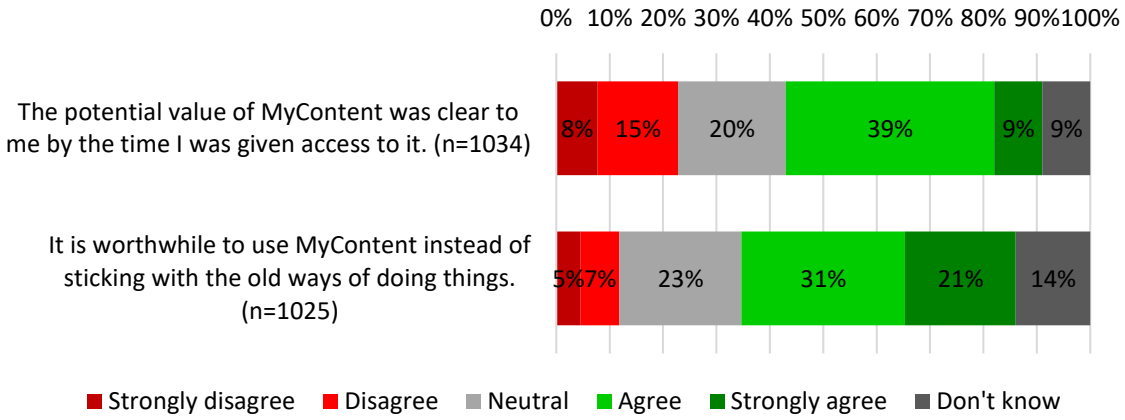


Figure 22: Support for MyContent

However, both the early adopter and "new" departments have experienced challenges with the rollout of ECM and MyContent – in fact, as shown in Figure 23, the portion of survey respondents expressing disagreement with the notion that rollout went smoothly (35%) is larger than the portion that express agreement (27%). The key challenges identified are:

- Change management: guidance and support issues.
- Licensing: mainly for early adopter departments and departments part of the phase 1 rollout.
- Infrastructure: system and network issues.

Figure 23 also shows a high percentage of participants who indicated that they are neutral or answered 'I don't know' to this statement. This could be due to respondents believing they were too removed from the side of implementation to have an informed opinion regarding these statements.

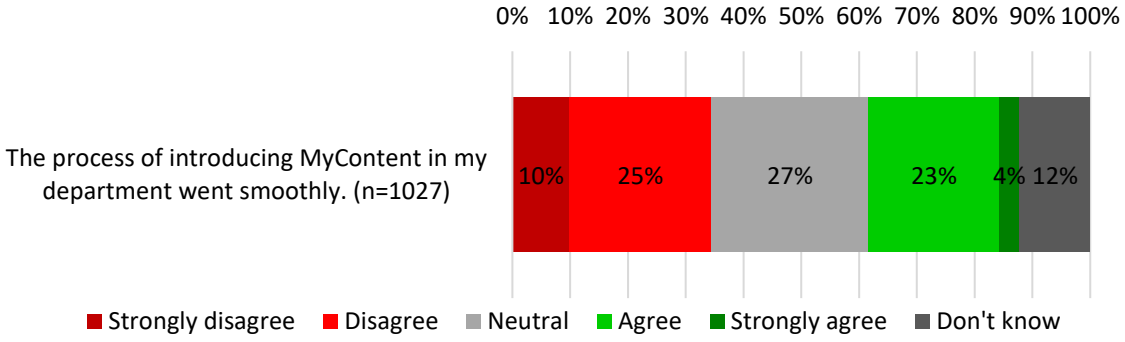


Figure 23: Experience of MyContent rollout

Consolidation of the early adopter departments

Before the transversal solution was rolled out the early adopter departments already had ECM instances that had been implemented by different service providers over several years. For instance, DSD had historically worked with DataCentrix, whereas DTPW had worked with Business Connexion (BCX). The departments worked closely with their relevant service providers and to an

extent these departments became independent and self-sufficient. However, when these departments undertook consolidation of their respective ECM instances, this did not occur without its challenges.

One of the key challenges was related to the issue of licensing. Due to the license agreement only being concluded in 2015, initially there weren't enough licenses for the early adopter departments. Moreover, the conflict of moving to MyContent from the Livelink instance also became an issue as this reduced functionality. According to one official in an early adopter department, since consolidating its instance of ECM, the customised workflows developed previously no longer work. Furthermore, the department was unaware that this would be the case and as a result it was not aware that it would need to allocate a budget to amend them to re-run them under MyContent. Since neither the department was aware of this, nor was transversal funding anticipated for this (from Ce-I or DCAS), these workflows have ceased.

Although the above is one example, early adopter departments expressed a concern that they are unable to progress or receive the functions they need for reasons beyond their control, such as advanced electronic signatures (AES). Two participants discussed this frustration by stating that:

"Maybe because we are so ahead, other departments are maybe being prioritised because they still need to mature. But it also stifles our development because we are not moving" (FG52).

"We have not had funding for ECM for the past 7 years, we have been surviving based on our networks" (I26).

"The assumptions were that money would be centralised and that each department would get a fair share of the pie. That did not happen, the money was shared for the departments that were being enabled for the first time, the legacy departments did not benefit at all" (I33).

The amount of time it took to migrate posed as a challenge for a lot of early adopter departments and this translated into additional costs as well. For some departments, consolidation took years rather than the intended number of months (I7; I3). In part this was due to infrastructure related issues but there were also financial challenges experienced; for instance, one official indicated that the service provider handling the department's migration requested a budget extension of R450 000 to complete the process.

Infrastructure issues, such as system failures and network issues were a prevalent problem for departments. Things such as the standard of the equipment, connections at some facilities (where some facilities didn't even have connection), certain system functionalities not working, system crashes, etc. were a few of the issues raised in various interviews and focus groups with early adopter departments. The lack of available support to problem-solve these issues was also voiced as a big constraint. In many cases, users were not aware of who to contact when they come across issues, as reflected in Figure 20. The issue here seems to be that the DCAS ECM unit's

responsibility has been interpreted in practice as limited to supporting the "new" departments, but Ce-I is only responsible for infrastructure (I7; I26). Thus, no entity seems to have been assigned responsibility to support early adopter departments with non-infrastructure issues:

"The position Ce-I often takes is 'we're only looking at the backbone. Speak to DCAS'. DCAS will say 'we've been briefed only to care for new depts., not legacy." And [*the ECM director*] would say "I'm the only one here…" then [*a project manager*] came later – but also only for the new departments" (I26).

Particularly in departments where an administrator could previously troubleshoot and handle many system administration tasks in-house, the lack of support and responsiveness is a challenge.

Despite these challenges of consolidation, in the focus groups, the early adopter departments (including DEDAT in this case) indicated that they generally do believe that MyContent offers greater benefits – even if these are not entirely realised yet.

Table 14. Early adopter departments' views on benefits of MyContent vs. former ECM solution

	How do the current benefits of MyContent compare to the benefits of your department's former ECM solution?
DEDAT	Greater benefits
DOH	Greater benefits
DSD	Greater benefits
DTPW	Greater benefits

It appears that these departments have learned to make adjustments and are trying to move forward by working with what they have. They express a sense of missed potential after consolidation, compared to the department-specific solutions that they were developing before. What is apparent is that early adopter departments such as DTPW and DSD have taken responsibility for their own capacitation in order to move forward with the system, but they do feel constrained within a transversal environment. A participant explained:

"Our department has been very successful and we do use ECM… We do use ECM and try to maximise it, there was more that we could use. It is a great success but it is frustrating that there was more that we could have done with ECM," (I33).

Rollout to new departments

The rollout to new departments occurred in two phases. As discussed earlier, Phase 1 saw the rollout to DCAS, PT, DEA&DP, DOCS and DOH (correspondence tracking only). Phase 2 saw the rollout to WCED, DEDAT, DLG and DHS.

In line with international best practices, it was decided that the rollout would commence with senior managers, in order for them to see the value of the system to encourage buy-in according to the "top down approach with top

management support from project initiation to final implementation" (Jacobs & Mohamed, 2013a: 11). This was identified as a "critical success factor" which was then intended to trickle down to the lower level users and the system would eventually be rolled out fully to each department. This strategy that was followed encompassed provision of the software to 100 users at the SMS level, as explained earlier.

A common critique of the way this rollout took place, was that it did not have a strong change management focus and it limited practical functionality. (The "collapse" of the change management component of rollout has been discussed earlier.) As a result, there was minimal consultation and planning with managers for the transition. This was in strong contrast to the intensive consultation, planning and change management that took place when individual early adopter departments introduced ECM (I42). In the quote below, the user compares this approach with other transversal implementation processes that had gone more smoothly:

"There wasn't enough business analysis resources because you are changing processes, the change to the new processes required analysis. It was just forced down our throats, and they just wanted us to identify the 100 users to be trained. We had no implementation plan, we have done a transversal system before and there usually [*is*] an implementation plan customised for a department" (I2).

The limited consultation also created a sense that departments' individual needs had not been considered in the design of MyContent:

"It was somebody's brainchild and not based on engagement and business needs. This is done the wrong way around" (FG54).

As a result, there were disparate levels of buy-in to the system:

"There were supervisors that was onboard right away and others just not interested." (I109)

Some users also objected to the fact that DCAS, rather than Ce-I, were rolling it out:

"The project manager was at DCAS and that for me was an immediate red flag because that is an anomaly. It is different for one department to run a project for other departments. It should be treated as an ICT project."

Like the early adopter departments, new adopters also had issues with licensing. Rollout commenced before the enterprise licence agreement was approved in 2015/2016. This was part of the motivation for restricting rollout to 100 users first. Departments struggled with this issue, which affected uptake of the system. In other cases, departments have had ECM rolled out without the necessary supporting infrastructure. WCED is such an example, where there was endogenous demand among records managers for the solution but cannot do a full-scale rollout due the infrastructure constraints.

Moreover, new adopters had issues with the levels of support received when moving to a new system. An interviewee explains that:

"What we lack is that there is no proper process of how it should be done. We all know that if we have problems with your PC you send an email to the helpdesk, there is a turnaround time, you get a reference number and it will be sorted out in 2 days. With ECM you don't know who to contact for which problem, there is no procedure manual. For Jtrack there is a manual that gives you a step by step process of any scenario you could face in the system, who to contact, how to conduct a unit transfer, which includes illustrations so any person could go on the manual and search what case study they are faced with and read it up. We need to bring that into ECM in obtaining support" (FG68).

Overall adoption of ECM

Partly because of these challenges, departments did not adopt MyContent as fully as intended. For instance, most focus groups strongly disagreed that their departments have taken steps to integrate the solution as necessary, by revising its processes and processes, or reorganising its staff and their roles and responsibilities.

Table 15. Focus groups' agreements with statements related to adopting MyContent into their departments.

Dept.	*Our department has revised its processes and procedures appropriately to align to a standardised MyContent-based ECM approach.*	*Our department reorganised its staff and their roles and responsibilities sufficiently to support the consolidation of ECM into MyContent.*
HS	Strongly Disagree	Strongly Disagree
LG	Strongly Disagree	Strongly Disagree
DEA&DP	Strongly Disagree	Strongly Disagree
DEDAT	Strongly Agree	Strongly Agree
DOCS	Strongly Disagree	Neutral
PT	Agree	Neutral
DOTP	Agree	Strongly Disagree
DOH	Strongly Disagree	Strongly Disagree
DCAS*	Disagree	Neutral
DSD	Agree	Disagree
WCED	Strongly Disagree	Strongly Disagree
DTPW	Disagree	Strongly Disagree

* Only one participant

The discussions that focus groups had around these statements were insightful as they reflect the uneven adoption of MyContent across departments, even among early adopter departments. Both PT and DOTP agreed that some processes and procedures had been revised, but PT described changes as "patchy" across the organisation while the different DOTP units represented in the focus group related the highly varied extent of adoption of MyContent across the department. It is notable that among DTPW, and to a lesser extent DOH, MyContent has not led to any significant

revision of policies and procedures, nor a reorganisation of roles and responsibilities. This may be indicative of existing arrangements being sufficiently adaptable as consolidated via MyContent.

In the case of DLG, DHS and DEA&DP, focus groups strongly disagreed with both statements. There seems to be quite low adoption in DHS; one focus group participant indicated that they are not aware of anyone using the system. DEA&DP respondents also reflected and shared similar sentiments, with one respondent saying, "We received training but we have not changed the way we operate; therefore we do not make use of it".

Another indicator that departments have not fully adopted MyContent is that they are still operating parallel systems for certain functions. CMATS, a correspondence tracking system, is still active in multiple departments, and is reportedly the system that Cabinet expects departments to use for high level correspondence (FG62). In addition, there is a reluctance to move over:

"We are still using CMATS for our document tracking, people are comfortable with it. There is a discomfort with the change" (I4).

"No one wants to go to MyContent, they prefer CMATS because it is quick. But the tracking system on MyContent you have to navigate it is time-consuming, we do not have the time and capacity to do it… We still have to phase out CMATS and implement MyContent, we discuss it annually but we have not gotten there yet, they still have to prove to us whether it is faster. If that could be proved to us then the PAs would buy-in because they are our main users." (FG64)

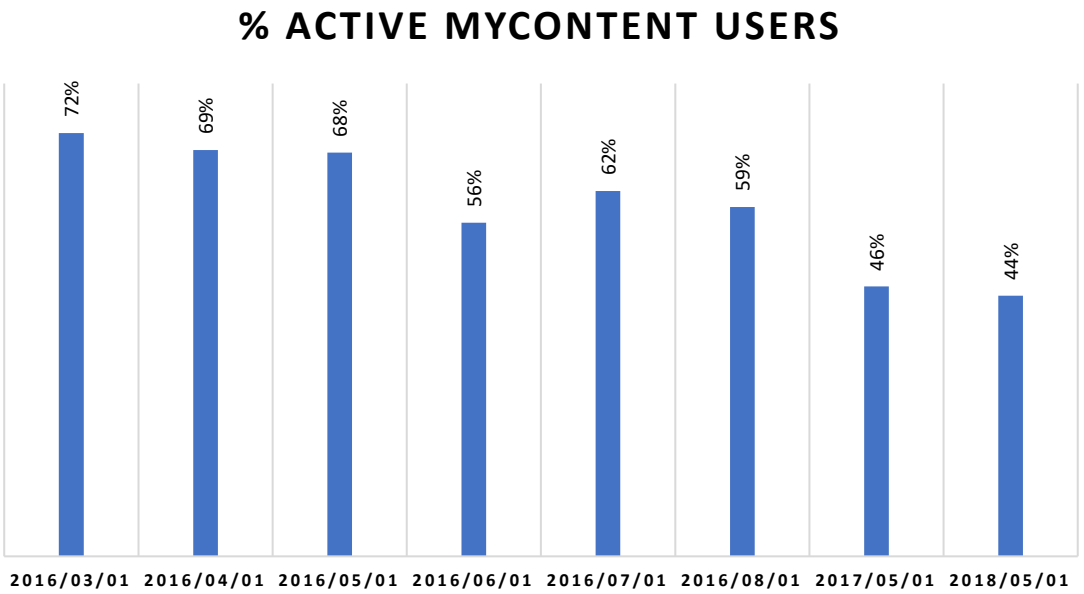
As the DEA&DP respondent pointed out above, if departments have not "changed the way we operate" by integrating MyContent into their policies, procedures, and staff arrangements, they have not created an environment where all users are expected to use it. Their staff, even with access to MyContent, are therefore less likely to use it. In some cases compliance with existing procedures may even preclude the use of MyContent. The next section discusses the current extent of usage.

Current usage

As of May 2018, about 44% of WCG staff who have access to MyContent, had used it in the preceding six months. This figure is part of a two-year overall trend of declining MyContent user activity: as shown in Figure 24, 72% of MyContent users were active on the system in the period ending[18] March 2016; this declined to 44% in the period ending May 2018. It has been pointed out that the decision to review the transversal ECM system was made around the end of 2016 and the decision to commission this evaluation was announced in April 2017 (I92). The DCAS ECM unit have the perception that the knowledge of a pending review / evaluation made departments cautious to adopt MyContent fully, in case the evaluation findings prompt significant

[18] The reports from which this data was pulled, each cover a period of 4 to 6 months. Users are considered "active" if they used MyContent at least once over that period.

changes to MyContent. Even taking this into account, there was a trend of declining usage by August 2016.



Note: The time between the data points varies. See dates indicated on x-axis.

Figure 24. Active MyContent users over time

The trend in most "new" (non-early adopter) departments mirrors this, although the decline is somewhat more dramatic in some than others (Figure 25). The figure above shows the available data per department (more data points are available for 2016, hence the less smooth trendlines for that period).

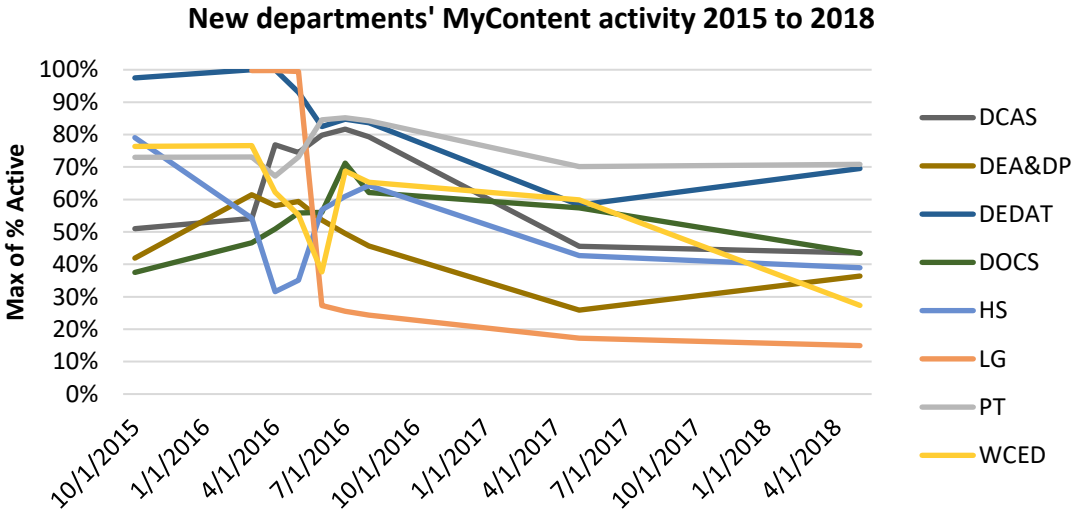


Figure 25: New departments' ECM usage (2015 - 2018)

There has been an increase in the number of users over the same period: the "new" departments had a combined 1243 users in the October 2015 report; by May 2018 there were 3516 MyContent users in the "new departments".

Most individual departments in this group have experienced an increase in the number of users. But as the graph shows, the increase in numbers of users has diluted the "coverage" of the ECM solution and overtime there has been a decline in usage.

It can also be observed from Figure 25 that most "new" departments (except DEDAT, DEA&DP and LG) showed an increase in usage between May and July of 2016. This trend could possibly be attributed to the user training sessions which commenced in June 2016. However, overall there has been a decline in the percentage of users in "new" departments making use of MyContent. This creates an impression of initial interest, but limited real integration of MyContent into people's day to day work. The reasons for this are explored further in the sections that follow.

