A Records Management Capability Framework
for the
FirstRand Banking Group

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Assignment submitted in partial fulfilment of the requirements for the degree of Master of Philosophy
(Information and Knowledge Management) at the University of Stellenbosch

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April 2005

Declaration

I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Abstract

Competitive pressures in every company worldwide always have, and probably always will, drive leading institutions to adopt smarter, faster and more cost effective ways of providing customers with feature-rich products and outstanding service, in order to differentiate specific offerings to local and global markets. This approach is both inevitable and laudable.

At the same time, communications (physical and electronic) have made the world a smaller place and presented a larger target audience for each company's goods and services. However, customers have become better educated, more sophisticated and more demanding, whilst competitors have raised standards and the fight for customer loyalty has intensified.

As these pressures increased, the appropriate level of corporate governance has not always been applied, as evidenced by the well publicised failure of Enron in the USA, and many others worldwide. The typical reaction has been to produce an increasing raft of legislation and regulation, designed to protect the consumer against 'cavalier' corporate behaviour, and an equally increasing demand for more and better information.

The Banking Industry has not escaped this trend. Its failures have not been as dramatic as Enron and the consequences not as severe. Nevertheless, the potential impact of failure through poor corporate governance is huge and legislation and regulation has become highly visible through acts such as the 'Financial Advisory and Intermediary Service Act' (FAIS), the 'Financial Intelligence Centre Act' (FICA) and the Basel II Committee, - all emphasising integrity, authenticity, completeness, transparency, security, retention, protection, and eventual disposal of information.

This assignment examines the relationship between the concepts information management, content management and records management and their importance as enablers of corporate governance. It highlights the current records management capability- maturity within the FirstRand Banking Group and presents a future solution and a practical approach to migration. Whilst understanding the challenges associated with implementing a records management strategy and programme, it emphasises the needs and the huge benefits for the FirstRand Group in meeting its corporate obligations, improving customer service and reducing operating costs.

The future solution is set within a Records Management Capability Framework which encompasses how records must be managed by a consistent set of rules. It presents a typical records management life cycle from creation to disposal; it examines how practical systems design can balance the need for structure and stability whilst providing flexibility for operational use; it documents design principles and critical standards; it outlines implementation guidelines; and it recommends policies, ownership, organisational structures and roles, and governance mechanisms within the FirstRand Business Model.

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FirstRand's records management competency was audited and measured against a capability maturity model (the Carnegie Mellon University's Software Engineering Institute's approach). The results indicated significant cultural and operational challenges in building a records management capability, but it was concluded that knowledge management and sharing of information and intellectual assets (facilitating faster access to better quality and up-to-date information and building corporate memory and business agility) could be delivered only by a well conceived and carefully implemented Records Management Capability Framework.

Opsomming

Kompetisie noop suksesvolle besighede, organisasies en soortgelyke instellings om kwaliteit produkte, goedere en dienste teen mededingende pryse aan verbruikers of kliënte te lewer. Koste-effektiwiteit speel 'n groot rol, inaggenome dat die kwaliteit en verskeidenheid van produkte en goedere nie mag taan nie. Die spoed en gehalte van kliëntediens kan die maatskappy 'n voorspsrong gee, inaggenome die toenemende kompetisie met ander maatskappye in dieselfde industrie of mark. Kompetisie met ander maatskappye of instansies in dieselfde mark of industrie, en differensiasie van beide produkte en dienste is onvermydelik.

Grootskaalse ontwikkeling in die kommunikasie-industrie dra by tot die bereikbaarheid van ander wêrelddele. Die mark (voorheen onbereikbaar) vir produkte, goedere en dienste, is skielik soveel groter en soveel meer bereikbaar. Die hedendaagse verbruiker en kliënt is meer gesofistikeerd en meer ingelig ten opsigte van produkeienskappe, -variasies, -verskeidenheid, voordele, nadele, ensovoorts, en dring daarop aan dat voorkeure en verwagtinge konstant aan voldoen sal word en selfs met gereelde tussenposes sal verbeter. Kompetisie dryf standaarde vir hoë gehalte produkte en kliëntediens tot die hoogste vlakke. Maatskappye kompteer toenemend vir kliëntelojaliteit en markbesit op 'n daagliske basis.

Met die fokus op kompetisie, klientediens en lojaliteit, en gehalte produkte en dienste, is goeie korporatiewe beheer en bestuursbeginsels nie konstant en deurlopend toegepas nie, soos blyk uit die gebeure met Enron in die Verenige State van Amerika. Deur middel van toenemende wetgewing en regulasies poog regerings wêreldwyd om die belange van die verbuiker / kliënt te beskerm. Inliging het 'n mededingende faktor geword, terwyl die aanvraag na relevante en akkurate inligting steeds toeneem.

Die Finansiële Industrie, en meer spesifiek die Bankwese, het nie begonoemde vereiste vir spoed, gehalte en relevansie vrygespring nie, aangesien finansiële instellings soos die 'Federated Bank' in die Verenigde State van Amerika en die Suid Afrikaanse Reserwe Bank, dit ten doel het om na die belange van die verbruiker om te sien. Goeie korporatiewe bestuurstandaarde en riglyne is egter ook van toepassing op die bankwese in Suid Afrika, soos gemanifesteer deur wetgewing en industrie riglyne en standaarde, byvoorbeeld, FAIS en FICA en die 'Basel II Committee'. Hierdie instellings het ten doel om die verbuiker / kliënt te beskerm deur riglyne en standaarde te stel wat die integriteit, geloofwaardigheid, regswetlikheid, volledigheid, deursigtigheid, sekuriteit, retensie van, en toegang tot inligting verseker.