Two departments that have however seen some increase in usage over the last year are DEDAT and DEA&DP, but these are relatively smaller departments where a few senior management users may be able to have a bigger influence in terms of departmental utilisation. In contrast, a rapid drop followed by the lowest levels of user activity is recorded at LG. The drop, after an initial 100% usage in the first few reports, may indicate that after initially accessing the system when first given access, most users never utilised it again. Qualitative data sessions suggested very low levels of buy-in to MyContent in DLG and this was reiterated via engagements with DCAS staff. For instance, once official said:

"They told us we must do it. We told them no and they said we don't have a choice. We were effectively bullied. If there is no buy-in, it's because people see no value in it. It does not make the world of difference to me. If you need a file just get it from registry."

The overall impression is therefore of a decline in MyContent usage among the "new" departments and this provides an indication of ineffectiveness of the ECM intervention. A staff member in the DCAS ECM unit cited these statistics, and explained: "We used to have competitions, and the usage was high because of the incentives and initiatives in place. When the department's buy in drops, the usage also drops" (I12).

The causes for a decline or lack of departmental buy-in are discussed further in the sections that follow, on management perspectives of MyContent.

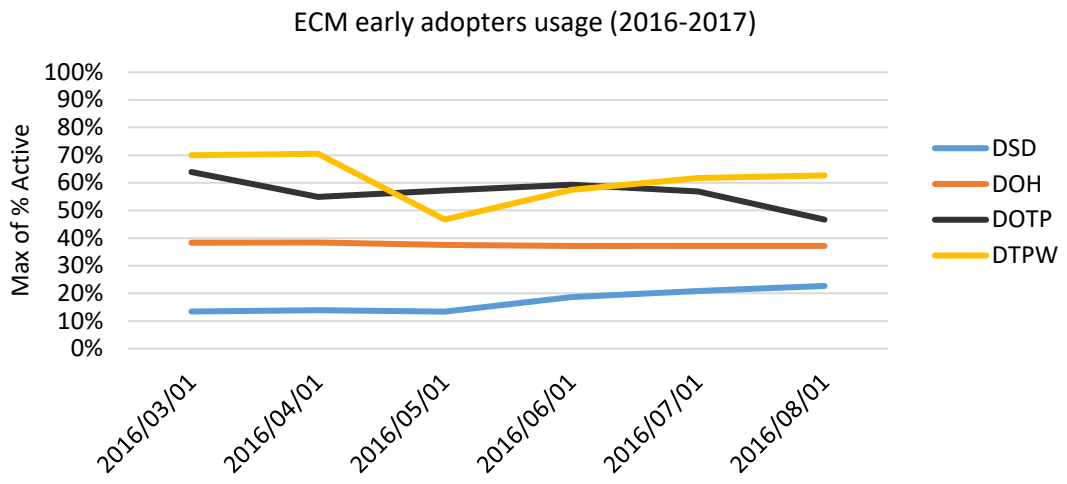


Figure 26: Early adopter departments ECM Usage (2015-2016)

Figure 26 displays the usage of the early adopters, but just over a five-month period from March to August 2016. It is not entirely clear how the reports distinguish between early adopter departments user activity on MyContent vs. their historic instance of ECM, and it is therefore not possible to draw any firm conclusions from the usage reports. But it appears that DSD has experienced an increase in usage as suggested by these 2016 figures. The DOTP decline appears to have been sustained into 2018, with a May 2018 report showing only 26% of users were active on MyContent over the previous six months. This could potentially be as a result of DOTP's unwillingness to move forward until they themselves as a department have a plan of action. An interviewee explained that DOTP is preparing for fuller-scale rollout and awaits the finalisation of a way forward after the conclusion of the evaluation.

Usage activities

In line with the theory of change, there are inputs and activities that each department is intended to undertake; which results in an anticipated output yield for the full optimisation and usage of ECM. In order for the full adoption of ECM to be realised, departments are expected to have:

- Departmental users operating on a common platform
- Users using the ECM package (take-up)
- Users adopting ECM-supported practices, protocols and standards in doing their work
- User support and communication
- Participation in transversal structures
- IT governance, system administration and change control
- Identification of plans for addressing further departmental needs

When interrogating the usage decline and the activities that people use ECM for, most users use the application for Document management, record management and document sharing. Figure 27 shows that Document management receives the highest reported usage among survey respondents with 31% of people having used it in the past month. SITS, RMRT,

correspondence tracking and AES have the least amount of usage, but this is attributable to the fact that a great majority of users have no access to these features. What is also important to note is that across all categories there is a high number of users who have never used the features (whether there is access or not). This speaks to the low levels of usage experienced amongst some departments for certain features. It is also quite clear that people have not used the full suite of functionality that the application offers. An interviewee stated that:

"[MyContent gives us] the ability to share, workflows, the ability to control data on websites, ability cross reference and have an intelligent view of the business but we are not doing that. We basically have a Rolls Royce but using it to take the kids to school, and not tapping into the full capacity of the system. We have invested massively and the return on investment is dismal because we don't know how to use it properly."

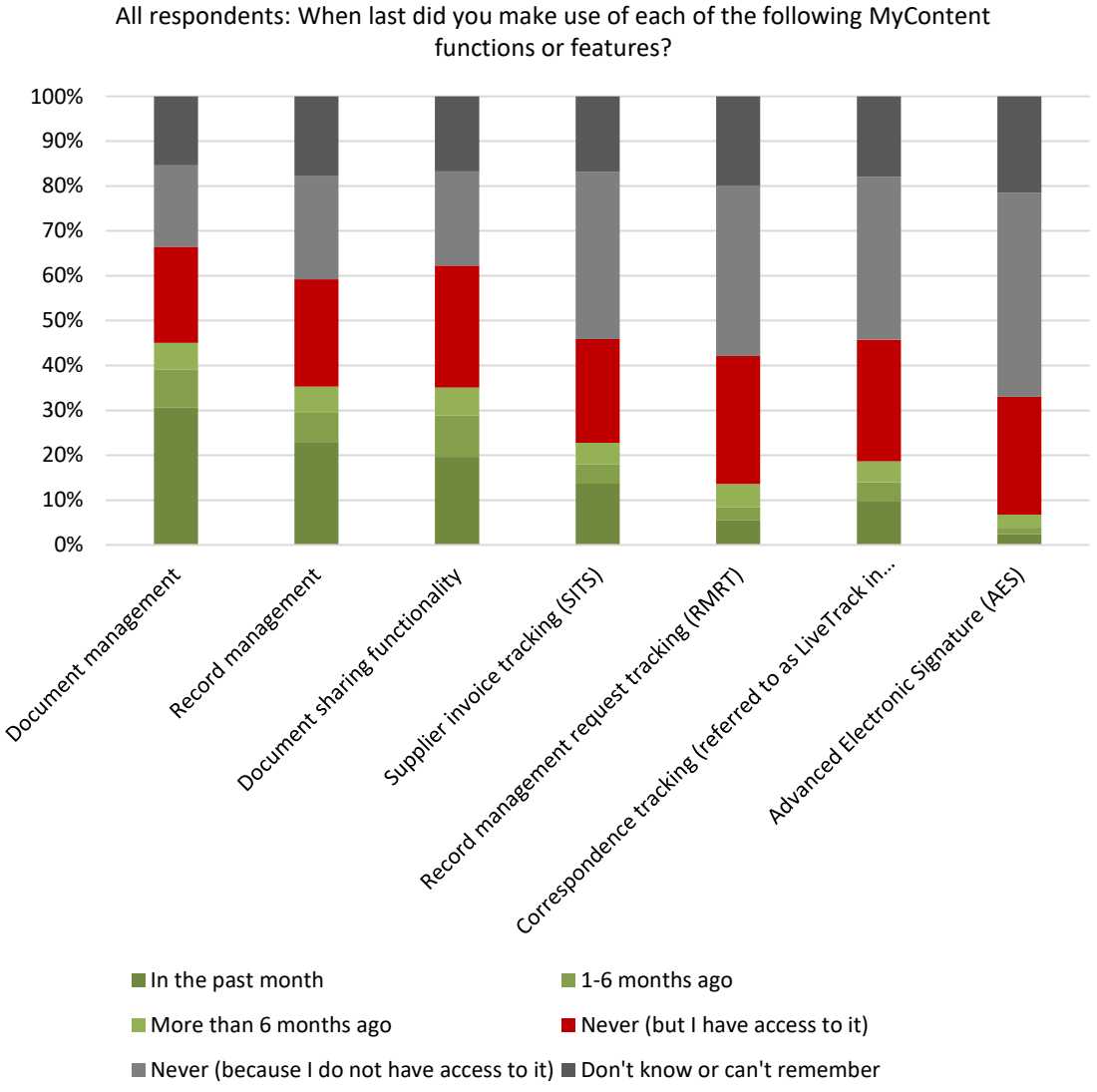


Figure 27: MyContent features usage (n=1128)

When considering utilisation trends and that even the most basic and simple feature (Document management) of MyContent has self-reported less than 50% usage in the past 6 months by survey respondents (all of whom have MyContent access), it is apparent that most users have not adopted ECM effectively. The following section will unpack user experience as well as the challenges and successes departments have encountered.

4.3.2 What is the actual user experience, successes and challenges?

User opinions of MyContent

Ease of use

As part of the survey, users were asked to give their opinion by rating MyContent on a seven-point scale on dichotomies such as slow vs. fast and easy to use vs. complicated to use.

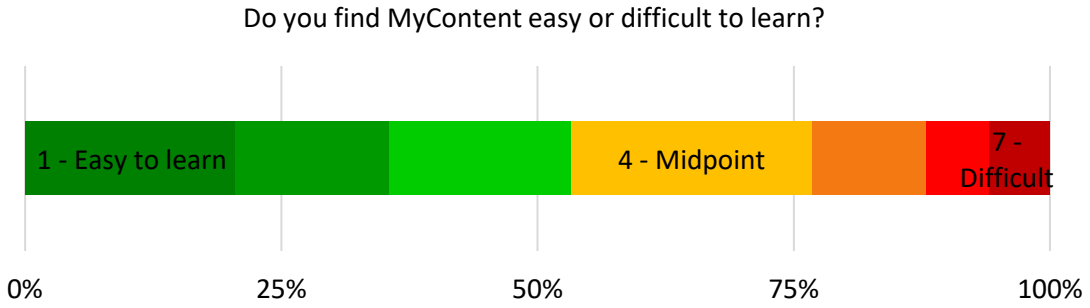


Figure 28: Survey results on how easy it is to learn MyContent (n=990)

As Figure 28 shows, most respondents found MyContent easy to learn. On a scale from 1 = easy to learn, to 7 = difficult to learn, over 50% of respondents rated it 1, 2 or 3. Another 24% selected a 4 (i.e. that they did not find it easy or difficult but somewhere in the middle). The average rating was 3.3, in favour of ease to learn.

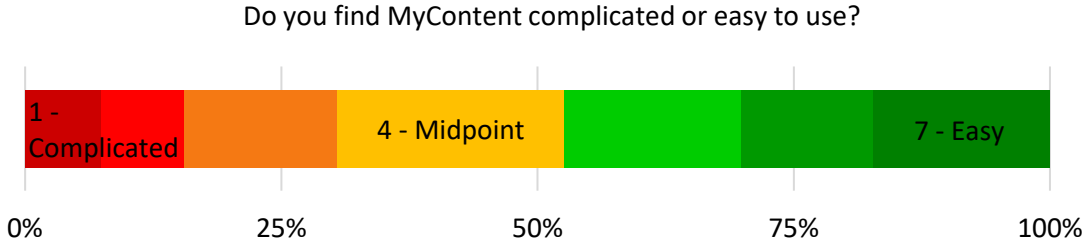


Figure 29: Ease of use of MyContent (n=977)

Users were somewhat positive, but more evenly divided in their views regarding the ease of use of MyContent. Figure 29 displays that responses were concentrated on the side of "easy", with 48% selecting a rating of 5, 6 or 7 and a further 22% selecting a 4, compared with 30% selected a 1, 2 or 3. Thus, a smaller but substantial portion of respondents expressed difficulty in using the system. The average rating was 4.4, in favour of ease of use.

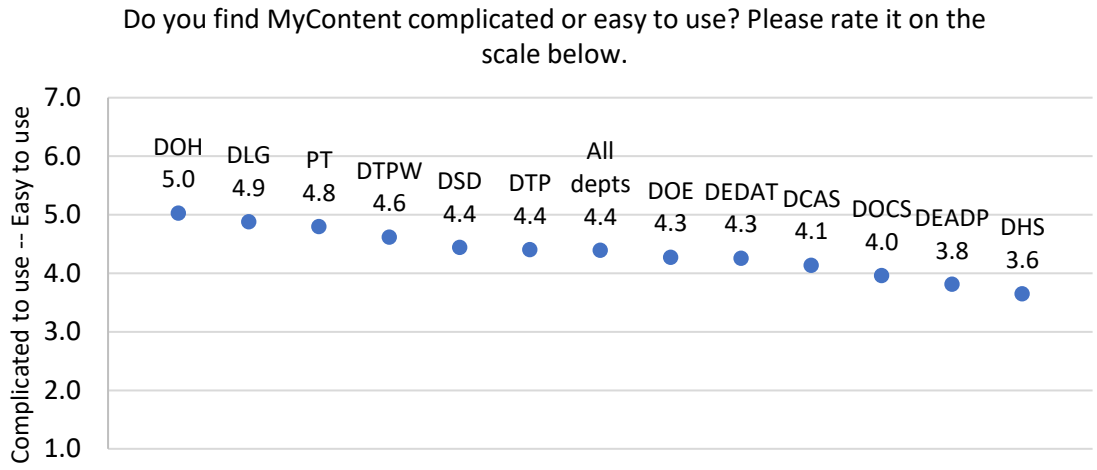


Figure 30: Individual departments' perception of ease of use of MyContent

The view that MyContent is easy to use, is also confirmed by individual departments, as seen in Figure 30, responding to this question in the same manner. Only DEA&DP and DHS have average ratings slightly below the midpoint of 4, at 3.8 and 3.6 respectively, suggest it is more difficult to use than easy.

However, when departments were asked whether MyContent was supportive or obstructive to their work, most departments responded that MyContent was more obstructive than supportive, with an average rating of 4.5 out of 7. Considering the purported benefits of time and cost-saving, this is a particularly worrying finding. Figure 31 displays that the DOH, DTPW, DSD and PT were departments that rated MyContent the least supportive.

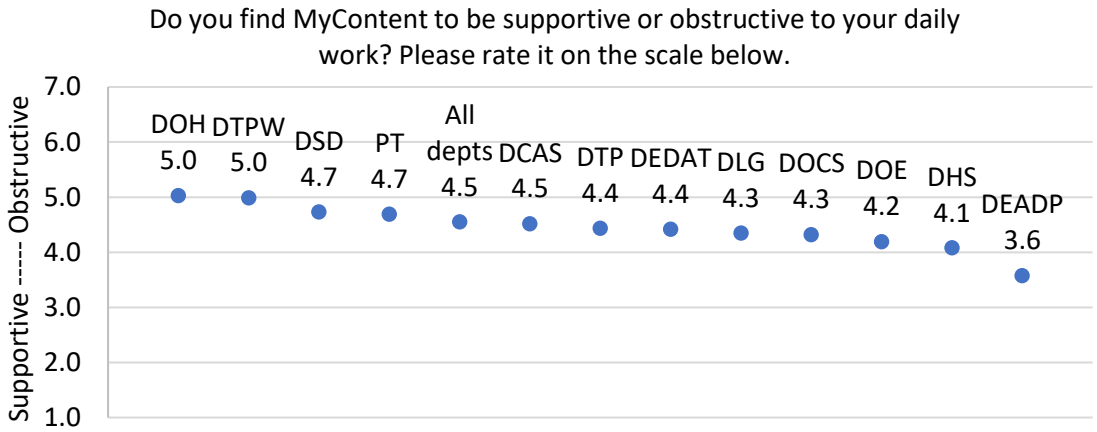


Figure 31: Perception on supportive nature of MyContent

Based on their current experience with MyContent, participants were asked as to how likely they were to recommend MyContent to a non-user on a 10-point scale. Using the Net Promoter Score, the answers revealed a negative inclination overall, showing that there were more detractors of the system than promoters. Figure 32 shows that the overall Net Promoter Score is -47,

with an average response of 5.3. This indicates that there are more unsatisfied users than there are satisfied users using MyContent.

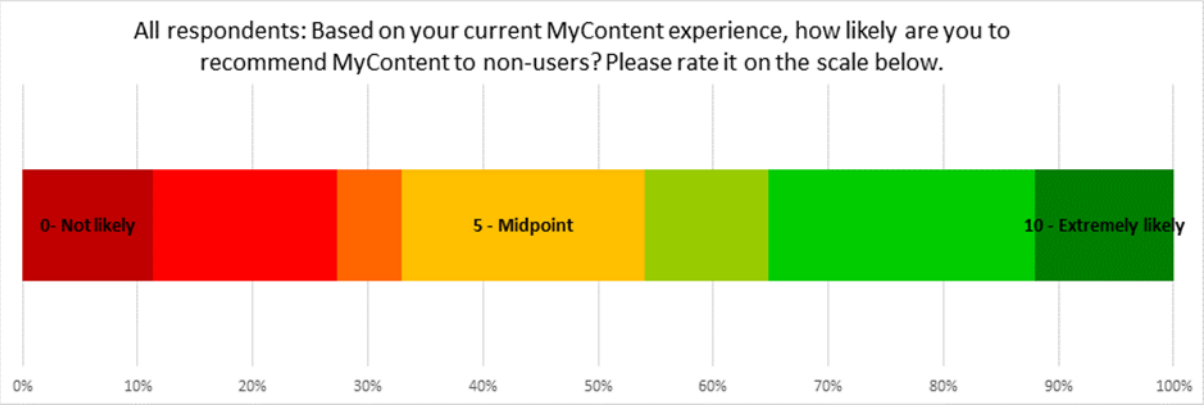


Figure 32: Net Promoter Score of recommendation likelihood (n=1005)

It is apparent that communication issues surrounding ECM rollout strategy, budget constraints, competing systems, and compliance and authorisation concerns are the main challenges experienced with MyContent. Overall it can be seen that these challenges affecting users of MyContent translate to a level of dissatisfaction with the system, seen by the Net Promoter Score.

System

When departments were asked as to whether they thought the system was slow or fast, most departments' average ratings were close to the midpoint of 4, and the average across departments was 3.9. However, as shown in Figure 33, DOCS, DEA&DP and PT's average responses were lower, indicating stronger views that the system is slow.

A survey respondent states that:

"The system is too slow. Specifically, the act of dropping files and folders onto MyContent, (it once showed me time remaining: take three days). It would be more convenient to be able to transfer an entire library from hard drive to MyContent…I don't actually have the time to spend transferring documents. There are also some files it doesn't copy. I don't have the time to find the root cause of this. And those are the types of files I need saved more than any of the others. My unit and I use MyContent because we must, not out of choice."

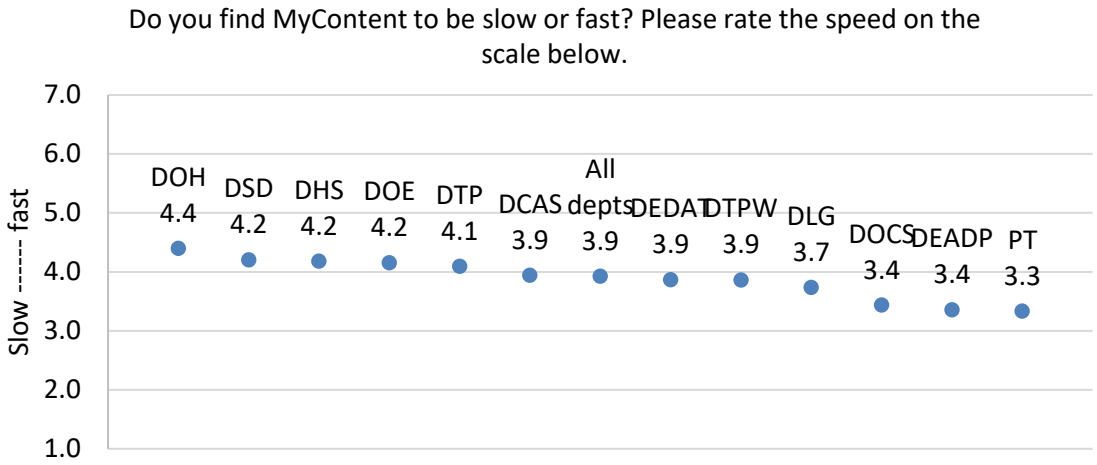


Figure 33: MyContent speed perception

Successes

According to the electronic survey results presented in Figure 34, users have identified the top 3 benefits of using MyContent as: less paper used; remote access to files; and centralised storage of key files. According to the TOC, the outcomes of the ECM solution are envisioned to be:

- Improved operations/business processes
- More efficient use of resources
- Compliance and risk

Although none of the identified benefits enjoyed more than 32% support, and were in part rivalled by the finding that 30% of all respondents do not believe that any of the benefits were associated with MyContent, these are useful for exploring some of the nascent successes that can be built upon owing to what is working with the system.

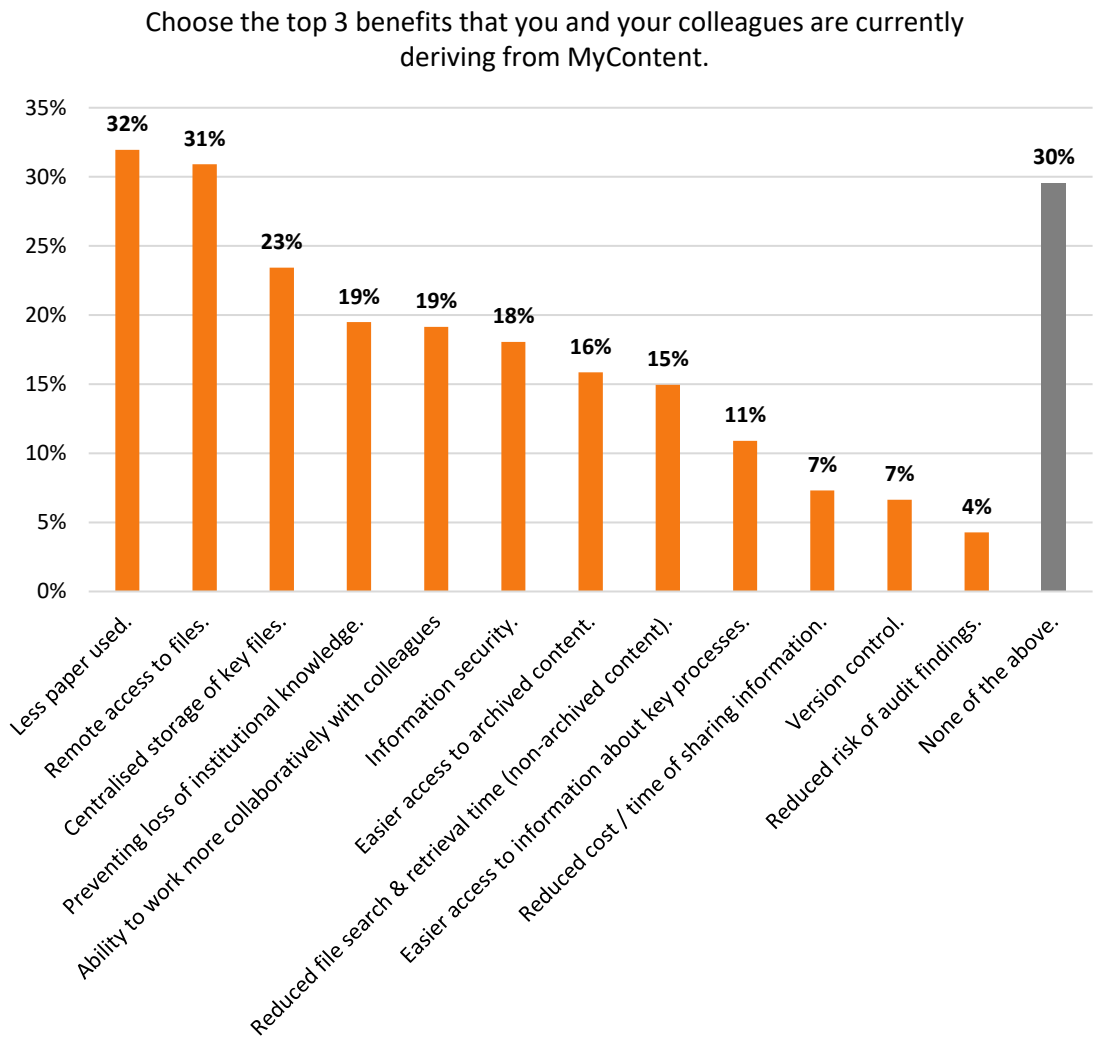


Figure 34: Top 3 benefits of MyContent

Improved operations/business processes

For the WCG to reach its desired impacts of a culture of efficiency and faster services to constituents, business processes and operations would need to be improved upon. Key indicators for determining improved business processes include reduced filing and file retrieval time, reduced loss of files, and increased sharing of content among teams. 19% and 15% of users expressed that remote access to files and centralised storage of key files respectively, is a great benefit that MyContent provides which improves operations. A participant explains:

"From the time I started, we wanted to save paper and *be* more effective in managing our records and getting a central storage of documents. People were losing documents because hard drives were crashing, it also allowed people to access work from homes, so this platform allowed them to access work from home. Workflows were also designed to improve the business process" (FG52).

Document retrieval is also seen a success where finding documents has taken less time as it would with traditional file storage. A DOH official explains:

"*Success* lies with Forensic Pathology Services. Implementation of it. 95% of users depending on it and using the system...Clerk has requested a document. Phone call, in the past leave forms in filing room and is full and maybe … can take a whole day to find depending on outlay of filing room. Now they go onto system and pulls documents and can do it in 3 minutes. Operational efficiency system."

It should be noted that although these are claimed as successes, measured evidence of improvements in these business processes is not available. The systems have embedded time tracking and time stamps in order to check file retrieval time, the time it takes to share a file, etc, but these time statements are not part of the usage reports and do not appear to be tracked. Thus ,at this stage, measurement for these indicators does not take place. Therefore, indicators for improved business processes remain qualitative and experiential in practice.

Other departments have raised frustrations with not having all the required information that is needed for their own reporting purposes. Interviewees state:

"My challenge is also the change management report. I ask for a report, but it is not user friendly to try and get a report. We can't really get it from a press of the button. It is important as implemented to know what the usage is, and to get a sense of where we need to intervene to up the usage" (I25).

"In the enterprise side where all the documents are sitting, it is harder to draw a report and I don't want to pull it per user and I don't want to see other departments. If I draw up an active user report it brings out 2 000 users, and it is mixed up with various other departments. That is not useful. I need reports that are more relevant and efficient" (I32).

More efficient use of resources

Costs associated with resource use serves as a key indicator for measuring how efficiently an organisation has achieved results. Reduced license costs, paper costs, and growth in physical storage space are outlined as key outcomes of more efficient resource use. Section 4.2.2 has already established that the average cost per ECM licence has reduced from R796 in the 2009/2010 financial to R606 currently. However, in terms of the cost of paper, the findings are less clear. Figure 34 shows that 20% of users perceived that ECM has reduced paper usage.

Respondents have also claimed that a key benefit of ECM has been the reduction of paper. An interviewee states:

"There have been some benefits though, we have been able to reduce the amount of paper and emails flying around. There is a flash email sent out that new document is on ECM. It has significantly reduced the traffic and user's emails inbox being cluttered" (R84).

Figure 35 displays the actual paper expenditure reported across WCG deportments[19]. From this data it can be seen that there is no uniformity in the manner in which paper has been spent across all the departments. HS, DEA&DP, and DEDAT have experienced a stagnation where the spending in paper has remained the same. DSD and DTPW, however, have experienced an increase in the amount spent on paper where spending is more than R1 000 000 for DTPW. DSD is spending twice as much money on paper as it used to: R 401 000 in the 2012/13 financial year compared to R834 000 in the 2017/18 financial year.

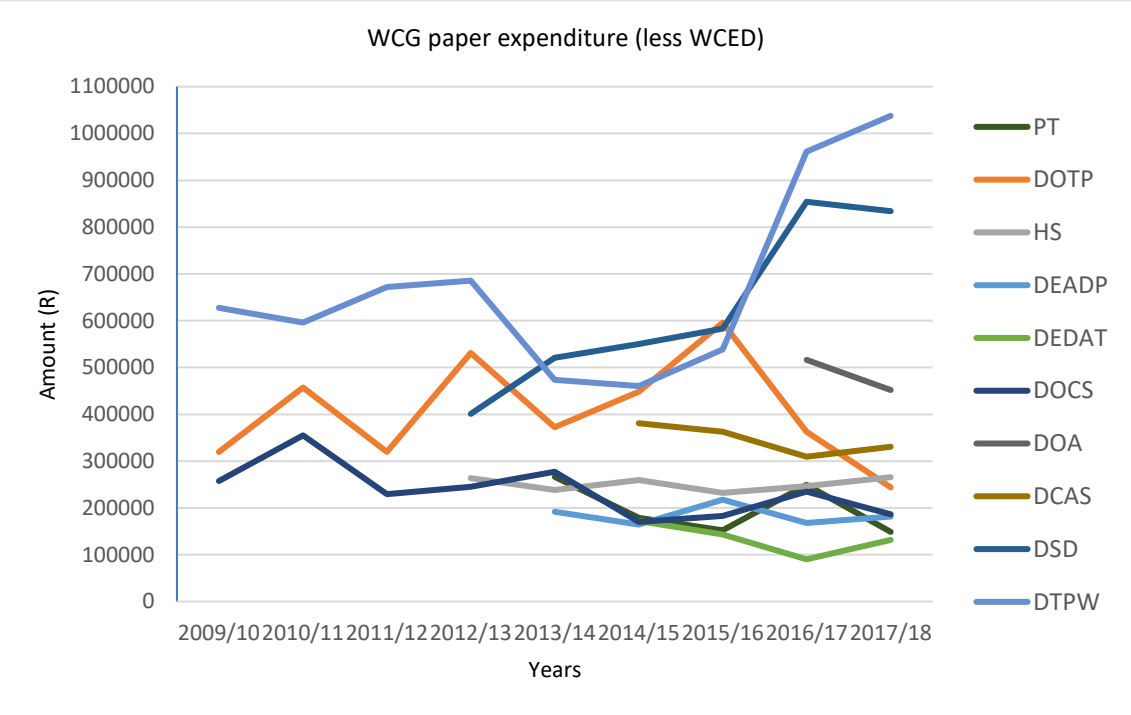


Figure 35:WCG paper expenditure

Other departments have experienced a decrease in paper expenditure. PT, DOTP, DOCS, and WCED have all reported reductions in the expenditure of paper, with noticeable decreases made by WCED, halving the amount of spend on paper since the 2009/10 financial year. Despite the apparent reduction in paper expenditure for most departments, once cannot attribute this reduction to ECM. It is important to note that the DOA also reported a reduction in paper expenditure, yet they do not enjoy the benefits of MyContent. In addition, the lack of availability of spend over time (from the 2009/10 financial year) for all departments, as well paper expenditure for LG, DOH, and DCAS make it particularly difficult to examine the validity of ECM reducing the amount of spend on paper. Therefore, at this stage, it is unclear

[19] Data obtained was for 11 departments. DOH and LG did not share any data pertaining to paper expenditure and WCED was left off the charts because of how it skewed the perspective.

as to whether ECM has subsequently reduced paper expenditure. The data provided does not provide sufficient evidence to substantiate this.

Compliance and risk

Regarding compliance and risk, many participants have stated the benefits of ECM and MyContent as preventing the loss of files. Figure 34 shows that 12% of participants claimed that the prevention of data loss was a top benefit derived from MyContent. A survey respondent states:

"Documents are updated and stored electronically thus the room for loss is minimum."

An interviewee also explains:

"I don't have issues with user losing documents because all the documents are on ECM. We have developed other system for [another departmental initiative], a management system and there is a huge amount of evidence required that we need to process before we [process transactions]. There is a link between our [initiative] and ECM, we use ECM because we want one system where we can store all our documents" (R7).

It is apparent that there are many benefits that users have derived from embracing ECM and utilising the MyContent platform. Key benefits have included remote access to files, claims of easier access to files, reduced license costs, preventing data loss and other enhanced features encouraging business optimisation. While all of this is evidence of the limited achievement of some of the intended results of the ECM intervention, it is also clear that these results are not prevalent across all departments and user experiences. The following section unpacks this in more detail.

Challenges

Improved operations/business processes

Faster, more standardised processes are a necessity to achieve improved business processes. Many officials and records managers have stated that the manner in which records are kept lacks standardisation and this affects business processes, due to slowing down the amount of time it would take to find a file or document. An interviewee explains:

"On ECM what they do is just open the door a little bit and throw in the record. They don't care where it is, which file it is in, they just open the door, and you as a records manager find yourself in trouble because you have to try find all these records. Risk of losing records" (I88).

Another official explains:

"My chief concern is whether the documents now amassing on the system are of 'records quality'. A few years back… a traditional records manager, raised the concern at a high-profile meeting that …from a future perspective we will have better records of Jan Van Riebeeck's time than of 20 years ago. The current reality …the current reality of 'scrambled eggs' would seem to bear

this out. 'Scrambled eggs' may be discerned from the amount of 'unstructured documents' on the system." (I47).

Many have stated that these issues arise owing to the challenges of continuous change management (discussed in section 4.2.2.). Training and change management were one of the most commonly identified issues expressed by users. Many felt that the training was insufficient and did not prepare them adequately to use the system. The difficulties experienced with the lack of change management continue to pose barriers to the acceptance of MyContent. This has resulted in many users not knowing about MyContent, as well as not understanding the underlying motive for implementing it. A participant claims:

"I think the Province is not doing enough to give guidance and to sell the system. I have not seen anything from the Province to say "have you… do you know MyContent? Do you know we're using this and it's a WCG approved system? Here's a file on it, here are the benefits on it" (FG62).

Another explains:

"The main issue is what was the vision? Where do we want to go with it? We are implementing it in registries, in hospital registries for instance, is that all we will use OpenText for? There is a wine company that has contracts and the contracts are for suppliers, it helps them with compliance issues. You don't have to carry documents home, it should be a communications tool. There are so many things we can do, but that vision has not been set" (FG68).

Another issue is the reluctance to move to MyContent due to competing systems. Some departments have managed to move away from these competing systems, however, other departments are still using these. The integration of this software also poses a problem for many departments who rely on these systems, which also adds to this complexity. An official states:

"We all use CMATS at the moment and some departments use Jtrack. No one wants to go to MyContent, they prefer CMATS because it is quick. But the tracking system on MyContent you have to navigate it is time consuming, we do not have the time and capacity to do it. That is the current problem in our department. We still have to phase out CMATS and implement MyContent, we discuss it annually, but we have not gotten there yet, they still have to prove to us whether it is faster" (FG64).

More efficient use of resources

Key infrastructure such as network capabilities serves a vital indicator for the efficient use of resources. In line with the TOC, reduced growth in network traffic was identified as a desired outcome for ECM and MyContent. Many users had stated that they had experienced challenges with productivity due to network issues. An official states:

"Clicks are there but people need to adapt and the electronic environment, only issue is network and it's not our problem. Can be very slow. Use it mainly

in the morning or after 5pm. Signing-in takes time, so the network becomes a problem" (I88).

"I have been asking them many times why the system is slow and also from Ce-I side if you send something (an issue) they are not quick to rectify it. You have to be quick in IT. Seems as if the server is in Somerset and not here" (FG76).

Figure 36 displays the perceptions of use of the MyContent on a 7 point scale Although most participants are neutral (have answered in proximity of the median of 4.0), themes such as security, clutter, practicality and efficiency are those where participants have answered as experiencing more difficulty rather than ease. This is indicative of a system that in practice is experienced as inconsistent with its desired results.

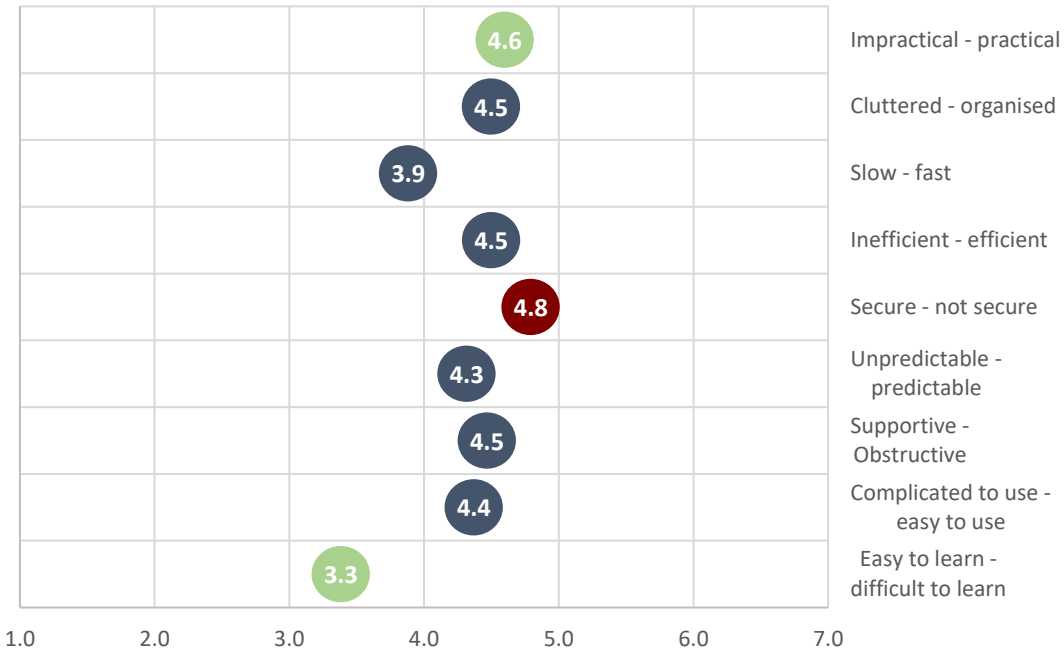


Figure 36. Perceptions of the MyContent system

Budget constraints, as discussed earlier also provide certain challenges for departments. The austere budget circumstance in which DCAS has found itself in turn also affects other departments. Due to these budget constraints DCAS can only offer so much and thus the onus for implementation of MyContent lies with departments. An official explains:

"Contract management are also a challenge – contracts are continuously growing and department's needs, and as the departments needs are growing, from a support perspective the budgets aren't growing and are not maturing with it" (I41).

This puts an added strain on the levels of acceptance of MyContent, as well as influences the degree to which departments can customise the system according to their business needs. Over and above that the equipment required for scanning is expensive and departments struggle to purchase enough scanners thus affecting business operations.

An interviewee states:

"We understand that we have to move with the times and innovation and we have invested into buying scanners which cost R60 000 which was money we never had but we had to because we were told we have no choice. We had to also buy a computer linked to the scanner" (I28).