Die werkstuk bespreek die verband tussen die konsepte inligtingbestuur, inhoudbestuur en rekordsbestuur en die doel daarvan ter ondersteuning van goeie korporatiewe bestuur. Dit belig die huidige rekordsbestuur bekwaamheid van die 'FirstRand Banking Group', die tekortkominge, en motiveer 'n toekomsgerigte rekordsbestuurmodel, riglyne vir implementering en 'n praktiese benadering tot migrasie. 'n Strategiese benadering tot rekordsbestuur belig vele uitdagings. Tog kan die langtermyn voordele, soos byvoorbeeld die toepassing van goeie inligtings- of rekords- en korporatiewe bestuurbeginsels, uitmuntende kliëntediens en koste -effektiwiteit nie geignoreer word nie, aangesien dit die 'FirstRand Banking Group' 'n voorsprong kan gee op ander banke in die industrie asook kliënte-besit. Die model vereis 'n vernuwende benadering tot

inligting- en rekordsbestuur as 'n katalisator ter ondersteuning van goeie inligtings- en korporatiwe bestuursbeginsels in belang van die kliënt.

Dedication

"True mentors are a rare species, Sir Michael…"

Acknowledgements

Thank You to :

My colleagues:

❑ The FirstRand Banking Group : Risk, Compliance and Audit Functions,

❑ The First National Bank : Content Management Unit,

❑ The First National Bank : All other Clusters / Business Units,

For your input and support.

My friends:

For your friendship, loyalty and support.

My family:

For your love, support and patience.

My Supervisor

For your input and guidance.

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1   Background and Objectives

Banks and other / similar Financial Services Institutions are accused of generating excessive profits and producing complex products that are difficult to understand and compare. Internationally, scandals have driven governments such as in the United States, the United Kingdom, and other European communities to regulate the industry and to promote competition with the purpose of driving down costs, improving ethical and social accountability and increasing transparency and customer service. This regulation can be seen in acts and accords presented by the Bank of International Settlements (Basel Accord II), the British Financial Service Authority, and money laundering, data protection, storage, electronic communications and transactions type acts and regulations.

Similar drivers in South Africa result in similar acts and regulatory type governance mechanisms / documents, such as the King Report II, the Electronic Communications and Transactions Act, the Financial Intelligence Centre Act, the Financial and Advisory and Intermediary Service Act, the Data Protection and other related acts and regulations.

Tighter controls on the stability of banks have been discussed since the Basel II Accord was drafted. It requires financial institutions to hold sufficient capital to mitigate risks in their operations. It addresses credit, trading and all operational risks, including IT (information technology), system failures and poor levels of business documentation. Money laundering and other drivers are putting financial services institutions under further pressure to keep proper accounts and records as evidence of business activities.

The FirstRand Banking Group (FR Banking Group) needs to pursue a Records Management Strategy and Framework in support of its Governance and Compliance function to account for effective and efficient management of its business records as evidence of its transactions and interactions, and as an enabling mechanism to manage risk to an acceptable level.

Essentially, evidence of sound risk management practices, transparency and accountability for business behaviour, creates an element of trust affecting customers, partners, suppliers and employee relationships positively, which contribute to bottom-line earnings and competitive advantage.

According to ARMA International, institutions not only manage business records to mitigate risk and manage compliance to legal and regulatory frameworks, but successful records management initiatives support strategic planning initiatives and sound decision making, bring products and services to market quicker, manage projects, accelerate marketing, service customers and ensure that the institution is proactive to change and competition. (ARMA International (2003), p. 1 - 16)

The FR Banking Group needs to manage records as information / intellectual and strategic assets. Records represent an explicit corporate memory for the banking institution. Electronic records unlock the content previously difficult to access in paper format, enable effective sharing of information and contribute to knowledge networking flows. They support evidence-based policy making by providing reliable evidence of

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past actions and decisions, based on the requirements that record integrity and authenticity needs to be retained. Records of authenticated transactions need to be kept in such a manner as to retain their qualities of legal admissibility and evidential weight / integrity, privacy and access. In particular, freedom of information legislation requires that electronic records be managed consistently within regulatory frameworks. These records management requirements / drivers resulting from institutional, industry and legal and regulatory frameworks should be built into both record-generating and records management systems, by constructing an interaction of software, standards, policies, procedures and interfaces.

Greater commonality between records management systems, including metadata standards, taxonomies (and indexing schemas), and compatible procedural control will ensure interoperability and joint working between clusters and business units.

The complexity of the FirstRand business model, the sheer size of the group, the number of industry and other institutional, legal and regulatory frameworks are creating challenges in the attempt to align Records Management efforts / initiatives across the FR Banking Group. However, no matter how huge the effort, the benefits resulting from a coordinated records management effort is even larger. Exploitation of the institution's intellectual and information assets across the group i.e. reuse of both information / intellectual and application infrastructure assets, could potentially result in significant cost and productivity savings, and mitigation of credit, operational, market and reputational risk.

The objective of this document is to define a Records Management Capability Framework for the FirstRand Banking Group. It aims to:

- ❑ Guide the institution towards a capability for effective and efficient records management in support of business-governance-compliance, industry, legal and regulatory drivers;
- ❑ Provide a framework and a set of possible opportunities and milestones, through gaining control of existing records which have continuing value as evidence; - and to plan for the implementation of new records management solutions including systems;
- ❑ Provide guidelines to encourage adoption of cross-cluster and business unit standards for metadata and interoperability such as indexing schemas (taxonomies), to support greater commonality and inter-departmental / business unit management, sharing and exchange of records across the FirstRand Banking Group and associated systems.
- ❑ Provide a platform on and from which future records management initiatives can be built. It needs to be updated at regular intervals to reflect and accommodate business, industry, legal, regulatory, information and technology (IT) management trends and drivers.

For the purpose of this document *Records Management* is a collective term including both the management of paper records as well as electronic records, although the term *Electronic Records Management* is used where required to reflect the use of electronic systems to automate capability and workflow.