Compliance and Risk

Another issue raised is that of the levels of security which the system provides. A few departments work with sensitive information that requires security clearance, however, with the current system respondents have claimed that the lack of security clearance has been a challenge. An interviewee explains:

"One of the important things is who is controlling the permissions. If I set up that my HOD, Forensic Investigation Unit folder structure for him, it's very confidential info, how can I ensure him it's secure? How can I ensure someone that the information is secure when I don't know who has access to the information? I have asked Ce-I to sign confidentiality forms and they haven't, there is a huge risk with changing permissions with no particular process followed. You need to make sure those things are managed, and proper control" (R7).

4.3.3 How is ECM being utilised and where is it adding the most value to WCG?

ECM is being utilised in an uneven fashion across the WCG with early adopter departments enjoying the most value, even while the agency associated with ECM has been curtailed by the transversal provision in MyContent.

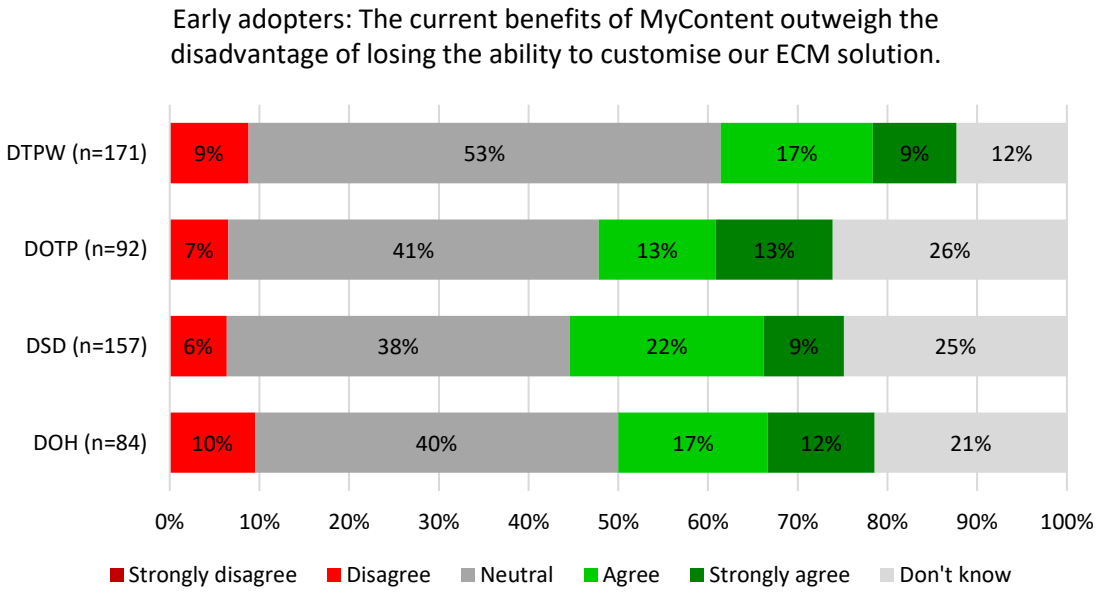


Figure 37. Early adopters view on current MyContent benefits outweighing the ability to customise ECM solution

Figure 37 illustrates that a large proportion of MyContent users from early adopter departments are neutral on whether the current benefits of MyContent outweigh the disadvantage of losing the ability to customise their previous ECM solution. Particularly striking from this graph is that over half of the survey respondents from all departments indicated that they were either neutral or did not know. To garner further insight into these views, survey respondents were asked to provide comment on their structured responses. These responses not only provide context into the significant amount of neutral responses but further reveal the nuances and different experience between the early adopter departments.

The commonly shared experience in DTPW for instance suggests that beyond the user interface, there is no significant distinction or difference between MyContent and ECM. This finding might be a key factor in explaining why DTPW has the largest number of respondents who expressed their neutrality on the question. The following quotes suggests MyContent users are not aware of any changes in the functionality between the two systems:

"I found that the two platforms, ECM and My Content, are the same." – survey respondent

"My team and I use the same functionalities as before. We have not experienced any change other than the simplified landing page" - survey respondent

However, the focus group conducted with DTPW yielded more insight in this regard. There, team members highlighted the agency they lost in being able to manage and address issues in their own ECM system. It proved to be one of the reservations the DTPW team had over the new arrangement, that their ability to support their own users had diminished owing to their new dependence on DCAS with regards to user support.

As part of the consolidation process, early adopter departments were expected to move their content from their various previous ECM solutions to the new MyContent platform. Early adopter departments shared a common experience in their migration process, despite the process occurring at different time frames. Departments generally expressed their frustration in relation to time lags, utilisation and costs associated with the migration process. The following quotes describe this experience:

"it took our department three years to consolidate. We would have 90% migration and then it goes back to 85% and then goes back to 82% they then requested extra money to put things in place but we declined their request because we spent close to R5 million for migration only… After migration for about a month we were on a shutdown, we could not find our documents. We had to call them to search and find our documents. It was an issue, it is a roller-coaster but now it is better." – FG64

"We have migrated not too long ago from our own Instance to the consolidated platform (MyContent). I am undecided at the moment. I think it is important that we migrated, but we have not fully felt the impact yet considering we are very mature in the use of the system. One disadvantage is that any change we want to the system takes a lot longer because we are on the consolidated space which means other departments needs need to be considered as well. What is great is that we receive the upgrades that all other departments receive." – survey respondent

Secondly, early adopters further reported on the implications that resulted from the above described experience. The two key implications that were raised were firstly, a decline in usage rates due to the operational issues of the system. Secondly, compatibility of the systems was also raised as another issue.

"Office365 and the Sharepoint environments provide most of the functionality offered by MyContent, and most users have access, or are getting access, or are required to use those platforms for collaboration on projects and business intelligence. The O365 portfolio also allows flexibility and customisation without expensive development being required. The only benefit I can identify for MyContent is that it is endorsed as an official e-Record platform. Whether or not this remains the case, the only way that I see MyContent uptake is if there is integration between the Sharepoint/O365 environment, which is much more user-friendly for collaboration, and MyContent, which meets the records management policy requirements." **–** survey respondent

Another key finding is that the early adopters' migration experience has created some uncertainty from "new" departments. Through our qualitative data collection, respondents have raised questions related to what issues have been learnt from the previous migration process and in some cases expressed their concern on the lack of a migration strategy.

"…We have also been asking for a migration strategy, we've just heard the DTPW experience and we don't want to fall into the same trap we are supposed to learn from the mistakes that have been made." – FG68

Another means of understanding how the transversal ECM system is adding value, is to compare outcomes pre- and post-introduction of the system. Figure 38 displays users' perceptions on some of these outcomes, comparing their (memory-based) perceptions of how things were around 2009 (when the Blueprint detailing the need for the intervention was being drafted)[20], compared to the present. One overarching finding from this graph is that compared to 2009, the percentage of respondents who perceive information security risks due to unauthorised access declined from 43% to 19%. Similarly, the perception that electronic content is managed inconsistently has declined from 53% to 39% and the perceived problem of loss of work because of hardware failure has declined from 43% to 19%. These declines are all encouraging, particularly from respondents with the benefit of institutional knowledge.

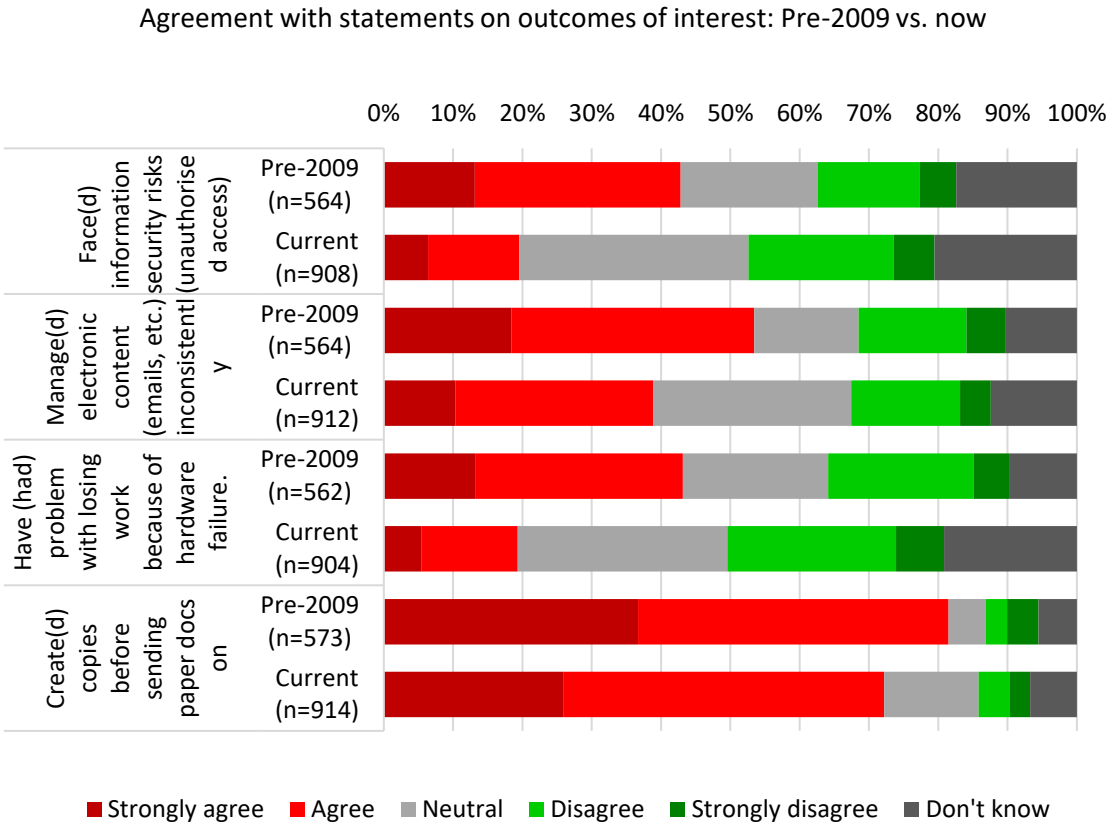


Figure 38: ECM system perceptions

Furthermore, Figure 39 indicates that there has been a bit of improvement in the perceived time taken for filing, and for retrieving files. In both instances, there has been a marginal increase in the percentage of respondents

[20] Only respondents who were already working in their current department by 2009, were asked about that period.

expressing agreement that these tasks take the minimum time necessary, coupled with some decrease in percentage that express disagreement.

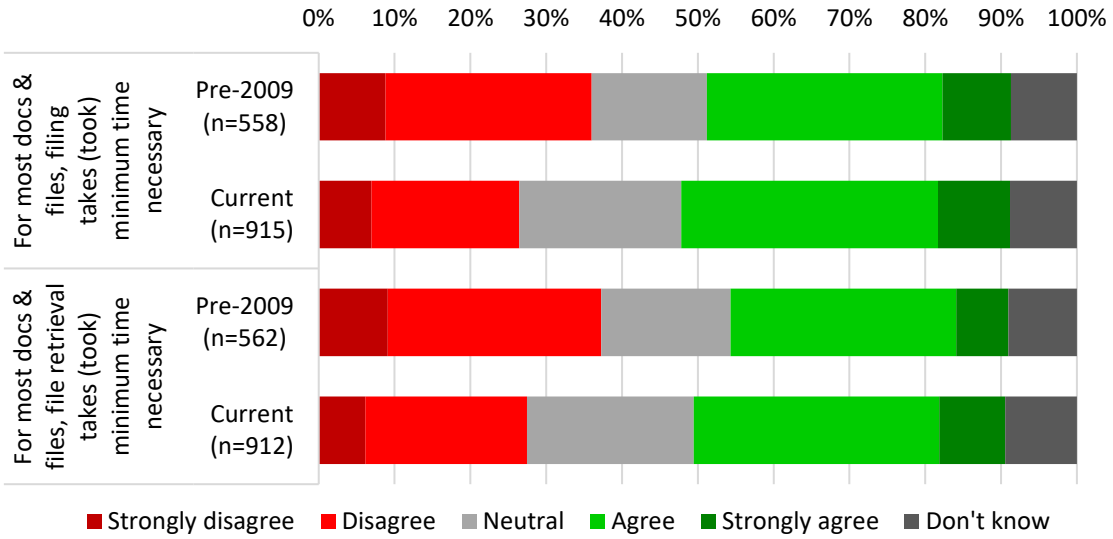


Figure 39. User perceptions on outcomes of interest, 2009 vs. current: improvements on filing and retrieval time

However, the extent of these improvements in perceptions is not necessarily as pronounced as the ECM solution would have intended. On each statement, at least one-fifth of respondents perceive the problem still to occur. In particular, it is notable that that over 70% of respondents still agree or strongly agree that their department creates copies before sending paper documents on. So while there has been progress, a worrying prevalence of these issues endures.

These findings show that WCG does derive value from utilising an ECM solution, but MyContent has not realised its potential in this regard. The challenges of migrating from previous ECM solutions to the MyContent platform have diluted recognition of the value of the intervention owing to what it has displaced in the process.

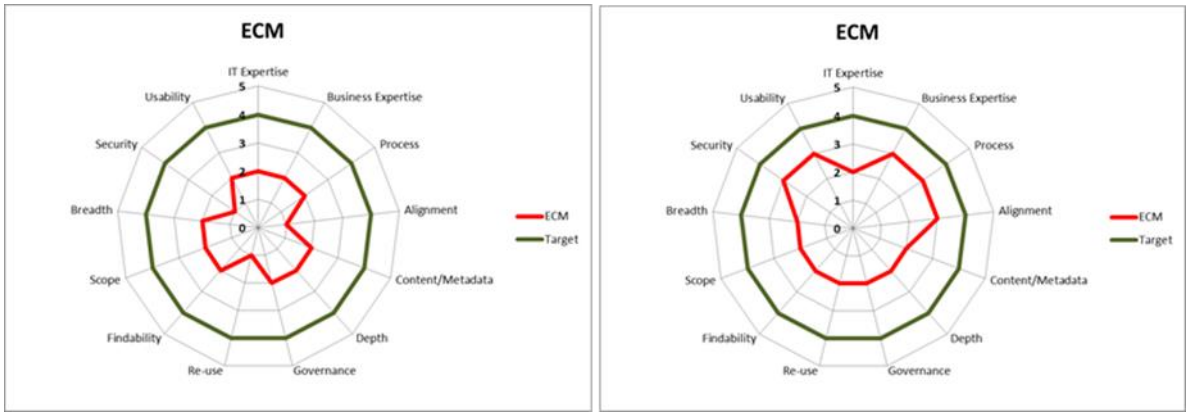
4.3.4 What is the overall level of ECM maturity within the WCG?

The ECM TOC identifies a maturing ECM practice as an intended outcome. It draws on a maturity matrix (as presented in Figure 40) used to rank the level of ECM maturity on a five-level scale starting from Level 1: Unmanaged to Level 5: Proactive. The scale ranks maturity levels based on three dimensions namely; human, information and system. The human dimension assesses maturity level based on IT and business expertise, processes for the standardization of procedures around content and alignment between IT and business strategies. The information dimension focuses on the actual content and metadata, depth (lifecycle management of content), the re-utilisation of content across systems and channels, the "findability" of content and governance through policies and procedures. Lastly, the systems dimension assesses the scope of management systems, the depth (departmental efforts in adopting and innovating systems), the centralisation and standardisation of security and the usability of the system itself.

	Level: / Dimension:	1) Unmanaged	2) Incipient	3) Formative	4) Operational	5) Proactive	
HUMAN	IT Expertise	No experience managing formal repository and workflow systems	Struggling 1.0 implementations of some systems	More advanced version 2.0+ implementations of systems, with focus on business-critical content	Managing repository and workflow systems is a core IT skill	Pro-active experimentation and learning about emerging content technologies	Measurement / Monitoring and Feedback Processes
	Business Expertise	Ignorance about value and role of ECM	Growing sense of awareness about lack of management services	Communication plans include updates to key stakeholders about ECM business value	Executive sponsorship of ECM as a practice; process and content analysis are core skills	Information management designated a core employee skill and part of their HR reviews	
	Process	Few or no standardized procedures around content	Basic process analysis leads to some ad-hoc workflows	Initial modeling of inter-departmental processes to prep for automation	Automated processes span systems and departments	Robust exception-handling and experimentation within framework	
	Alignment	Key business drivers are not well understood by IT strategists, resulting in ECM gaps in IT portfolio	Gaps still exist between technology and core business processes; IT-metrics not evaluated by business outcomes	IT and Business both understand their information management roles and their respective strategies are no longer developed in a vacuum	Execution of IT & Business strategies become more cohesive, but still follow push-pull model	Strategy development between IT and the Business is done in collaborative and concurrent manner with frequent reviews using proper metrics	
INFORMATION	Content/metadata	No formal inventory; no formal classification	Departmental inventories and initial content tagging	Enterprise inventory underway; controlled vocabularies (CVs) initiated	All new repositories and content types registered; global taxonomies created	Pervasive ROT elimination; Folksonomy development; Ongoing metadata reviews	
	Depth	No lifecycle management	Most content archived haphazardly; some departmental RM efforts	Development of formal electronic retention, RM, and disposition schemes	Implementation of electronic and paper-based RM across the enterprise	All content types go through formal lifecycles.	
	Governance	No policies and procedures	Scattered policies; few or no formal procedures	Development of information governance structure and codification of procedures	Policies and procedures widely disseminated; Enterprise ownership in place	Active review and adaptation; Voice of Customer key to feedback process	
	Re-use	Content routinely duplicated	Content still routinely duplicated, but staff aware of problem	Initial content analysis and structuring	Documents repurposed across systems and channels	Content components re-used across systems and channels	
	Findability	Employees spend excessive time searching using various internal search engines	Search indexes tuned and basic metadata applied	Rationalization of search technology; analysis of search logs and further tuning, leveraging CV terms	Development of specific enterprise and/or federated search applications	Search and classification become a central service, with business-driven variants	
SYSTEMS	Scope	No understanding of core content types	Some basic DM implementations with ad hoc workflow	Identification of core content types, locales; pilot projects for DAM, BPM, etc.	Business-critical information systems prioritized	Broad availability of diverse management systems	
	Breadth	No systems	Scattered departmental efforts	Initial attempts to combine or integrate systems across departments	Successful departmental initiatives have been scaled enterprise-wide	Encourage and adopt innovations from departmental levels	
	Security	No security regime in place	Dependent on individual systems	Formal projects initiated to address gaps & redundancies due to multiple solutions	Standardized policies and procedures exist and are system enabled	Security is treated as a centralized shared service	
	Usability	Lack of systems make end user usability considerations moot	Employee adoption rates measured, but dissatisfaction unanalyzed	Some initiatives use Scenario Analysis and User Persona techniques to guide design	User-centered design underpins all system designs, with formal collection of user feedback	Usability is a guiding principle in all system activity	

Figure 40. ECM maturity matrix

"ECM maturity" is further conceptualised in the 2016 Draft ECM Strategy Document under a similar matrix consisting of five levels, from "initial" to "transformative" as shown below in Figure 42. A maturity assessment of the WCG was included in the latest draft of the ECM strategy document (Mohamed, 2016). The assessment ranked the WCG at a level 2 (Opportunistic) and in some cases, a level 3 (Organised) as with DTPW, DSD, DOH and certain units within the DOTP. The strategy document anticipated the maturity level to move up to level 4 following the successful implementation and effective adoption of ECM. The figures below illustrate the difference of the province's maturity level prior and post the MyContent foundation pack rollout:



Original Baseline *Post MyContent Foundation Pack*

Figure 41. WCG maturity original baseline vs post MyContent foundation pack

Figure 41 illustrates a shift in the WCG's level of maturity from a level 2 (Opportunistic) to level 3 (Organized). Further, as per the ECM draft strategy prediction and objective, the province's maturity level as illustrated below in Figure 42 WCG was placed at the middle of Level 4: Enterprise.