1.1 The FirstRand Business Model

The FirstRand Group can be characterised as a *'Federation of Business Entities'* whereby the whole is greater than the sum of the parts. Each business unit has an *'owner / manager'* culture. Key words about business units are: innovative, entrepreneurial, world class, non-hierarchical, profit-driven. In fact, any business unit that is not profitable, and has no such potential, has no right to exist. The business case prevails.

Some potential dangers associated with this *'Federation'* are that each business unit is focused solely on its own mission, and its own profits, - sometimes at the expense of other business units. Individual areas tend not to look at the big picture and therefore opportunities around sharing infrastructure, having common architectures, aligning processes, creating economies of scale, etc., can be easily missed. Duplication and cost layering is rife in these environments. The customer is approached by different clusters / business units of the FirstRand Banking Group with differing and fragmented offerings. Constant reorganisation or restructuring is a sure symptom that these conditions exist.

Strategies and initiatives such as 'collaboration', a 'customer segment focus', and 'putting more load on the truck' are proof of an attempt to address some of these dangers.

1.2 The e-Business and Transactional Record Keeping Challenge

The inception of e-business has given widespread attention to the importance of transaction integrity. This partly is the result of the recent interest in 'straight-through-processing' or the ability of the web interaction to initiate a process that is completed without human intervention. Web interaction and 'straight-through-processing' provides unprecedented productivity gains and frees users for more important tasks. However, since all aspects of the process operate automatically, errors could go undetected and therefore transaction integrity needs to be enforced. In order to enforce integrity, records need to be kept of all transactions, leaving a clear trail of transaction history and integrity.

The situation becomes even more complex as users interact / interface with web front-end systems linked to business systems, creating interactive web sites. These web front- ends generate 'records on the fly', often tailored in presentation views to the customer profile of the person who is interacting. Consequently there needs to be trigger events, possibly taken from event logs, which populate specific fields and lock the transaction into context with the time it is taking place. In order to achieve this, robust metadata specifications and record keeping functionality must support the transaction based activities during web front-end interaction.

In this regard FAIS (Financial Advisory and Intermediary Services Act) compliance certainly must be a driver. It states that as the customer interacts with product related content, the 'advice' generated from this interaction regarding the most suitable product according to the individual profile, needs to be captured as a

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record as well as the associated transaction when the customer accepts the suggested product(s) / service(s).

The Electronic Communications and Transactions Act (ECT Act) is also impacting on how information about transactions should be retained as evidence / proof of the way business is conducted. It also addresses the interaction with records (creation, use), the storage medium or format used to store and protect records as evidence, and the requirements of evidential weight and integrity of the record. In the case of litigation and regulatory governance, records need to be accessible and available for inspection at all times.

1.3 The purpose and Objectives of Records Management

The purpose and objective of records management is:

- ❑ To create and maintain authoritative and reliable records in an accessible, intelligible and usable form for as long as they are required to support business obligations and accountability requirements of the organisation;
- ❑ To establish and maintain only those records that are needed, and through systematising retention and disposal, ensuring efficiency and economy in the management of records;
- ❑ To improve access to records and archives, and thereby enhancing planning, forecasting and sound decision-making;
- ❑ To secure destruction of obsolete records;
- ❑ To protect the archives in an archival institution;
- ❑ To arrange archives in accordance with archival principles so as to preserve their contextual information, and to describe archives in such a way as to disclose their content to users;
- ❑ To comply with legal and regulatory frameworks;
- ❑ To protect legal and business interests and solve disagreements and disputes;
- ❑ To serve as organisational memory; and most importantly
- ❑ To improve customer service.
  (Kahn 2004, p. 21 - 22)

1.4 The Requirement for a Records Management Capability across the FirstRand Banking Group

The Financial Services Industry, including that in South Africa, operates within one of the most highly regulated environments worldwide, and inevitably regulation will increase. It is also regarded as the industry with the highest adoption rate of information technology and electronic communications because of the need to drive cost reductions and service improvements caused by the vast amounts of electronic information contained in huge transaction volumes.

In terms of compliance and managing risk the following apply:

- ❑ Internal operations : whether within a single company, or in group structures locally, regionally or internationally;
- ❑ Service delivery to customers (consumers and corporate), worldwide;
- ❑ Interactions with business partners and service providers; and
- ❑ Interactions with regulatory and government institutions.

Compliance is impacted by a complex network of laws, regulations, codes of practices and common provisions interacting and overlapping with each other. These affect the full spectrum of information management, including applications, information technology infrastructure, communications and data management.

Good Corporate Governance and its Compliance Function demand that the FR Banking Group manages its information / content as evidence, and a record of its daily activity and operations in an efficient, effective and responsible manner in support of good corporate management. The main drivers are:

- ❑ Transparency and disclosure of information;
- ❑ Accountability;
- ❑ Efficient use of enterprise resources;
- ❑ Proactive planning and forecasting for future sustainability
- ❑ Effective decision-making;
- ❑ Proactive management of enterprise risk;
- ❑ Delivery of economic and shareholder value; and
- ❑ Management of stakeholder relationships in an ethical and socially responsible manner.

Although the Bank has managed paper records for many years, the arrival of the *'Information Age'* means that much of the FR Banking Group history is now recorded in electronic format. Therefore, the need arose to manage both paper and electronic records (where both are required) as an integrated whole where standard practices and mechanisms are applied across the Banking Group. The proposed Records Management Capability Framework / Strategy and Programme must conform to the legal and regulatory mandates, as well as reflect the specific FR Banking Group management practices and sound technology frameworks and standards.

Since different clusters and business units across the Banking Group have different requirements and roles, the development of the strategy requires careful and intricate planning, communication and training.

1.5   The Need for Assessment

The complexity and challenges associated with the Banking Industry, the FR Banking Group Business Model and Institutional, Legal and Regulatory Frameworks impacting the records management

environment, need to be assessed in order to measure the current capability, establish the business requirements, identify gaps and plan the way forward.

The following questions are raised in order to contextualise the different elements that relate to the FR Banking Group:

- ❑ What is meant by 'Good Corporate Governance'?
- ❑ What is the relationship between Corporate Governance and its Compliance Function?
- ❑ What are the drivers of Good Corporate Governance and more specifically how do they relate to the banking institution?
- ❑ What are the challenges that the banking institution faces as it relates to :
  - • Complexity of governance, compliance and frameworks;
  - • FR Banking Group business model;
  - • Culture, maturity and change readiness or appetite;
  - • Business process and information modeling;
  - • Information and content management discipline, integrity and ownership;
  - • Available and capable application and technical infrastructure;
  - • Governance models and mechanisms; and
  - • Challenges that electronic records and storage pose.
- ❑ How can responsible management of information / content / records assist the governance and compliance requirements of the banking institution, including effectiveness and efficiency?
- ❑ What are the requirements for Records Management relating to the FR Banking Group?

In order to assess the ability of the FR Banking Group to cope with both governance and compliance and associated records management capability and maturity as posed by the above-mentioned questions, a records management audit was conducted. The purpose of the audit was:

- ❑ To assess the current records management capability (as-is position) of a representative sample of business units across the FirstRand Banking Group in the context of a complex set of Corporate Governance and Legal and Regulatory drivers and associated frameworks;
- ❑ To identify the challenges and requirements associated with records management compliance;
- ❑ To establish business related requirements;
- ❑ To use the capability assessment and results as a means to understand the current environment (see section 4) and identify gaps, pain points, opportunities and priorities; and
- ❑ To use the research results as input proposing an information management compliance or Records Management Capability Framework / Strategy (see section 5) for the future, guiding the institution towards information management compliance maturity and records management capability.

2 Corporate Governance, Compliance and Risk

2.1 Corporate Governance

According to Sir Adrian Cadbury in his foreword to **Corporate Governance : A Framework for Implementation : Overview,** Corporate governance is concerned with holding the balance between economic and social goals and between individual and communal goals. Governance frameworks are there to encourage efficient use of resources and equally to acquire accountability for the stewardship of those resources. The purpose is to align as nearly as possible the interest of individuals, institutions and society. The incentive to institutions, and those who own and manage them, to adopt international and local accepted governance standards, is that these standards will help them to achieve their corporate objectives. The incentive of their adoption is that standards and frameworks will strengthen the economy and discourage fraud and mismanagement. (The Global Corporate Governance Forum 20 September 1999, p. vi)

According to the OECD (Organisation for Economic Co-operation and Development), corporate governance is "*a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good Corporate Governance should provide proper incentives for the board and management to pursue objectives that are in the interest of the company and shareholders and should facilitate effective monitoring, thereby encouraging firms to use resources more efficiently*".
(Bank for International Settlement 1999, p. 3)
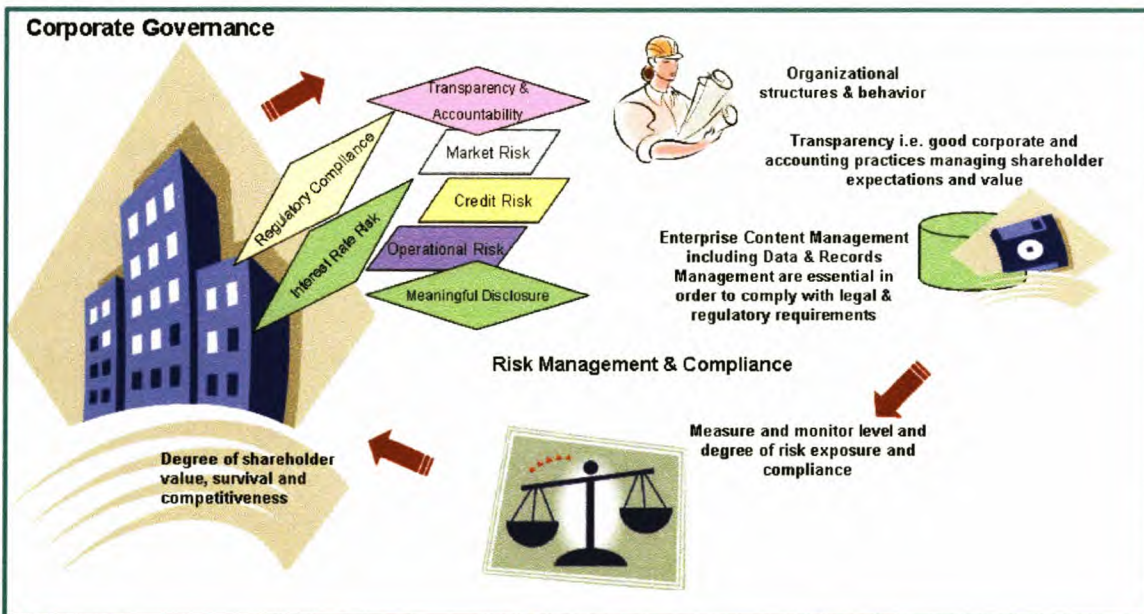
Figure 1 : Corporate Governance, Risk Management and Compliance

The foundation of corporate governance is disclosure. Transparency is the basis for public confidence or trust in the corporate system and funds will flow to the centres of economic activity that inspire trust.