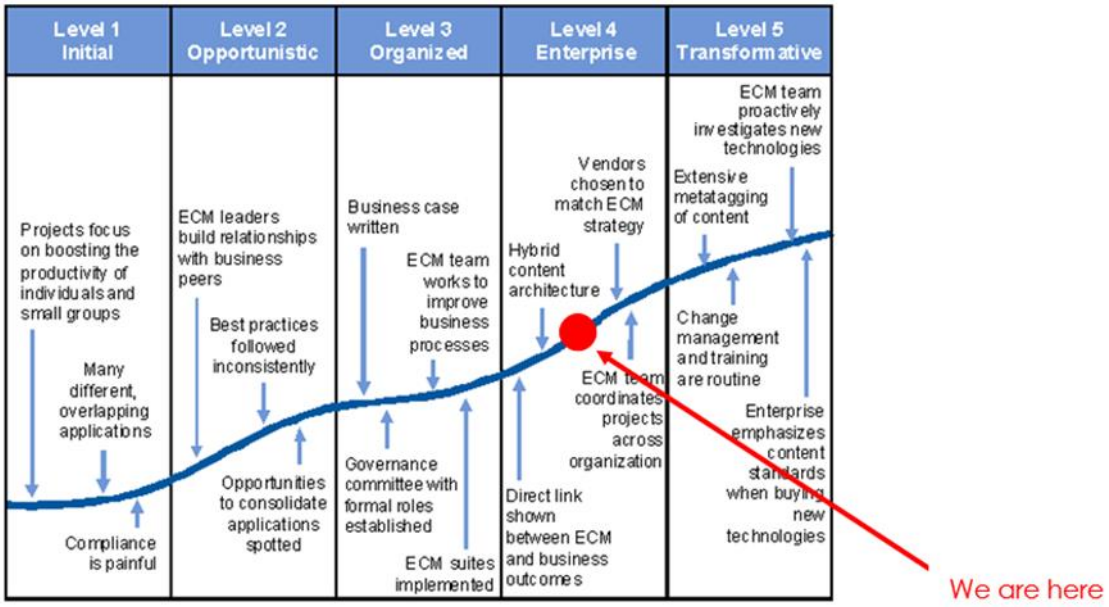


Figure 42. ECM maturity levels and WCG position according to the 2016 Draft ECM Strategy

The evaluation findings suggest, however, that ECM maturity across government is extremely varied, and in some areas has regressed. It is true that while transversal elements have been put in place, such as governance committees and formal roles (the consolidation forum), but the user experience has shown how these have not functioned optimally in practice. Furthermore, to place WCG as a whole at a single position on the spectrum risks a loss of departmental nuance and neglects the realities of the distinct types of ECM intervention.

For instance, based on the findings presented about user activity and management's buy-in to ECM, a department such as DoLG appears to exhibit the characteristics of Level 1. At the same time, parts of DOTP, DSD and DTPW exhibit the characteristics of Levels 3-4. Even in the case of the more mature departments, some units are considerably more mature than others. The differences in departmental maturity levels are clearly varied, particularly between early adopter departments and departments within phase 1 and 2 of rollout. The following quotes from an early adopter and phase department reveal the distinct difference:

Table 16: Early adopter vs new department on matters of maturity

Early adopter department	***"New" phase department***
Because we are the forerunners, we see other departments come in,	We are an infant department… If the province decides to do things, they

DCAS only provides training for the system, we are business specific so if you want to see business specific solutions we have other people come in from other departments. They come in for business for training, especially for scanning. We train record managers from other departments	don't take our maturity into account. We are not at the risk levels like other departments because our problems are smaller.

While no rigorous maturity assessment has been conducted within the scope of this evaluation, it appears that in all departments, changes in business practices have lagged behind the changes in systems and software. The general finding here is that departments at their various levels of maturity expressed some sort of lag between the MyContent system being implemented and the system's relevance to their core business practices. The respondent below particularly emphasizes the time lag between MyContent and the developments and innovations within the general content management space:

"Technology has evolved since 5 yrs ago. Survey infrastructure is old, and systems are old. Need to keep abreast with what is happening with advances. Need to be integrated and speaking to each other. Platforms do not allow it." – FG77

In addition, the varying levels of maturity across departments is illustrated and reflected in the uptake within these departments and the relative stability among active MyContent users. This as mentioned is influenced by various factors, the main contributing factor being the department's experience with some sort of pre-existing ECM solutions. Hence, early adopters (DTPW, DSD, DOH) were reported to be on a maturity level 3 as per the conducted maturity assessment. However, there are clearly lessons to be learnt from departments like Provincial Treasury and DEDAT which also enjoy high active user rates and who tend to view MyContent more positively.

The varying levels of maturity across departments further has implications on departments' ability to tailor and enhance the MyContent solution to meet their core and specific business needs. This particularly has an impact on early adopters. The statement below provides insight into one of the respondents' frustration with "stagnation" of their ECM maturity level due the transversal rollout of MyContent. The evaluation findings suggest that some of the early adopters seek to realise transformative benefits from MyContent, however because they no longer are business owners of the ECM solution they feel constrained and disempowered as a result.

"We are a very mature department so we cannot wait for other departments, otherwise we will remain stagnant." – FG52

"As a legacy department, we are unable to forge ahead with the gains we made with ECM. Now we have to use a 'vanilla' version of ECM." – survey respondent

As part of identifying the WCG ECM maturity aspirations in terms of next steps, the draft ECM strategy document (Mohamed, 2016) identified four specific areas of aspiration namely: mobility, social media, records management and electronic signatures. Mobility recognises the need to enable the user to interact seamlessly whether in the work environment or outside of it from multiple devices. This includes the integration of user-friendly interfaces with traditional content management repositories, collaboration capabilities and users' interaction with the enterprise environment even when they are in remote locations (Mohamed, 2016: 27).

In terms of social media maturity, the aspiration is to understand the relationship between social media and content management both of which are acknowledged as value adding system to government hence they should co-exist in a cohesive manner (Mohamed, 2016: 27).

The draft strategy document recognises that the current record management policies and standard operating procedures make limited provisions for electronic records and that this challenge continues to limit the maturity of ECM transversally, despite being a clear intention based on the Business Case, legal opinions and more. The objective here then is to "aggressively promote compliance" to record management policies and configuring the ECM system to enable this to be enforceable (Mohamed, 2016: 28).

Lastly, the MySignature addition of electronic signatures was a maturity aspiration that has already been introduced to reduce the dependency on the labour-intensive paper-based process. The document thus recognises the need for legal restrictions to be taken into account to enable the full utilisation of advanced electronic signatures (Mohamed, 2016: 28). It is also exemplifies the extent to which maturity in the WCG is variable, as it is a function that is not yet uniformly available across all departments.

4.3.5 What is the key value of ECM and what is the main driver for implementing ECM?

Preceding findings have highlighted the benefits and successes derived from the implementation of ECM. When distilled from the various benefits, the key value ECM intervention presents across the WCG is its ability to improve the storing, access, sharing and management of documents between and within departments. Document management rates as the most commonly utilised function with users, it speaks to the easiest aspect of the MyContent platform to use, it is identified as one of the top three benefits, and among those with some institutional knowledge, it features in the noted changes pre-2009 to current. Furthermore, it was part of the original rationale for e-Filing, and is linked to the most commonly perceived benefit- the reduction in paper.

Despite this standing out as the key value of ECM, it unfortunately does not speak to the main driver of implementation because ECM's comparative advantage as a platform is limited when considering this function only.

In determining the main driver for implementing ECM, managers' perceptions, levels of buy-in, their opinions of ECM and MyContent, as well as their experiences using the system all feature, particularly because of the rollout approach which was intended to be "top-down".

Managers' experiences with MyContent

There were varying opinions regarding the implementation of ECM expressed by managers. Arising from discussions, three main matters emerged that affected the levels of buy-in and support for realising the benefit of ECM: access issues, departments having other competing systems, and participation in planning.

Managers expressed the difficulty experienced due to resistance because of competing systems. This was particularly echoed by early adopter departments. Software such as CMATS, JTrack, and Sharepoint were already in place and in some staff members' opinion, working more or less effectively. The view from these staff members is that MyContent is disrupting other business processes and that additional time to learn the system is unnecessary thus causing a reluctance to accept the system. An interviewee explains:

"A number of departments … had proposed a single uniform application, work processes, etc. for working. They had procured a similar thing which was already implemented and viewed ECM with suspicion and raised issues: training (difficulty of getting used to the new system), work flows, affecting processes in business…[which] made acceptance of ECM difficult" (I45)

A survey respondent also states:

"MyContent is not helping, uploading files takes a long time to setup. The function is a slow tedious process we do not have the time. Our current CMATS system tracks our documents - JTRACK and all the other little systems then Office 365, all in the same time period. Users are suffering from software implementation overload. Too much at the same time – systems doing the same thing confuses users."

Other managers shared the frustrations of the constraints of lack of access (license rollout) and attributed the low buy-in levels experienced in their department to it. They believed that not being able to share documents and workload on ECM because of access became problematic as this affected collaboration capabilities for certain units. An interviewee states:

"The problem is that the rollout was selective, very few people had access. In the directorate where I worked myself and maybe two other people had access, so we couldn't work as a unit on ECM" (I4).

Another participant explains:

"I am a line function manager. That is why they should have started rolling it out to the full directorate, for example I use it, but I can't force my staff to

use it…because we had limited licenses in the first round not all people had access to it. So, we had a lot of usage, but it fizzled out…We had about 100 licenses when we started, and it was given selectively to key people" (I18).

A common thread that was expressed in interviews was that of inclusion in planning. Many managers indicated that the rollout of ECM and MyContent was a higher-level decision and they could not contribute to the terms of reference or were not involved with the planning of the rollout. Managers believe that because of this MyContent does not fully address or cater to their business needs entirely. An interviewee states:

"The Starter pack was deployed, and department was not involved in the Terms of Reference for the deployment of the starter pack. Before that, we didn't want a solution that wouldn't add to the functionality to the department. We had the starter pack imposed on us" (FG67).

Another official explains:

"Gave them the package and told them to run with it. Buy in from the top was very shallow and affected buy in into institutions and it was on onus of CEO to take it forward. Didn't look at the needs of users. User adoption and buy in had suffered at that level. 10/20/30% users at each institution. ECM system stopped rollout because of lack of buy in and couldn't measure efficiency…the system in all its essence caters for corporate environment…Requirements of departments outweighs money spent on the system. Cannot see effectiveness of the system" (FG55).

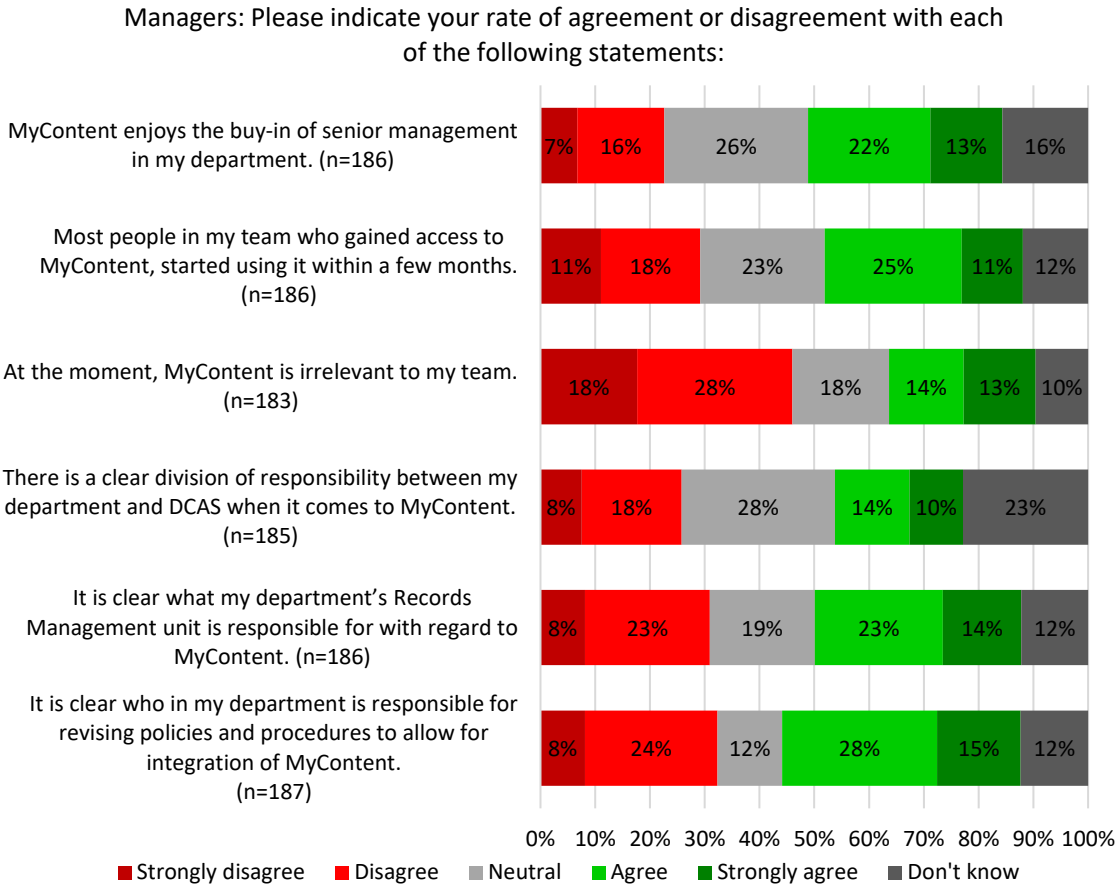


Figure 43: Managers' perception of MyContent

Figure 43 displays Managers' indicating that they agree there is buy-in among senior management at 35% compared to 26% that are neutral and 23% who do not believe there is buy-in. Figure 43 also shows that among Managers there is not a clear division of responsibilities between their department and DCAS (only 24% agree compared to 26% who disagree). Although a plurality of respondents did disagree that MyContent is irrelevant to them (46%), more than a quarter of managers did agree (27%). Upon interrogation of the statements, Figure 43 shows that when managers were asked as to what challenges make it difficult for them to use MyContent, the majority responded that there is a lack of clarity around what MyContent offers which is also expressed by users in section 4.3.2. Table 17 shows that all departments except for DCAS lack clarity about what MyContent offers.

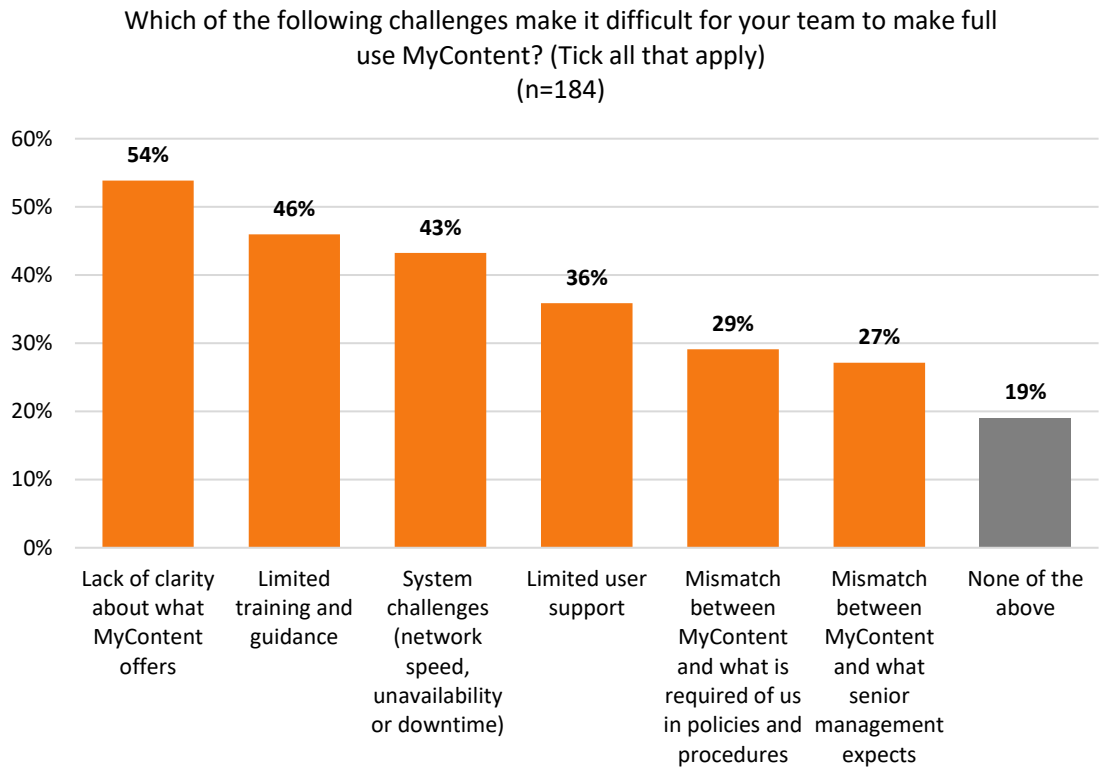


Figure 44: Managers' challenges associated with MyContent

Despite the challenges, some managers do recognise the value of having the system. However, many managers believe that not having the full functionality of MyContent poses a problem. An official explains:

"I expressed my support and it is where we wanted to go in terms of electronic management of records and filling. I sometimes feel like I threw myself into it without fully understanding the complexities. I feel like there were robust expectations that would come out of the system that have not yet materialised. I am in a way disappointed. We had competitions to get people to use the system. I think people are using the document management function, it is routine, but I don't think we have the full value," (I22).

Apart from functionality, many managers express concerns with difficulty in using the system. Table 17 displays that a significant proportion of managers experience challenges with the system when using MyContent.

Issues such as network speed and downtime also deter managers from using MyContent. An interviewee states.

"There are challenges, there is a lot of admin, the system is not as user friendly as it should be. There is a lot of clicking. The system is also very slow, we have raised it with Ce-I *and* DCAS. They say they hear us, but they don't do anything about it. That is how people have lost traction. Also, the other value of being able to collaborate with other departments has not yet materialised" (I22).

Table 17: Managers' top three challenges with MyContent per department

	System challenges (network or speed, unavailability	*Limited training and guidance*	*Limited user support*	*Mismatch between MyContent and what is required of us in policies and procedures*	*Mismatch between MyContent and what senior management*	*Lack of clarity about what MyContent offers*	*None of these above*	*Total respondents (management level)*
DOH	x	x				x		15
DSD	x	x				x		13
DOTP	x	x				x	x	40
DTPW	x	x				x		23
DCAS	x		x				x	18
PT	x					x	x	8
DEA&DP		x	x			x		20
DOCS	x		x		x	x		11
DLG		x		x		x		5
DHS				x	x	x		6
DOE	x		x			x		12
DEDAT	x	x				x		13

Despite the challenges, there is a level of buy-in to MyContent. However, one of the biggest challenges is that the managers in departments, central to the "top-down" approach, themselves lack clarity on what MyContent can and cannot do. It will be very difficult to identify a common "driver" for system uptake until the broader value proposition of MyContent is understood and realised at a departmental scale.