Furthermore, the purpose of good corporate governance is to prevent and mitigate systemic failures of corporate governance affecting macro economic, industry and institutional or corporate health stemming from weak legal and regulatory systems, inconsistent accounting and auditing standards, poor banking practices, thin and unregulated capital markets, ineffective oversight boards of directors and little regard for the rights of minority shareholders. Good corporate governance is a source of competitive advantage and is critical to economic and social sustainability, as its purpose is not only to attract long term foreign capital, but also to broaden and deepen local capital markets by attracting local investors.
(The Global Corporate Governance Forum 1999, p. 2)

2.2 Corporate Governance as it relates to the Financial Services / Banking Industry

2.2.1 The Corporate Governance Responsibility of the Banking Institution

Banks are a critical component of the economy. They provide financing to commercial enterprises and basic financial services to a broad segment of the population as well as access to payments systems. In addition banks are expected to make credit and liquidity available in difficult market conditions. The importance of banks to national economies is underscored by the fact that banking is universally a regulated industry and that banks have access to government safety nets. It is of crucial importance therefore that banks have strong corporate governance.
(Bank for International Settlement 1999, p. 3)

Banks have an economic and social responsibility to manage risk to an acceptable level complying with relevant legal and regulatory requirements by exercising good corporate governance affecting shareholder value (relevancy / effectiveness), sustainability and competitiveness.
According to Ross Levin in *The Corporate Governance of Banks : A Concise Discussion of Concepts and Evidence,* banks are critically important for industrial expansion and capital allocation. When banks efficiently mobilise and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and stimulates productive growth. Thus the functioning of banks has an impact on the operations of firms and the prosperity of nations. (Levin 2003, p. 2)

The Bank has an ethical obligation not only to its customer base, shareholders and the general community, but also to its employees. All relationships should be approached on the basis that they will be long term, supporting the principle of sustainability. Relationships with all stakeholders should be conducted honestly and ethically supporting the principle of doing business based on trust. (Charkham 2003, p. 51-52)

Given the importance and role of the banks with the ability to potentially affect the whole socio-economic spectrum, good Corporate Governance requires sound structure and reporting lines, clear definition of accountability, responsibility and the relevant processes executing and monitoring the compliance process. Checks and balances are vital to ensure power is not abused. These checks and balances include both prevention and detection. (Charkham 2003, p. 7; 23)

2.3   Enterprise Risk Management supporting Corporate Governance

In order to protect the interests of its stakeholders, the banking institution is also responsible to manage the comprehensive risk environment in which it operates. According to Simon Mingay (2001, p. 1), Enterprise Risk Management (ERM), is key to understanding the requirements, controls and processes needed for a resilient and increasingly competitive and virtual organisation. Resilience requires a consideration of what might go wrong unexpectedly and developing flexible responses. Risk management provides a powerful platform from which to gain a unique insight into building resilience by identifying and mitigating vulnerabilities. Risk management also provides the framework, which enterprises can use to escape the constraints and blinkered perspective enforced by forecasting. In order to succeed, the enterprise, and more specifically the Bank, must build risk management into strategic and operational decision-making, i.e. its governance model. Enterprise Risk Management, including technological innovation of activities and new complex products, structures and strategies, are key driving forces behind the New Basel Capital Accord (Basel II), currently being enforced by the International Committee for Banking Supervision.

Integrated and comprehensive Enterprise Risk Management will require all Financial Service Providers to undertake significant work to meet required standards especially for Operational, Credit and Market Risk Management, the associated processes and data management.

In summary corporate governance for banking institutions involves the manner in which the business affairs are governed by their boards of directors and management and affects how banking institutions:

- ❑ Set corporate objectives (including generating economic returns to owners);
- ❑ Run the day-to-day operations of the business;
- ❑ Consider the interests of recognised stakeholders;
- ❑ Align corporate activities and behaviours with the expectation that the banking institution will operate in a safe and sound manner, and in compliance with applicable legal and regulatory frameworks;
- ❑ Protect the interest of depositors; and
- ❑ Manage a comprehensive set of risks.

Corporate Governance also ensures collaborative working relationships between bank management and bank supervisors. Transparency of information related to current conditions, decisions and actions is

integrally related to accountability, in that it gives market participants and shareholders sufficient information with which to *'judge'* the performance of the banking institution.
(Bank for International Settlement 1999, p. 3 - 4)

Accountability and transparency depend on trustworthy records which form the bedrock of accounting, financial, and customer interaction and transactional and reporting systems. Equally by demonstrating accountability and transparency, banks create a relationship of trust, which is essential for future sustainability.

2.4 Corporate Governance and its three Components : Compliance, Efficiency and Effectiveness

2.4.1 Compliance (compliance processes, institutional, legal and regulatory rules and policies)

The Basel Committee on Banking Supervision motivates the purpose of compliance as: *'Compliance with laws, rules and standards helps to maintain the bank's reputation with, and thus meets the expectations of, its customers, the market and society as a whole'*. Compliance, - by acting proactively and by executing good practices, should prevent loss of either a financial or reputational nature. This statement implies that the banking institution needs to put the necessary mechanisms, such as relevant compliance processes, associated information management practices and supporting infrastructure, in place to enable the compliance function.

In order to support the bank's compliance function, information / content needs to be managed in such a manner as to identify, assess, advise on, monitor and report on the bank's compliance risk, i.e. the risk of legal or regulatory sanctions, financial loss, or loss of reputation a bank might suffer as a result of its failure to comply with all applicable laws, regulations, codes of conduct or standards of good practice.
(The Global Corporate Governance Forum 1999, p.12 - 13)

In terms of compliance, the following elements need to receive sufficient attention:

❑ Internal operations, service delivery to customers, interactions with business partners and service providers and interactions with regulatory and government institutions;
❑ Compliance monitoring and risk management processes and information to support relevant frameworks;
❑ Information management compliance policies, ensuring security and appropriate access levels, traceability / audit trails / history of the relationship between accountability, process and use of records / information as a means to support evidential weight and integrity;
❑ Reporting capabilities, feeding back to relevant governance and risk committees.