4.3.6 What are the best practices that have emerged to date?

ECM good practice tends to lie with the early adopters. One of the departments that has exemplified good practice for ECM is DTPW. Due to the historic levels of buy-in from management, they were able to adopt ECM and create structured workflows well before MyContent. The strong departmental drive is what made it possible for ECM to be integrated into business processes, but DTPW was also proactive in managing and inducting staff into these processes. DTPW has developed (and retained) their own internal

capacity to the point where they run their own training and periodically intervene to ensure ECM remains above a certain threshold.

At the time of migration to MyContent in 2017, DTPW monitored its active ECM users and identified a drop in utilisation rates according to interviewed staff. In order to manage this transition and ensure their staff continued to make use of ECM, the department embarked on an eight month MyContent Revitalisation Project from April to December 2017. DTPW staff explain:

"The department itself developed a change navigation plan before migration, we went out to regional areas and trained people in these regions. This was a departmental initiative."

"We have the revitalisation project currently running. People are using the system, we are trying to sustain the numbers. We train and refresh the training. That is what we drive here, change management."

"There is a lot of value in our approach, if you look at the amount of documentation we have as a department in comparison to other departments, it justifies what we are doing, and we are doing brilliantly. It is not only about the usage but also the value, it was used as a repository but what else can you do with it? Can you use it like a little search engine? What else can you do? That is the direction we are moving into."

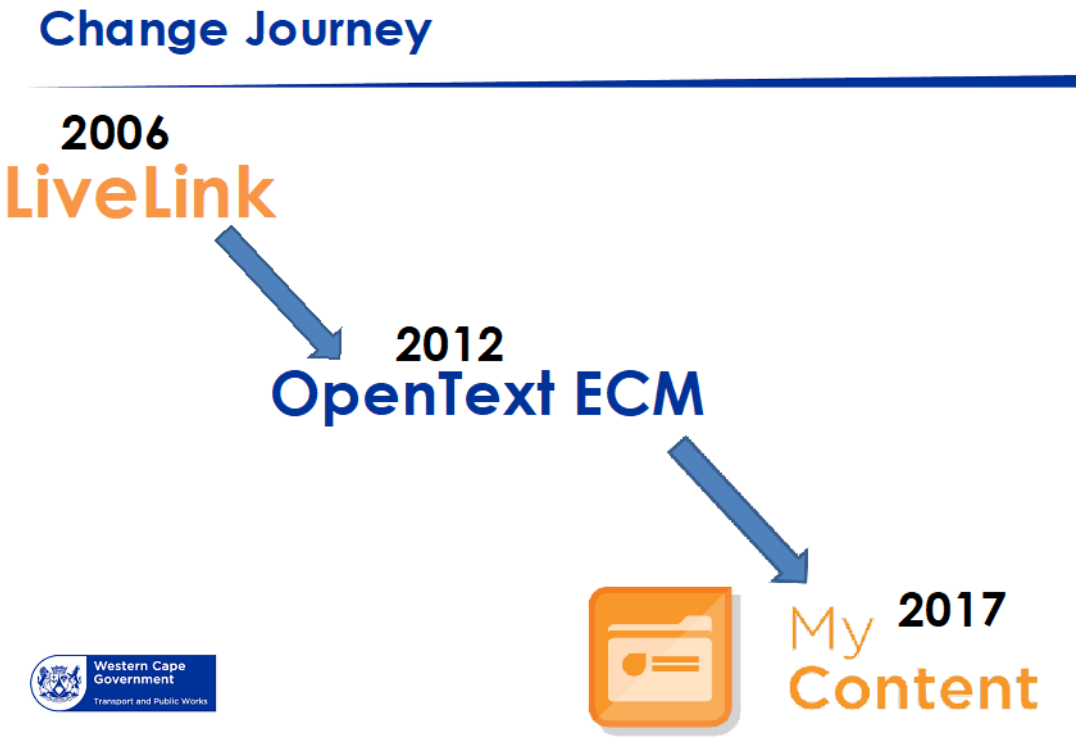


Figure 45: A change management slide from the DTPW MyContent Revitalisation Project

This initiative entailed a corporate communication campaign across multiple platforms, trainings at regional offices and a change management plan implemented within the department and satellite offices. Presentations included a combination of contextual information with practical examples of what the MyContent system looks like and how it should be used. Figure 45 provides an example slide from the presentation summarising the department's change across systems over time.

Apart from early adopters, new departments have also had initiatives that would constitute good practices supporting user uptake. DCAS specifically found innovative ways to promote and use MyContent. When MyContent was rolled out by DCAS with service provider support, there were competitions promoting the solution. Monitoring was conducted of the best users and gifts and goodie bags were awarded. A DEDAT official recalls:

"There was a competition conducted once a month, they *(DCAS)* looked at your usage and you won a nice prize. It was a goodie bag which included a flash, mouse pad all branded with MyContent."

A DSD interviewee states:

"When I got in the prizes and gifts were being handed out and prizes were offered for best user or people using it the most for the month. The winners got nice gifts."

Besides DCAS, PT also exemplified good practice in terms of departmental ownership and change management. They were the first department to switch from CMATS to MyContent and are the only new department not paying licenses for CMATS. This has paved the way for other departments who are now seeing PT's example, wanting to do the same. A participant explains:

"Treasury came on board and made it their own. Wanted to get rid of CMATS. Now all the other departments want. It worked for them" (I15).

A PT official also states:

"[PT senior manager] worked very hard to assist people and encourage them to use MyContent. Created awareness…had many awareness sessions and OD. And change management (internal and external), went through MyContent and the file plan. Did regular corporate communications. They went through 5 core skills."

From the above, it can be seen that DTPW, DCAS and PT have all contributed to good practices using electronic management in their different ways. In line with the envisioned roles and responsibilities, each of these examples is instructive for how MyContent can be more successful, particularly when departments take the lead, create their own initiatives and make the system work for them.

4.3.7 Are the legal requirements for record management being met in ECM user practice?

As discussed earlier, there are key findings that have been drawn from this report. The first being that the WCG legal requirements have not changed since the rollout the ECM intervention, so the same requirements stand. Subsequent legal opinions have confirmed that ECM should not be a barrier to meeting the legal requirements for record management, and WCARS has endorsed MyContent. However, there does appear to be a misalignment between the MyContent solution and its value to record management in practice, and this appears to be due to a lack of clarity and guidance about how MyContent is utilised in a way that is verified as legally compliant. Again, the lack of common policies and procedures in place to support the evidential weight of electronic documents highlights the enduring inability of the ECM intervention to fulfil one of its original intentions.

Based on the qualitative data collection, the DTPW is currently the only department that claims it is audited through the ECM platform owing to the fact that it has ensured its ECM processes withstand audit scrutiny. In the absence of such scrutiny and acceptance by the auditor-general, departments have thus questioned the value of digitising records. The following quotes elaborate on this:

"The debate with the auditor-general is that we have not yet established whether they will accept the e-record" – I85

"The auditor-general for instance does not accept electronic documents for audit purposes because they cannot verify the authenticity of the document and it does not meet the standards it is supposed to meet" – FG68

"I must still produce an actual payment pack to the AG. During the possibility of day zero, if we reached phase three we were not going to be in the office, the auditors had requested that I must make staff available to come into the office and scan them copies of the samples they need for audit. Do you think they will accept a printed email authenticating an invoice?" – I28

The above quotes illuminate the enduring concern electronic records create in terms of the audit process and explain why despite the ECM solution, many remain inclined towards the pre-existing paper-based system. As previously mentioned, this has resulted in a parallel system where paper and digitised records are duplicated within different work processes mainly due to the lack of directive instructions on the standards and requirement for digitising records from the Heads of Service as per the legal opinion referred to in "Legal and Policy Requirements" section of this report.

Paper Record Management Requirements

The Provincial Archives Act and Record Management Policy govern the management of provincial recorded information regardless of form or medium. The Policy in particular explicitly states that the original paper-based records are not to be destroyed once digitised. As discussed previously, both legal tools require a written disposal authority for the destruction of the paper-based records from Heads of archival services (Reed, 2014).

Departments largely observe these requirements, but an issue arises about when files can be disposed of.

"The WCG has closed four systems and they are at Alfred street. We have records from 1901 for instance, they shouldn't be in our filing system, they should be at Archive. Provincial documents should be there. Archive gives us a disposal period and say we can keep documents for 20 years and we can dispose of them after that. To send it to them, we need approval. Our problem is to get rid of these files." – I28

The above highlights that for the disposals of files departments are erring in favour of the legal requirement to keep records as per the Archives Act and Record Management Policy, but without addressing the issue of disposal.

However, the lack of change in WCG requirement since the introduction of ECM has also raised issues with the current paper record management requirements. The frustrations raised from the lack of compliance with the paper record management requirements has emerged as a general finding in this regard. As discussed in preceding findings, the Uniform File Plan as a transversal file plan system has been called into question due to a lack of compliance to the record classification and naming conventions required for the file plan to function efficiently.

The two key issues raised with regards to this are the requirements linked to classifying and naming records. Respondents were asked to provide their insights on areas of improvement in relation to naming conventions and records classification, as part of their comments respondents reflected on the following issues:

"Within the department [*observance of the Uniform File Plan]* has not improved. It becomes an issue because they should sit and classify according to the file and then only you can scan it. When documents come to them, there is no file number. When you scan it, it should [be there, but] it is a problem, people are not using the file plan. It is a historical problem." – I66

All departments are reported to have a registry procedure manual, verified and audited by provincial archives. As such, there are guidelines provided to staff. Various departments have also reportedly drafted manuals for their department related to file requests linked with the Code of Conduct stating how file numbers must be allocated and documents must be filed. Despite this, user behaviour deviates and non-compliance is common.

Not only is compliance inadequate with regards to record management, but respondents also directly referred to insufficient standard operating procedures to guide employees in managing records in general.

"…far too many of our processes are ad hoc. And are in people's heads instead of a SOP, [the] way things should happen." – I33

"Need to give guidance in terms of naming convention, for searching purposes. No standardised guidelines. Must think long term about documents lying in the system. Very *deurmekaar*." – FG56

On-going transition to ECM as a record management solution

Due to current inefficiencies and the lack of compliance with existing requirements, departments have expressed their concerns and frustrations with the status quo. The current practice of record managers remains paper-centric and they have questioned the appropriateness and value of ECM as a record management tool. The uncertainty seems to largely stem from the current experience of a lack of awareness around existing supporting documentation and inadequate practical guidance on how to bridge the paper-based and electronic record management challenges.

4.3.8 Has the vision set out in the e-Filing Blueprint and Business Case been realised in the implementation to date, and what are the reasons?

The Registry/E-Filing Blueprint (DOTP, 2009) and Business Case (Jacobs & Mohamed, 2013) set out an (implicit) vision for a transversal ECM solution that enhances business in the WCG while improving resource efficiency. The Business Case in particular envisioned a maturing ECM practice that is transversally consolidated, with a "centre of excellence" in DCAS offering support and further enhancements.

Table 18 provides a summary of the extent to which implementation to date has realised aspects of the constituent elements of this vision, based on the findings of this evaluation.

Table 18. Achievement of the vision for ECM

Solution Scope[21]	***Level of achievement***
Resource / Capacitate DCAS	Partially achieved
Define and implement ECM Policy (including retention policy)	Not achieved
Establish an ECM Centre of Excellence (Programme)	Not achieved
Upgrade the ECM Consolidation Infrastructure at 4 Dorp Street	Achieved
Standardise all existing ECM implementations on Open Text version 10	Achieved
Create central ECM foundation pack capability	Partially achieved
Procurement of implementation vendor for foundation pack rollout	Achieved
Rollout of foundation pack	Achieved
The digitisation of the Western Cape Archives Holdings.	Partially Achieved[22]

[21] Taken from the ECM Business Case (Jacobs & Mohamed, 2013)

[22] Not all of the Western Cape Archives Holdings have been digitised, but the associated project was implemented and targeted holdings were digitised.

Solution Scope[21]	***Level of achievement***
Rollout of full ECM functionality across WCG	Partially achieved

The table notes that the system architecture priorities have largely been achieved: upgrading of the ECM consolidation infrastructure; and standardising ECM implementations on OpenText 10. This was discussed in section 4.2. The development of a rollout foundation pack and the procurement of a vendor have taken place. While full ECM functionality has not been rolled out across the WCG, considerable progress has been made towards this goal, in that 12 out of 13 departments now have access to MyContent Foundation Pack (with some additional functions). The WCG Archives digitisation goal has also been partially achieved considering the considerable resource implications of full-scale holding digitisation.

It is argued that DCAS has been partially capacitated. As discussed in sections 4.1 and 4.2, there is now a DCAS ECM directorate and it has managed the rollout of MyContent, albeit with significantly limited human resources and two vacant posts. This directorate does not match the description of an ECM "centre of excellence" however. Such a centre has not been established.

The Business Case further envisioned the development and implementation of an ECM Policy. As discussed in 4.1 in particular, there is a draft but no final version of such a policy. Such a policy would need to be integrated with, or complementary to, the provincial records management policy and guidelines, which also have yet to be revised to account for ECM.

The fact that the vision has been achieved in terms of infrastructure and rollout, but less so in terms of policy, again reinforces the notion, presented with regard to ECM maturity, that business process changes have lagged behind system improvements.

4.3.9 Synthesis

This section has discussed the effectiveness of the transversal rollout of ECM in terms of user adoption, user experience, value add, maturity, benefits, best practices, legal requirements for record management, and the fulfilment of its vision as per the Blueprint and Business Case. This section synthesises these findings; in doing so it considers the extent of achievement of the intended theory of change outputs – transversal and department-specific – and immediate outcomes – in terms of improved business processes, more efficient resource use, and improved compliance / risk mitigation.

While there was an initial openness to and interest in MyContent, the evaluation has found that departments have not fully adopted MyContent. Most departments have not fully integrated it into their processes and procedures nor adjusted their staffing arrangements to take it into account, nor do they seem to intend to do so. Naturally, this has limited the extent to which individual business units or users have adopted MyContent as a primary or preferred means of doing their work. Furthermore, not many departments seem to have an appetite to adopt MyContent more fully in its current form. The only departments where managers have plans to adopt MyContent more fully in the short to medium term are DTPW (with its revitalisation strategy)

and DOTP. Thus the assumption in the theory of change, that departments would take ownership for the business side of ECM, has not entirely realised.

There is a trend of declining user activity in almost all departments over the last two years, and the most recent report shows that only 44% of users made any use of the system over the last few months. This signals that departments are not merely slow to adopt ECM or just need more time; instead, after having tried to work with it for a while, they are increasingly opting not to use it.

Most users don't have a particularly high opinion of MyContent and are not very likely to recommend it to others, with detractors outnumbering promoters in terms of the Net Promotion Score. Even though most users rate the system as reasonably easy to learn and easy to use, they consider it more obstructive than supportive to their work. Of course users are unlikely to embrace a system that they do not perceive to be supportive to their work.

Thus the transversal ECM system has fallen considerably short of intentions in terms of take-up. This limits its potential to benefit WCG. Nevertheless, there have been some improvements in the outcomes of interest to this evaluation. Survey respondents perceive a lower prevalence, compared to 2009, of some of the problems that MyContent was intended to address, such as duplicating paper files, information security risks and loss of work because of hardware failure. Although these are considered still to occur at worryingly high levels, the perceived reduction coincides with the period when MyContent was rolled out.

Where MyContent is used, the most commonly cited benefits are related to digitisation and centralisation of documents: less paper used (although unverified overall); remote access; and centralised storage of files. The qualitative data also confirm that certain users and units in WCG have seen important benefits for their operations / business processes from this, and have reduced their perceived risk of loss of work. Where there has been a decrease in departments' paper expenditure, it is not possible to judge how much of this reduction is attributable to MyContent.

A strikingly large number of early adopter departments' users are neutral on the question of whether it was worth migrating to MyContent. It appears that these users did not experience much change. In focus groups, however, stakeholders from these departments raised concern about their dependency on DCAS for user support and administration which they could previously manage for themselves.

This section has further argued that despite 12 out of the 13 departments now having access to MyContent, there is a very wide disparity across departments in terms of their ECM maturity. For the more mature, early adopter departments, the transversal ECM solution may in fact be limiting their further development. The good practices observed in PT and DTPW were driven by considerable management buy-in; without this, changes in business practices tend to lag behind, so that the ECM practice does not mature.

Nevertheless, for departments with the lowest levels of maturity, the mere introduction of an ECM solution was a first step.

Overall, the original vision for a transversal ECM solution has been partially achieved in terms of its components, but less so in terms of the end-state envisioned. Areas of success include the putting in place the necessary infrastructure, transferring the mandate to DCAS and introducing and consolidating MyContent. However, the capacity constraints in DCAS and the lack of a "centre of excellence" to drive and support ECM transversally, have hamstrung the effectiveness of the ECM intervention. Furthermore, from conceptualisation, the clear need for sufficient ECM policies / policy guidance has been acknowledged from the start. The fact that the records management policy was only introduced in 2017 and that no ECM policy was introduced, has created uncertainty and arguably contributed to the stagnating / dropping levels of adoption of ECM into user departments.

The late introduction of the records management policy and the limited practical guidance that has been given on implementing it as pertains to MyContent, also speaks to the relationship between the ECM directorate and larger records management directorate. As the literature review pointed out, ECM brings together ICT and records management disciplines and the gap between these two needs to be deliberately bridged. The business implications of this technological solution need to be interrogated so that there can be clarity and coherence in compliance to all requirements for records management while making optimal use of ECM.

5 Conclusion

The evaluation has sought to determine if the ECM solution has been effectively implemented as per the ECM transversal Blueprint and Business Case. It concludes that the implementation of the ECM solution has been hampered by the initial institutional repositioning and challenges to its intended rollout. This is in part due to issues of resourcing, coordination and buy-in. In particular, resource availability has been a limiting factor that has prevented the ECM solution from being fully effective. Breakdowns in the assumptions underpinning a successful intervention at both the transversal level and at the department level have militated against the realisation of a significant portion of the intended benefits for departments.

While implementation has been significantly challenged in terms of user experience, it has also registered achievements that provide a firm foundation from which to inform the "redesign of an implementation framework for the next stages of ECM implementation". A number of elements, which are essential for effective adoption of a transversal ECM solution, are now in place that were not there at the time of the Business Case. Transversally, this includes the establishment of a dedicated ECM server hosting the majority of the WCG on a single instance. There is also a basic ECM package, the MyContent Foundation Pack, with a set of selected features / modules that can support both electronic document and records management, as well as other common processes. Furthermore, there are enough licences for this system that it could be rolled out universally to all 13 departments (excepting certain categories of Education staff for the time being). In terms of supporting adoption, there are the beginnings of a policy framework to support uptake of this system for electronic document and records management –if not exclusively, then certainly as an approved approach that can be integrated with or run parallel to a paper-based system for the time being. Finally, across the 12 departments that now have an ECM footprint, there are examples of both implementation successes and failures with ECM in a wide enough set of contexts as to prove instructive for planning the way forward.

Thus, the WCG's requirements for an ECM solution set out in the Registry/e-Filing Blueprint and Business Case appear to be met in terms of the purpose, licensing, functionality and IT infrastructure associated with MyContent, noting exceptions. While broader aspects of the ECM intervention design are mostly appropriate, there has been a lack of clarity and detail in terms of the governance arrangements, operationalisation of roles and responsibilities (particularly regarding user support), and critically, a failure to provide adequate leadership and guidance with regards to policies and procedures governing the use and application of MyContent. Thus, on balance the ECM solution is considered appropriate for the WCG's requirements while recognizing that key aspects of the intervention's design have not been realised in practice.