2.4.2 Efficiency (process automation, performance measurement and continuous improvement)

Information, is the lifeblood of the organisation, and is frequently processed inefficiently and is often incomplete, inconsistent and difficult to locate. The financial implications to the business are enormous. The FirstRand Banking Group needs to transform the way information, content and records are handled.

By capturing transaction information, structured and unstructured, in an electronic format, managing it through a completely digital workflow, and archiving it in dedicated content management structures, addressing the compliance drivers for records and systems, the Banking group will achieve new operational efficiencies. The combination of business process automation, relevant taxonomies (information structures) and compliance rules, the following advantages will be derived:

❑ Optimised information resources and supporting application infrastructure;
❑ Reduced costs and process latency, by automating paper-based processes such as loan applications, etc;
❑ Improved customer service, customer retention and communications management, by responding proactively and appropriately to customer needs for products and services;
❑ Business continuity and operational resilience by exploiting high availability backup, archiving and storage platforms and supporting lifecycle management processes;
❑ Increased visibility and availability of corporate information highlighting inaccuracies, process deficiencies, or inconsistencies with corporate information that may otherwise go unnoticed. (Clark 2003, p. 1)

The following is required for creating efficiencies:

❑ Performance management processes to measure and improve process performance as well as information integrity, quality and a management information reporting function;
❑ Managing information input, process and information output as a closely integrated whole;
❑ Automated business and information lifecycle management processes (workflow), resulting in efficiencies and productivity.

2.4.3 Effectiveness / Resilience / Relevancy (information management processes and architecture)

The bank has an economic and social responsibility towards all its stakeholders to manage its resources in a responsible and appropriate manner. Managing information and content as a strategic resource, is a key enabler for sustainability, profitability and competitive differentiation.

In order to manage the information and content resource as a strategic asset, it needs to be managed and applied when and where it could potentially deliver the most value. It also needs to be managed in such a

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way as to be proactively responsive to events, customer demands, changes or risks. It needs to give insight in terms of history, evolution and context of use.

In support of the bank's accountability with regards to its effective use of its information resources, the following elements should receive sufficient attention:

- ❑ Delivery of information / content as per process and role / responsibility : e.g. relevance, managing information overload, ensuring productivity;
- ❑ Delivery of information targeted and relevant to customer requirements : e.g. ethical and socially responsible;
- ❑ Capturing all relevant information associated with customer, employee, partner and supplier in order to sustain future beneficial relationships;
- ❑ Establishing simple, reusable and standardised processes, information and content objects or records;
- ❑ Building information capabilities which are relevant, targeted and purposeful, enabled by taxonomies and metadata;
- ❑ Creating information quality and process ownership to ensure accountability, responsibility, quality and evidential weight;
- ❑ Using and renewing information use and reuse models to drive efficiencies and cost effectiveness;
- ❑ Entrenching information management, security and life cycle management policies to protect information and content as a strategic asset;
- ❑ Providing mechanisms to report appropriately and purposefully to enable proactive decision-making.

3 Information, Content and Records Management

According to Gartner Group, financial services organisations (including banks) will be driven by customers, regulators, and equity markets to reduce most business cycles to real-time processing. Money is information, and money decisions are information management decisions. (Gartner Group, Financial Services 2001 - 2006 2001, p. 1 - 18)

3.1 The Importance of Information, Content and Records Management

Meta Group's research indicates that organisations that can best leverage their intellectual assets, both structured and unstructured (i.e. transactional and informational), will be best positioned to create operational efficiencies, drive highly scalable business models, and avoid unmanageable business risks. By reducing duplication, minimising exception handling, exploiting best practices, identifying / leveraging subject matter expertise and exposing appropriate levels of relevant, in-context, business information to constituents (i.e. customers, employees, partners, suppliers, regulators and other stakeholders), financial service organisations are able to increase the quality and speed of service delivery, while increasing the overall quality of user experience for all stakeholders. (Brand and Warzecha 2003, p. 5)

Leading information centric organisations have determined that it is no longer relevant whether information is structured or unstructured, but concentrate on the degree to which it is managed. By managing the banking institutions content as an enterprise asset, the following benefits could be derived :

- ❑ Reduction in process latency;
- ❑ Improved access to corporate records;
- ❑ Increased customer satisfaction;
- ❑ Improved employee productivity;
- ❑ Increased information accuracy and integrity;
- ❑ Reduced corporate risk and
- ❑ Regulatory compliance.

3.2 Information Management as Enabler for Governance

3.2.1 Institutional, Legal and Regulatory frameworks

In order to support the bank's corporate governance requirements, both structured and unstructured, information needs to be managed in such a manner as to identify, assess, advise on, monitor and report on the bank's compliance risk, i.e. the risk of legal or regulatory sanctions, financial loss, or loss of reputation a bank might suffer as a result of its failure to comply with all applicable laws, regulations, codes of conduct or standards of good practice. (Gilbert 10 March 2004, p. 1 - 2)

The purpose and need for Information Management Compliance are driven by good Corporate Governance practices, guided by standards and principles issued by the OECD, the Basel Committee on banking supervision (Basel II), and other local and international frameworks such as presented in Appendix C. (Please note that the list as presented in Appendix C, is not meant to be an exhaustive list of acts and regulations impacting the banking industry).

3.2.2   Efficiencies, zero latency of processes, customer satisfaction, increased visibility, productivity and innovation

The purpose of effective and efficient information management is not only to expose, report and proactively manage enterprise risk, it also needs to create efficiencies by automating paper based processes and life cycles and by reusing and sharing information and content objects across different processes. Availability and accessibility of structured and unstructured information facilitating both a 360 degree view of the customer as well as a similar view of the enterprise, drives product innovation, customer service excellence and shareholder value. Increased visibility and availability of corporate information also highlights inaccuracies, process deficiencies or inconsistencies with corporate information that may otherwise go unnoticed.