The transversal rollout of ECM has been constrained by limited resources – chief among these the institutional capacity required to drive a transversal intervention of this nature and reduced funds for the intervention. Although

the planning and requirements for both capacitation and budgeting set out in the Blueprint and Business Case were generally appropriate, they were not realised in practice. Institutional capacity has been spread between Ce-I and DCAS without the formal establishment of the kind of staffing and skills complement within the "centre of excellence" that was intended. There has been inadequate involvement of records management staff in the process and a reliance upon a limited pool of external service providers to drive the intervention. However, there have been economic benefits, particularly in terms of the reduction in per user licensing costs, consistent with the original intention of the intervention. Despite this achievement, the Western Cape has not been adequately resourced as intended and this represents a critical enabler to the successful implementation of a transversal ECM solution.

Inadequate resourcing, along with challenges in the implementation, communication and change management of the rollout process have led to MyContent user activity declining and negative perceptions about the ECM solution across the intervention groups. Although early adopter departments recognise the potential greater benefits associated with MyContent, the user experience has prevented them from realising this in practice. The support roles and responsibilities set out in the Business Case have not been realised in practice and this has contributed to low user adoption. Communication, especially to the early adopter departments, has been particularly poor and there has been insufficient leveraging of their good practices and capacity to achieve the institutionalisation of MyContent that was intended. Critically, the limited guidance from the side of DCAS in how to ensure the effective satisfying of the legal requirements for document and records management via MyContent as an endorsed electronic records management system has led to the perpetuation of the paper-based system. Thus, the ECM solution has not been effectively utilised transversally. It has a foothold in some departments, notably the early adopter departments and in cases such as Provincial Treasury, but significant improvements to the implementation framework will be required if the potential value of the ECM solution is to be realised.

In conclusion, the ECM intervention has sought to effect important changes in the WCG at both a transversal and departmental level. Realising the intended benefits has been dependent upon an important sequencing and achievement of the intervention logic, while meeting some key assumptions. In practice, this has not occurred with critical deficiencies in terms of transversal resourcing, capacity and change management. This has been matched by insufficient ownership and buy-in on the part of departments, leading to low utilisation rates and limited results. Nevertheless, a transversal foundation for the ECM solution has been established and many of the key outputs set out in the Business Case have been achieved. Benefits, albeit limited, are accruing to departments on an uneven basis. The challenge now rests in moving from the tenuous foundation and limited achievements to date, to better entrenching, supporting and institutionalising a more effective ECM solution throughout the WCG.

6 Recommendations

The following recommendations are informed by the findings and analysis presented in the evaluation report and feedback received from more than 30 WCG stakeholders in a recommendations workshop held on 2 August 2018. This input was used to critically interrogate the recommendations in terms of their feasibility, affordability and acceptability as per the *Standards for Evaluation in Government* (Jacob, 2014). This process was central to supporting the overarching considerations of a partnership approach and supporting utilisation the evaluation report.

A note on the recommendation questions

The questions set out in the ToR informing this evaluation were both numerous and broad in scope. In seeking to answer all of these questions, the proposals shift from broad, overarching recommendations related to the intervention at a high-level, down to low-level operational recommendations which may be better addressed in further technical detail outside of the evaluation report with staff specialised in those areas and processes. The following ensures all evaluation questions and sub-questions set out in the ToR are answered in this evaluation report.

6.1 How can the ECM solution be improved?

6.1.1 How could the implementation to date be improved upon?

There are four key areas of the implementation to date that could be improved upon: resourcing; buy-in; training and support; and institutional arrangements.

Resourcing

The evaluation found that significant resource challenges in staffing and implementation budgets posed barriers to the full implementation of ECM. Implementation can be improved by addressing this.

Enhance capacity and financial resources for ongoing transversal ECM management. It needs to be recognised that driving and supporting ECM transversally is not a project with a defined end date, but rather an ongoing role. Staffing and financial resources should be allocated accordingly. The DCAS ECM team should be better resourced, at the bare minimum with the five staff positions filled in the DCAS unit as expressed in the Business Case, but potentially with more staff as informed by the departmental review. See specific discussion of the need for business analyst and records management expertise, below.

The enabling role that Ce-I plays is also critical in this regard. The historic allocation of resources for ECM has been shared between DCAS and Ce-I. In motivating for additional resources, it is therefore important that planning and budgeting is jointly informed and motivated so that the holistic implications of ECM implementation are considered.

While it is important to institutionalise ECM as an ongoing transversal function, this function is not static; it will evolve as ECM technology and the WCG's ECM maturity evolves. Decisions around human and financial

resourcing of this role as well as its institutional positioning may therefore need to be reviewed relatively frequently.

Review departmental capacity for managing ECM, especially records management. In addition, the People Management: Organisational Development (OD) team needs to undertake a review of the internal capacity of the 13 departments as it relates to records management, IT and knowledge management more broadly. The evaluation found that an important constraint to adoption of MyContent as an electronic document and records management (EDRM) solution is the human resource implications of moving into the new skills frontier that ECM presents. Staff currently face the challenge of running both paper-based and electronic systems for the time being, while the system transitions from a mostly manual one to one of mostly virtual automation. Human resources currently devoted to paper processes may therefore gradually be freed up as processes are automated, but such staff will also require upskilling and/or re-skilling in order to play new roles on the electronic system or elsewhere in government. These are real issues that require transversal guidance and department-specific review and planning. The Registry/e-Filing Blueprint provided a proposal in terms of organisational design that was not actioned but can serve as an informant to the proposed review. Similarly, considerations around the current and anticipated physical infrastructure and storage needs associated with the inescapable reality that some records will remain paper-based should inform these resourcing considerations.

Ensure further rollout is adequately resourced. It should also be stressed that the rollout project is not yet complete. Financial resources are required to roll the system out to the Department of Agriculture as well as the thousands of users in the 13 departments who do not yet have access. The constrained budget over the last six years inhibited the effectiveness of rollout; and there needs to be careful consideration of how to set the remainder of the rollout project up for success in the current fiscal environment. Learning from implementation to date, it is important not to neglect the user onboarding, training, change management and support dimensions in favour of the IT / system dimension of rollout. The latter is much easier to manage than the former, and the experience of DTPW has shown that the former is very much a continuous and cyclical process.

It has also been noted that the implementation of ECM and MyContent has budget implications such as the purchasing of scanning equipment and upgrading of computers. In some cases there is already a reported shortage of scanners.

A possible approach to rollout in this fiscal environment is to stagger it, in terms of departments rather than users. This staggered approach is recommended in more detail below.

<u>Supporting buy-in of managers and records managers</u>

The evaluation has demonstrated that every department's level of buy-in is critical to effective adoption and usage of ECM and MyContent; without this, changes in business practices tend to lag behind, causing the ECM practice not to mature, or potentially even regress.

Buy-in, specifically at a management level, is important to ensuring adoption of the system. The implementation approach up to now has not been adequate and change management has been too diffuse and ineffective. So far, this approach has yielded disparate levels of buy-in and adoption across departments. But many managers in every department have now been exposed to the system and have a view on MyContent, whether for the better or worse. So there is a clear need to target a reinvigorated change management approach at managers, and supplement them with support.

It is recommended that the "ECM-savvy business analysts", originally envisioned as key team members of an ECM "centre of excellence", be appointed. These person(s) should have the responsibility to get to know the department's business and work with them to address managers' most common constraint to using the system: a manager's knowledge of what the system can offer. They should also advise on the amendment of responsibilities and processes to account for the introduction of the system. A business analyst would also help with the identification of plans for addressing future departmental needs.

In addition, it is recommended that the ECM team in DCAS embed (whether through appointment, secondment or other) in-depth knowledge of records management within it. The evaluation noted that such knowledge and consideration of the records management implications of ECM did not necessarily filter through to the DCAS ECM unit by virtue of its institutional positioning. The ECM team needs to engage thoroughly and help to find workable solutions to records managers' concerns as a functional priority, including possible amendments to the system or the way it is being rolled out and supported. They should also drive the sharing of good practices and solutions related to EDRM among departments. They can best do this if they have a thorough understanding not only of the system (which they already do) but also of records management theory and departments' current practices.

Concurrent to the preceding recommendations, there is also a need to ensure that "buy-in" is not only driven by soft means and support, but reinforced in terms of ensuring compliance to agreed protocols and conventions, particularly as this relates to managing unstructured content. A firmer approach to ensuring compliance in this regard, driven by departmental management and reinforced by records managers, concurrent to resourcing and other support, should be pursued and cascaded.

Training and support

The evaluation found low levels of user confidence on MyContent, and reported that even users who have been exposed to training were largely not confident in MyContent. This poses an obvious constraint to buy-in and uptake. The initial introductory training that forms part of rolling the system out to new users should be reviewed, to understand the contradiction between high post-training user satisfaction rates, and later reports of dissatisfaction with it.

Additionally, as more users start using the system, there is an ongoing ECM training role. This role should be played "in-house" by DCAS ECM staff (in the same way DTPW staff fulfil this function within their department), if not in its

implementation then at least in its management and in the selection of training content. With adequate resourcing, training programmes could be more frequent, as well as continuous (training levels with follow ups), supporting users in making fuller use of the system over time. The DCAS ECM staff who are engaging with departmental managers from a business analysis and records management perspective, should have oversight over the training curriculum to ensure it is responsive to departments' contexts and any customisation or uniqueness in how ECM is being applied. This will also require liaising closely with WCARS and seeking to ensure their involvement, consistency and harmony with records management training that is offered independent of ECM. To reduce costs, e-learning should be explored.

Support should not be limited to discrete training events, but should also be offered through other channels, potentially being integrated into orientation and induction for all new appointees. In some departments, the ECM "champion" approach has worked well to promote usage; it may be useful to explore the conditions under which this worked and replicate it if appropriate. Another valuable approach to be explored is user forums (led by users who are supported by the ECM unit).

Furthermore, channels for accessing user support need to be enhanced. Policy documents and guidelines needs to be clear in terms of the intended lines and sequencing of support, and this needs to be communicated consistently to users and actioned accordingly. There needs to be more capacity for first and second line support. Ce-I (which is responsible for third-line support) needs to consider how it can best handle MyContent related queries. It appears that Ce-I support staff need to be better acquainted with MyContent and the technical issues that tend to arise. Logging multiple support requests needs to be discouraged through a common response between DCAS and Ce-I. This requires DCAS and Ce-I to jointly design, communicate and operate a seamless support system. This also entails due regard for the impact of changes in networks and supporting infrastructure, on the functioning of MyContent.

Institutional platforms

A proliferation of structures and platforms should be avoided, and the technical / systems aspects of the transversal ECM solution appear well addressed and governed by the existing structures. It is therefore recommended that these structures be streamlined and reduced with clear Terms of Reference as it relates to ECM.

The evaluation does highlight the need for the revitalisation of the ECM Forum or similar structure and suggests there may be value in a joint convening of the structure by DCAS and DOTP: Ce-I to ensure collaboration and coordination. The reportedly operational and systems-driven emphasis that this forum previously took, now needs to shift to one where DCAS provides leadership, is reinforced and enabled by DOTP:Ce-I, and departments share challenges and good practices on the business aspects of ECM implementation. The ECM policy framework should be drafted and finalised in close consultation with such a forum.

Bolstering the support and authority of DCAS as it relates to ECM in such a forum could be reinforced by the establishment of a select interdepartmental

advisory panel (possibly a working group structure of the ECM Forum) that draws on the experience and benefit of best practice ECM in the WCG. Included within this panel or working group would be early adopter departments, good practice departments like Provincial Treasury, and potentially even an external stakeholder. Such a grouping could support DCAS outside of the forum in terms of providing a soundboard and sharing good practices that will enhance its leadership role via the ECM Forum as an established platform.

The second need highlighted by the evaluation is for a platform for provincial records managers to coordinate the planning and transition from paper to (more) electronic records management, not in general (as is appropriate in the larger Records Managers' Forum) but specifically related to MyContent as the officially approved ECM system of the provincial government. It is essential that DCAS drive the transition from paper to electronic records management, because it will require significant transformation of the records management profession in the WCG; and it can ultimately be very beneficial but also has many associated risks, as have already started to become apparent. Given the strategic importance of this process, the Head of the Archives and Records Service should serve as or appoint the chairperson of this forum. As part of providing strategic leadership on this transition; it is recommended that DCAS develop MyContent-specific ERM implementation guidelines in close consultation with such a forum. The forum can function either as a standalone committee linked to the ECM forum, or as a subcommittee of the Records Managers' Forum. It is important however that it be informed by the practical features of, and that it can influence and negotiate possible necessary amendments to, MyContent.

6.1.2 What improvements/enhancements should be made to ECM?

While priority should be given to developing the policy and institutional framework for ECM and supporting its take-up and use, the evaluation has identified some aspects of the current MyContent solution that can be improved or enhanced to ensure the success and institutionalisation of the intervention.

User friendliness

Departments have stated that a big deterrent to using the system has been the user experience challenges. Making MyContent more intuitive and user friendly by improving things such: speed, navigation, user interface, pop-ups and fewer clicks (a "3-click maximum" approach) can aid in persuading users to use the system and understand better what it can do. It should ideally be as easy to manage content and collaborate on MyContent as on one's own PC.

To aid the transition to EDRM, the desired user behaviour with regard to file naming and classification should be facilitated by the design of the system and ideally automated as far as possible, without removing the user's responsibility for it (this is discussed further below).

Disposal of files

Laws governing the disposal of files should be integrated into the MyContent system and can prompt a user, in this case the records managers who would also be the monitors of the system, to dispose of a file when it has reached its disposal time.

Restricting access

Some departments that are working with sensitive information indicated that they need a more secure system, or clearer guarantees on security, before they can place this information on MyContent. System enhancements that can allow departments to share 'classified' information with selected audiences would support this. Protocols around this need to be developed and integrated into MyContent in consultation with staff within departments where this is a regular feature of their work and communication (e.g. forensic investigations).

Offline work

Departments have raised the issue of downtime when the network and system are offline. A solution to this would be the allowance of the system to be used offline (uploading or updates with a low priority can be scheduled for after hours or when the network is functioning). An offline system would alleviate low productivity levels when the networks are down. The feasibility of this should be determined by DCAS in consultation with Ce-I.

Integration with other IT tools and equipment

MyContent is one of several software solutions that the WCG uses and should integrate with other transversal applications as far as possible. MyContent should be able to seamlessly import/export to other systems (BizProjects for example), as well as sharing to systems outside of WCG, as per defined protocols. Where MyContent is currently compatible with systems, it is important that Ce-I schedules updates to these systems with MyContent in mind – some bugs in the interfaces have arisen for instance when Microsoft Office was updated.

Provide guidance on how to be auditable via MyContent

DTPW has had its processes confirmed as audit-compliant and limited the associated accountability risks from an electronic system. Providing guidance how this can be done via the system is an opportunity to popularise a potential benefit of the system in line with its core function.

6.1.3 Given the elapse of time and associated learnings, what should the revised vision and objectives be and how should these be realised practically?

The evaluation has validated the purpose and intention of the ECM solution as expressed in the original Blueprint and Business Case. There was good reason to pursue such an intervention; and there still is. The vision was never explicitly set in those documents, but has been implicit as derived from the foundational documents and the outcome and impact levels of the theory of change used for this evaluation.

Currently, the implicit vision is for ECM as an intervention to result in improved operations / business processes, more efficient use of resources, and improved management of compliance and risk – ultimately contributing to faster services to the public, a culture of efficiency, better value for money, and improved transparency and accountability. These results are still sought, albeit with more emphasis on how ECM should contribute to that.

It was envisioned that there would be a (continually) maturing ECM practice in the WCG, and this is still relevant; the literature review has demonstrated the evolution of both technology and business processes associated with ECM over time and it is clearly desirable for the WCG to continue to evolve as well.

It is thus recommended that the vision for ECM in the WCG be informed by the theory of change for this evaluation, but be more clear in terms of the transformative state it envisions. The vision should be bold, explicit, and clearly articulated as it relates to the desired end-state, which goes beyond EDRM or ECM, to that of EIM. The vision should holistically reflect collaboration, business processes, knowledge and information sharing, and record management as this relates to an envisioned EIM end-state in the WCG.

The shortcomings in implementation were driven not by an inappropriate vision but by deficiencies in terms of transversal resourcing, capacity and change management, especially in relation to the sequencing of EDRM as a foundational component of ECM. The objectives for the coming years should be articulated in such a way as to make progress towards this vision, learning from implementation shortcomings so far, and sensitive to the constrained fiscal environment.

It is recommended that the WCG set the following objectives for ECM in the short- medium term (1-3 year planning horizon):

Institutionalise ECM in the DCAS organisational structure. As described above, the achievement of the ECM vision requires the appropriate institutional resourcing – not on a project basis but as an ongoing role. The intention of a "centre of excellence" is still a worthwhile objective, but this cannot be a temporary or outsourced arrangement. The bare minimum recommended expertise that this unit should have been detailed above.

Complete the process of transversal ECM rollout. As discussed above, MyContent needs to be rolled out to the thirteenth department and to several thousands of users across departments. To spread the cost and improve the likelihood of success, it is recommended that this be staggered: start with departments where there is already an interest / appetite for a management-led, broad implementation process and look at how existing capacity can be leveraged. Move on to further departments with the benefit of experience and demonstration effects from these initial departments. Recognise that the completion of the rollout process in a department does not signal the end of the need for transversal involvement but a change in what that involvement consists of.

Adopt electronic document and records management (EDRM) practices at large-scale as the first priority. This is key to the achievement of the resource saving dimensions of the vision (paper, storage

space, and time); it is also the oldest form of ECM historically and therefore the best supported by international good practices and examples. Furthermore, this is what MyContent is most commonly used for already, so build on it. This objective is about current documents, records, and first-time archiving; it is not related to initiatives to digitise historic records.

This is a much more complex undertaking than was perhaps anticipated in the drafting of the original blueprint and business case; it has a crucial system / process redesign component but is also fundamentally about changing user behaviour. It should be led by (or at the very least in partnership with) records managers but strongly supported by DCAS both from an implementation guidance and with the support of DOTP from a change navigation perspective. Even though it may not be feasible to "go paperless" in the medium term, the transition towards this should enjoy priority and should largely be completed in most departments by the end of the period. The implications of this are unpacked further under the recommendations on the way forward.

Introduce and implement an ECM policy framework. The draft ECM policy seeks to give guidance about a wide range issues but has never been adopted and stakeholders have questioned whether a single policy is appropriate. However, the evaluation has shown there is clearly a need to set out a coherent framework for which ECM-related decision-making is made and to join the disparate policies, guidelines and processes into a better integrated, effective and efficient system. There is therefore a need to provide a broader policy framework setting out the purpose, intentions, parameters and ambit of ECM related functions. This development and finalisation of the policy framework should be a priority and developed with due regard for the WCG's ICT governance framework, the existing Records Management Policy, as well as the digitisation policies of the WCG. It should be complementary to other policies (especially the records management suite of policies and regulations). Once approved, its implications for all role players should be assessed and the DCAS ECM unit should drive communication of the policy framework and implementation of the necessary changes across government, including with supporting guidelines and example templates.