Information should be managed, used and protected as strategic asset. To ensure its safety, business continuity and resilience must exploit high availability backup, archiving and storage platforms and supporting lifecycle management processes. In this regard it supports the bank's ethical, social and economic responsibility of ensuring a healthy and sustainable business.
(META Group 2003, p 5 - 6)

3.3   Records Management Support for Information Management

3.3.1   The relationship between information, enterprise content and records management

3.3.1.1 Information Management

Information Management is the application of management principles to the acquisition, organisation, control, dissemination, and use of information relevant to the effective operation of organisations of all kinds. According to the International Encyclopaedia of Information and Library Science, Information Management as the '*Information here refer to all types of information of value, whether having their origin inside or outside the organization, including data sources, such as production data; records and files related for example, to the personnel function; market research data; and competitive intelligence from a wide range of sources. Information management deals with the value, quality, ownership, use and security of information in the context or organizational performance*'. (Kahn 2004, p.11)

3.3.1.2 Enterprise Content Management

Enterprise Content Management is defined as '*the creation and capture, collection, packaging and customization, storage and delivery of content capital across the enterprise in a specific context for*

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business value. It should be managed as strategic asset, and as a competitive differentiator. This often consists of document management, records management, digital asset management or collaboration features. In order to facilitate reuse and drive efficiencies, an object based approach is pursued, identifying reusable and sharable content objects across the enterprise'.

According to META Group, Enterprise Content Management (ECM) is *the* technologies, tools, and methods used to *'create / capture, manage / secure, store / retain / destroy, publish / distribute, search, personalise, and present / view / print'* any digital content in any format across an enterprise'. At the most basic level, ECM tools and strategies allow the management of an organisation's unstructured information, wherever that information exists. (META Group March 2003, p. 16)

Numerous terms are used, from a variety of sources, nearly interchangeably with ECM-integrated document management, digital asset management, integrated document and content management, and total content management to name a few. Regardless of the precise terminology, ECM capabilities manage traditional content types (images, office documents, graphics, drawings, and print streams) as well as the new electronic objects (Web pages and content, email, video, and rich media assets) throughout the lifecycle of that content. (Kahn 1994, p.12)

3.3.1.3 Records Management

Records Management is the content management process (planning, controlling, directing, organising, training, promoting, and other managerial activities) and the discipline and function of designing and implementing systems, with the purpose of monitoring records in any format throughout their life cycle from the time they are created to the time that they are destroyed.

❑ **What is a Record ?**

Gartner group defines records as follows: *'Records include all books, papers, maps, photographs, machine readable materials or other documentary materials made or received by a department or individual working for the corporation or government entity or employed by it under the federal, state or local or regulatory statute or in connection with the transaction of corporate or government business and preserved for presentation by that corporation or its legitimate successor as evidence of the organisation, functions, policies, decisions or procedures, operations or other activities of the corporation or because of the informational value of the data'.* (Logan 21 March 2003, p.1 - 2)

More specifically for the FirstRand Banking Group records are information used to maintain records as evidence created daily when conducting FirstRand Banking Group activities that need to be managed in order to achieve adequate and proper documentation of the policies, events, decisions, interactions and transactions for effective, efficient and economical management of operations, in accordance with legal, ethical, professional and regulatory considerations.
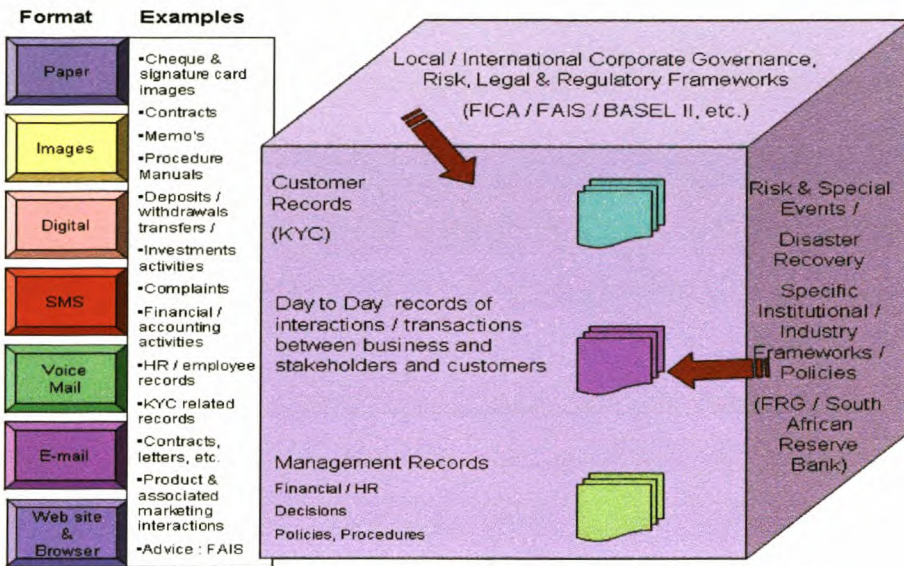
Figure 2 : FR Banking Group Records and Format Example

❑ Preservation of records

Only essential records should be kept and "essential" is defined as follows:

Records are essential when they are material to an organisation's mission-critical programmes and functions (e.g. disaster recovery) and required for legal and regulatory compliance and to resolve any dispute between parties (events, actions, decision-making processes, risk management, etc.).

In summary, information, enterprise content management and records management, are related disciplines concerning themselves with managing enterprises information assets and resources responsibly throughout their entire lifecycle, whether to support compliance responsibilities, to create operational efficiencies or to deliver excellent customer service by improving product development life cycles and meeting service level agreements.