At the end of the medium term (3-5 years), review the institutional positioning of the transversal ECM management function. As many stakeholders recognise, ECM is much more than a document and records management intervention, as much as that may be the starting point. It has far wider business implications and applications. However, there are clear legislative requirements which must be observed and its foundational function should be legally entrenched with DCAS for at least the medium-term. It is possible that, once EDRM is thoroughly established across government, it will become so inherent to the transversal records management role that it would not necessitate a distinct sub-unit. At the same time there will be a progression in the readiness of the WCG for ECM-based interventions to support business beyond records management. As the ECM transversal management role evolves in this direction, and mandates are shifted and revised, it may become more appropriate to position the transversal ECM function outside of DCAS, either under transversal strategy, or under transversal IT solutions.

6.1.4 What are the required monitoring and evaluation parameters and processes to assess the attainment of the vision and objectives?

The DCAS ECM unit should develop a WCG ECM maturity framework. It should be guided by the vision and objectives of the revised theory of change and draw on existing ECM maturity models in the industry. It should distinguish between transversal as well as department-specific maturity assessments and should be designed in such a way that it can be undertaken internally by the DCAS ECM team (perhaps with peer or external validation). This should be the primary means of evaluating ECM's progress towards its vision and objectives.

As a component of the maturity framework, records managers should undertake periodic assessments of their departments' progress towards EDRM (including relevant user behaviours).

The evaluation found that the transversal ECM solution was motivated for and implemented without quantifying key outcomes at baseline or monitoring thereafter. To support better demonstration of progress and the benefits of ECM going forward, the DCAS ECM unit should distinguish between performance monitoring indicators that it tracks regularly and those outcome indicators it sources data on annually or as part of maturity assessments. It should establish a baseline on these (including sourcing data from other units where necessary). Some of the indicators / indicator sets whose importance have been highlighted in the evaluation are listed below and these could be support by the development of technical indicator descriptions. (See also the logical framework used for this evaluation.)

Operational performance monitoring indicators

- User activity (including a distinction between "basic" activities such as viewing files from emailed links, and more "advanced" activities)
- MyContent system downtime
- Average network speed (disaggregated by buildings / geographic locations)
- % of support requests logged and resolved within maximum standard time (by both DCAS and Ce-I as appropriate)
- % of WCG users who have access to MyContent (disaggregated by department)
- % of WCG users trained on MyContent (per module / course)

Outcome indicators

- Annual departmental utilisation of A4 reams (reduction per department)
- Cost per user licence (reduction)
- Annual ratio of manual-to-electronic records working time spent by registry staff (shift of ratio from manual to electronic indicative of behavioural change over time)
- Annual storage space OR weight of additional paper records (department-specific trends over time)

The indicators should be agreed with departments and defined to ensure uniform sourcing, collection and reporting. Distinction should be made between those for regular performance monitoring and those less frequent outcome indicators be measured at baseline and then as part of periodic maturity assessments or at a next large-scale review / evaluation.

6.1.5 What should the standard/generic requirements of ECM be; and what room will be allowed for bespoke adaptations, and what should the key criteria be for allowing customisation?

There are benefits both to custom and standard versions of ECM. The benefits of custom solutions have been demonstrated by the early adopter departments: they have high levels of departmental buy-in (and therefore implementation support) and tend to focus on supporting areas of strategic value to the departments, and to suit the department's unique context and needs. This increases the likelihood of a good return on the investment. The key disadvantage is the size of this investment and compared to the scope of the benefit (limited to one department).

Cost efficiency is the greatest advantage of a standard / generic package such as the MyContent Foundation Pack that is now available transversally, and the possibility to collaborate across departments is another important benefit. There is clear value to this package and as discussed earlier, it should be rolled out to all users – with gradual enhancements.

However, the package does not cater for all the unique realities of how departments work and therefore the potential value ECM may be stifled if departmental agency is completely displaced by centralised, universal functions only. There are also examples in the early adopter departments of custom solutions that respondents claimed yielded significant service delivery or cost efficiencies. To address these shortcomings of the generic version, it should be permissible under certain defined conditions for departments to make amendments, add additional functionalities or workflows onto or linking to the generic version of MyContent. DCAS and DOTP:Ce-I would need to define this, potentially as part of the ECM policy framework.

The individual department(s) that wishes to customise its ECM solution would need to budget and commission the customisation at cost (potentially shared) depending on whether there is scope for broader application. Resourcing therefore is required at two levels, within DCAS unit and at a departmental level as business owners. A business case will need to demonstrate that the request complies with criteria, including:

- (if relevant) the solution is necessary to allow the department to use ECM in a way that complies with its sectoral regulatory framework
- the solution can yield substantial efficiencies in service delivery, human or financial resources (against a quantified baseline)
- it addresses an area of strategic importance to the department or the provincial government in general
- cost estimates should be provided
- in-house user support should be provided for

- a change navigation plan, including upskilling and reorganisation of staff if needed, should be detailed

If the customisation may benefit multiple departments, it should be requested as an enhancement to the generic version of MyContent through an annual budget and planning cycle. This cycle need not conclude rollout to all departments before it considers departmentally motivated expansions, so long as departments reach an agreement with DCAS about providing internal support if DCAS indicates capacity constraints.

6.1.6 What guidelines should be adopted regarding naming of files?

The evaluation identified inadequate staff behaviour in many departments around naming of digitally created files.

It is departmental records managers' responsibility to develop file naming conventions as part of driving an effective transition to EDRM. While it is beyond the scope of this evaluation to propose a specific file naming convention, it is recommended that existing good practices be reviewed, for instance in DTPW, for possible adoption across government in a transversal guideline including for managing cross-departmental files. Departmental records managers should confirm file naming conventions in consultation with departmental and monitor their adherence. Line managers should then be held accountable for the compliance of their staff. It would be valuable for MyContent to feature an automatic file-naming template, feature or validation condition to assist users in this regard.

Records managers have the duty to conduct periodic checks of records management practices. It would be useful for MyContent to have the ability to generate file naming compliance reports in a format that suit records managers' needs.

6.1.7 What steps should be taken to ensure that every record that is created is classified by users?

The evaluation also highlighted inadequate user practices around the classification of electronically created files. The evaluation described the Uniform File Plan and Line Series File Plans, and the arrangements for maintaining them, as they currently exist. This is a perpetuation of inadequate user compliance with paper-based classification conventions. It argued that staff do not appreciate the importance of the file plan as a records management tool.

Ensuring user compliance with classification requirements is therefore not just about deriving an electronic classification system but also about raising user awareness and changing user behaviour in general. This again needs to be driven by departmental records managers in consultation with line managers. Acting on these recommendations make result in additional resource allocations and attention dedicated this issue which becomes an opportunity to change user behaviour across paper and electronic practice.

The continued training of new and existing MyContent users creates an opportunity for records managers and WCARS to promote improved user awareness and behaviour. MyContent training should be customised in this

regard, or include a slot for the departmental records management unit to inform / remind users of the department's file plan (with its uniform and line series specific sections) and how they should comply with it when working on the system.

Part of the transition to EDRM will be for records managers to redefine their monitoring task with regard to file classification. Records managers should be granted access to their departments' full set of business workspaces and folder structure and should define a standard operating procedure for periodic checks of user compliance with the classification conventions.

Automatic content classification software exists and is increasingly accurate. DCAS, including staff with records management expertise, should explore the enhancement of the MyContent document and records management features to include this function, whether in terms of pre-populated templates, validation checks or other means. Departmental records managers must be consulted on this to ensure it is practical and suitable in their context. As the Records Management Policy emphasises, users are and should remain responsible for classifying their own records; they will therefore always need to understand their departmental file plan and classification system. But the automatic classification feature can simplify their task, for instance by pre-populating part of the classification or by "guessing" it for the user to confirm or amend.

6.1.8 How should legal requirements and user practice be reconciled in relation to the creation and maintenance of a folder structure?

The first step towards improving user practice on creation and maintenance of a folder structures are described above: user compliance with classification requirements as they create files.

Secondly, records managers (with guidance from DCAS) should decide to what extent to regulate user workspaces. Currently users have business workspaces on MyContent, where they create and manage their files with their teams – effectively, shared drives. This is where most content should be stored while it is being developed or while the business process associated with it is ongoing. These workspaces are not necessarily systematically organised and it is not clear from the information reviewed in this evaluation, whether it is appropriate to impose standard conventions on these work spaces (beyond the file naming and classification conventions which are clearly necessary). Work spaces that are organised according to a predefined structure may be easier for colleagues from other units to understand and navigate when necessary, and may therefore support more effective collaboration. A standard organising system may also facilitate the uploading of documents to the file plan (perhaps even automatically). However, the flexibility to organise one's work and the work of one's team as one sees fit is important from a line manager and staff buy-in point of view.

Whether or not these workspaces become subject to standard organisation, the content created on them eventually need to be moved to a system, organised according to the file plan, for longer-term storage (archive). The evaluation has argued that users need to become records managers in the sense that they are now expected to file their own records on the file plan. However, it is likely to be necessary for records managers to oversee and

monitor this process, and to provide user manuals and guidelines as needed. As is currently the case with paper-based systems, the records management task is facilitated when files are correctly classified by users at the point of creation.

Departmental records managers should develop standard operating procedures for: the process of moving content from workspaces to file plans; and for records managers' monitoring of content newly added, or moved, on the file plan. This will be aided by MyContent's logs of changes to its directories.

6.1.9 What standard operating procedures should be institutionalised regarding the processing and storage of correspondence and formal submissions?

The evaluation has described the current state of correspondence tracking in WCG: MyContent is now available to some users in each of the 12 departments and it includes a Correspondence Tracking feature; and at the same time, most departments are still using alternative systems, notably CMATS, for correspondence tracking. This evaluation has not assessed the MyContent Correspondence Tracking feature specifically and the user tasks and steps associated with it. However, it appears that the processes associated with CMATS have been developed to work effectively and comply with the needed records management and legal requirements. Departmental staff currently employing CMATS expressed a reluctance to change to MyContent, although some considered it an inevitability.

To support uptake and the transition of the departments still employing CMATS, standard operating procedures to support MyContent correspondence tracking should be informed and as closely aligned to those currently in place for CMATS as possible. They will need to ensure that electronic correspondence and submissions meet the evidentiary requirements of integrity, authenticity and reliability as set out in the ECT Act, and should be tested for acceptability by the Auditor-General.

6.1.10 What is the way forward for ECM?

As described in the preceding recommendations, there are a number of key areas critical to the success of ECM in the WCG. At a high-level, it is recommended that:

- A clearly articulated vision to be developed to meet the WCG's current needs and should be used to drive and guide senior managers in the adoption, rollout and change management process of MyContent;
- MyContent be retained as the transversal ECM solution; An enabling environment be created in terms of DCAS capacity, resourcing and institutional authority for ECM;
- The rollout of MyContent to all users (both at departmental and individual level) be completed with improved training, support and change management;
- Departmental adoption initiatives be driven, starting with departments where there is an interest and appetite;

- Implement better performance monitoring and periodic assessment of transversal and departmental ECM maturity; and
- Priority be given to the transition from paper-based to electronic records management, with DCAS playing a strategic leadership role.

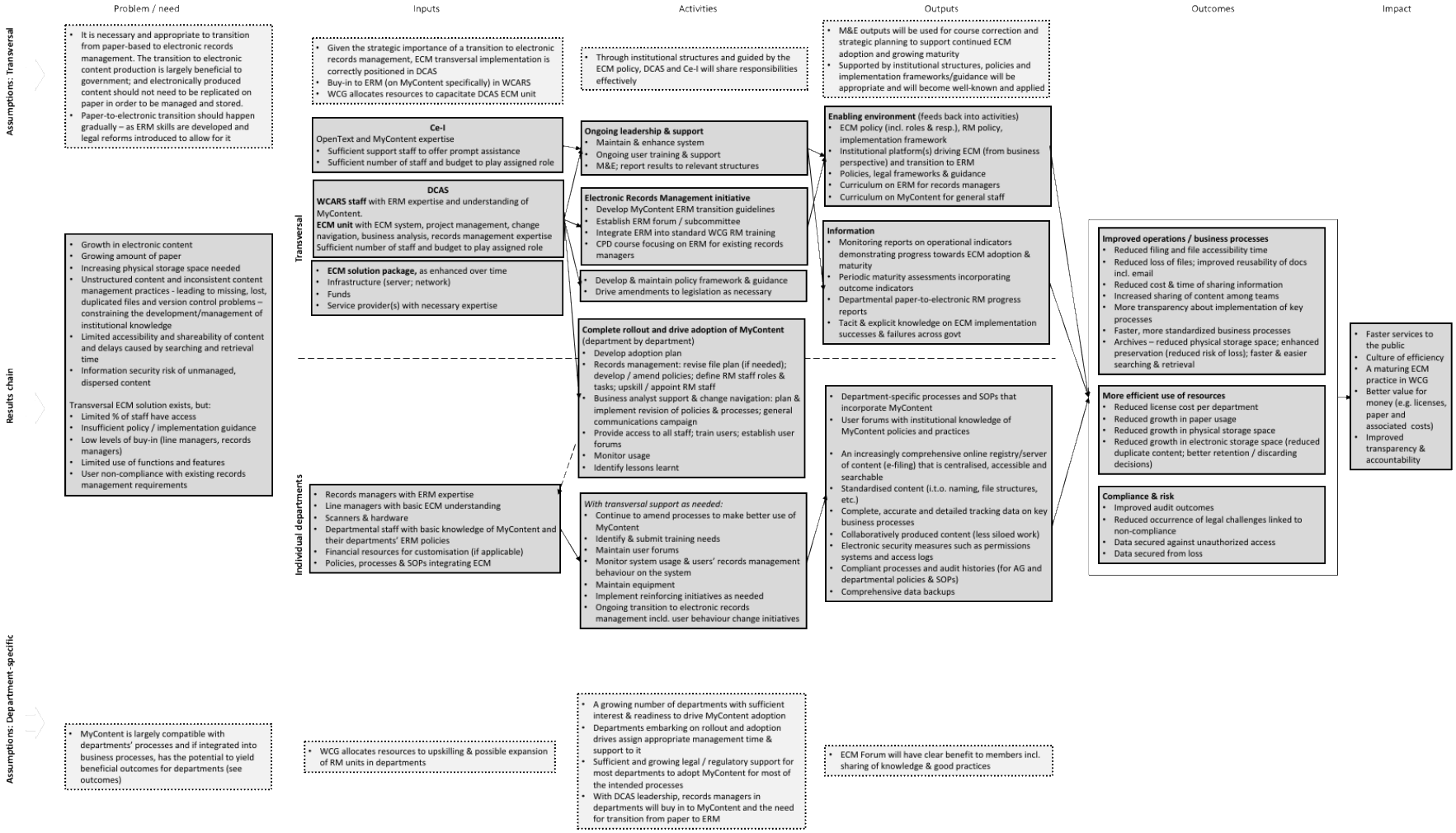
If the above recommendations are substantively achieved over the short-medium term, the next evaluation of ECM will yield significant improvements.

6.1.11 What should a revised ECM Theory of Change look like?

The revised ECM TOC that is produced at the end of this evaluation, should serve the needs of managers (esp. DCAS managers and key role players in depts) as they manage the further implementation of ECM over the coming few years. Thereafter it should be reviewed again (as TOCs are meant to evolve over time).

The TOC should be included in the policy framework (see below) as a means of articulating the vision and objectives of the transversal ECM solution. It should then be reviewed periodically along with the policy framework.

Figure 46: Proposed revisions to the Theory of Change



6.1.12 Derive an adapted implementation framework, sequencing and methodology, roles and responsibilities and change management requirements.

Going forward, the first priority should be the capacitation and resourcing of the DCAS ECM unit. The second priority should be for the DCAS ECM unit to drive the consultative development and approval of the ECM policy framework, as this will form the basis for further adoption and integration of the transversal ECM solution across provincial government.

The ECM policy framework should specify the following:

- Vision, purpose and objectives of ECM in WCG
- Legal and existing policy parameters informing ECM
- Functional scope and criteria for ECM automation
- Allocation of roles and responsibilities between DCAS (Archives and Records directorate; ECM directorate), DOTP (Ce-I; Change Management; other relevant units), and implementing departments. (No major changes in the distribution of these responsibilities is currently recommended but they should be made explicit and the relevant parties sign off on them. Responsibility for early adopter departments' ECM support should be clarified.)
- Key institutional structures and their role w.r.t. ECM (ECM forum; ERM forum; EPTM, TAPS Steering Committee)
- Role of ECM champions and user forums
- Theory of change (linked to vision & objectives)
- M&E framework including the maturity model (linked to theory of change, vision & objectives), list of indicators, and reporting arrangements

With capacity, resourcing and a policy framework in place confirming roles and responsibilities, a change management plan should be agreed including:

- Transversal change management and communication support coordinated jointly by DCAS and DOTP;
- Dedicated departmental change management provided by DCAS to departmental records managers along with upskilling; and
- Departmental champions and change agents.

The change management plan should sequence an intensive phase of ECM revitalisation followed by that of stabilisation and then review.

Change management efforts should coincide with further rollout planning occurring concurrently. Departments should be consulted on how best to stagger rollout at depth and breadth based on the stated needs and appetite of the respective departments, within a medium-term horizon.

Building on the ECM policy framework, implementation guidelines need to be developed for the following:

- EDRM transitioning with MyContent;

- Bridging documents/updates to supplement registry manuals regarding electronic file naming, classification, the interface between the workspace and the file plan, storage and disposal (templates to be adapted if needed for individual departments and in the case of multi-department users);
- Ensuring digital content on MyContent have and retain their evidentiary value;
- Guidance on how to get electronic processes deemed audit-compliant by the Auditor-General;
- Key processes to be reviewed in light of MyContent, with examples of good practices;
- User forums and support;
- Guidance on how to motivate, propose and introduce MyContent customisations for departmental business processes; and
- Identification of key change processes associated with the process of driving full MyContent adoption within departments.

Finally, the monitoring and evaluation provisions identified in the ECM policy framework should inform transversal oversight of this process via the ECM Forum and the decision of when to undertake and what to focus upon in the next review.

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8 Appendix - Licence costs

	2009/2010	2010/2011	2011/2012	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total user licence costs to department for historic ECM instances (data from Ce-I)	R4 219 134	R2 990 984 +R4 800 000 +R1 014 512	R3 146 495	R4 575 276 +R1 089 270	R4 490 205	R5 531 234 + R9 983 915	R38 156 961	R9 999 972	R9 999 972
Number of users with licenses on historic ECM instances (data from Ce-I)	Livelink – 3000 CLM upgrade of legacy depts – 2300 Legacy add-ons maintenance	- Open Text CLM Suite – 2300 BPM – 3000 Microsoft Integration – 2000 e-Forms – 250 Libraries Management - 325 + CLM (5000) + CLM (2700)	- Open Text CLM Suite – 10000 BPM – 3000 Microsoft Integration – 2000 e-Forms – 250 Libraries Management - 325	- Open Text CLM Suite – 10000 e-Forms – 250 libraries management – 325 + CLM with Correspondence Tracking (2000)	- Open Text CLM Suite – 10000 e-Forms – 250 libraries management - 325 Correspondence tracking + CLM - 2000	- Open Text CLM Suite – 10000 e-Forms – 250 libraries management - 325 Correspondence tracking + CLM – 2000 + CLM (3000)	3 year EIM Flex Agreement – See BOM	3 year EIM Flex Agreement – See BOM	3 year EIM Flex Agreement – See BOM
Total number of licenses (own calculations)	5300						Up to 32 000*	Up to 32 000*	Up to 32 000*
Average cost per licence (own calculations)	**R796**						**R1192**	**R313**	**R313**
							Average R606 per year per licence		

* Based on minutes of the meeting where the enterprise licence agreement was approved.

9 Annexures

See separate file attachment of all annexures related to the evaluation report.