4 Current View (AS-IS) : Data Analysis and Findings

4.1 Capability Maturity as a Concept

4.1.1 Background and Context of the 'Capability Maturity Model'

4.1.1.1 Definition / Description of the "Capability Maturity Model'

According to the Carnegie Mellon University's Software Engineering Institute, a capability maturity model delineates the characteristics of a mature, capable process. It identifies the practices that are basic to implementing effective processes. It also assigns to those practices associated maturity levels ranging from unrepeatable to mature and well managed. Typically a path is recommended through the various practices to achieve higher levels of maturity and to improve an organisation's processes.

4.1.1.2 History and evolution of the "Capability Maturity Model"

The Carnegie Mellon University's Software Engineering Institute, established in response to the United States Department of Defence (1980), began to develop a process improvement model for software engineering in 1988, with the purpose of managing software development costs and software quality. Over a period of time the model gained popularity with other organisations engaged in 'complex' engineering activities. As thinking and understanding matured the model has been improved and adapted to included not only systems and software engineering processes, but also other innovation related processes such as product development, people and other organisational operational processes (Capability Maturity Model Integrated Product Suite – CMMI). In summary it evolved into a standard best practice process maturity/capability model which could be applied to organisational processes across the organisation.

4.1.1.3 The Value of Capability Maturity Model Integrated Product Suite (CMMI)

The CCMI includes a common set of process areas which form the core of an integrated capability model. It provides an integrated approach to reducing the redundancy and complexity resulting from the use of separate, multiple capability maturity models. The model improves the efficiency and the return on investment for process improvement. The model must be tailored to support the organisation's mission and business objectives. Compatibility is maintained with the International Organisation for Standards (ISO) and its streams.

4.1.1.4 The Use, Purpose and Objectives of the Capability Maturity Model

Capability maturity models are used for several purposes such as :

- Guiding process improvement efforts and helping organisations establish and achieve improvement goals;
- Providing a common language for cross organisational communication and benchmarking;
- Providing and integrating organisation frameworks for organisational initiatives; and
- Helping an organisation to understand what specific practices to perform, how to improve its capability in performing those practices, and what process areas to focus on next.

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The CCMI framework assesses and drives capability maturity accomplishment by using five levels (1 – 5, where 1 is low and 5 is high) with associated criteria for each level, in order to measure successful achievement. (Carnegie Mellon University. Software Engineering Institute)

The principles and philosophy of the 'Capability Maturity Model' and more specifically the CMMI model, was applied in order to assess the Records Management capability and maturity across the FR Banking Group.

4.2 Capability Maturity Rating

4.2.1 The Capability / Maturity Rating

The impact of Records Management drivers on the FR Banking Group is high, but the maturity of both process and content management culture and discipline is low. The audit and findings are a means, not exhaustive, to identify trends, pain points and possible opportunities in order to improve records management capability and maturity.

The questionnaire used as part of the audit methodology, assesses issues relating to culture, process, information / content and application / technology infrastructure capability and maturity. (See Appendix C)

The variables are defined as follows:

- ❑ Impact = Drivers such as industry standards, acts / regulations, customer service, transparency, efficiency, corporate memory, etc;
- ❑ Maturity = Maturity of the business unit to cope with records management drivers;
- ❑ Priority = Impact versus Maturity.

The table below represents a summary of results depicting business unit impact, maturity and priority on the scale from one to five, where one is low and five is high.

Rating : 1 – 5 where 1 is low and 5 is high			
Business Unit	Impact	Maturity	Priority
Q	5	1	4
A	5	1	4
B	5	1	4
D	5	1	4
P	5	1	4
V	5	1	4
T	5	1	4

H	5	2	3
I	5	2	3
J	5	2	3
O	5	2	3
R	5	2	3
E	5	2	3
F	4	1	3
K	4	1	3
U	5	3	2
C	5	3	2
G	5	3	2
L	5	3	2
M	5	3	2
N	4	2	2
S	4	2	2

Table 1 : Capability Maturity Rating as per Business Unit and Indication of Priority

Mapped to the Content Management Maturity Model, (see Appendix H), the audit results indicated the following maturity across the FR Banking group per individual elements / component:

Rating : 1 – 5 where 1 is low and 5 is high						
Capability Variable	**Dependent Component**					
Ability to address / accommodate / comply / align	**Business**	**Process**	**Information / Content**	**Application / IT Infrastructure**	**Culture**	**Average Capability / Maturity**
Drivers						2.1
Legal Regulatory and Institutional Frameworks						
RM Programme and Culture						1.6
Organisational Structure / Roles						
Policies						
Communication,						

Training and Awareness						
Control, Monitoring						
Improving Performance						
Process						**1.7**
Life Cycle Management						
Mapping Business Process to Information / Content Relationship						
Information / Content Accessibility / Accountability						**1.7**
Inventory / Retention Schedule / Business Value or Purpose						
Roles and Accountability /						
Appropriate level of access / security						
Application / IT Infrastructure						**1.5**
Workflow						
Imaging						
Archiving						
e-Mail Management						
Storage / Repository						
Library Services						
Versioning						
Audit Trails /						

History of Interaction						
Moving of Records / Migration to other formats						
Security / Appropriate levels of access per roles						
Reporting						

Table 2 : Average Capability Maturity Rating across the FR Banking group per Records Management Element / Component

The average maturity as indicated by the above-mentioned results is between a level 1 and level 2, and labeled rudimentary. The migration plan or roadmap as part of the Records Management Capability Framework needs to improve capability and maturity initially to a level of systemic control (level 3), then mastery (level 4) and then optimisation and innovation (level 5).

Based on the capability maturity rating resulting from the records management audit, the need for a structured and strategic approach toward records management is clearly demonstrated.

4.3 Summary of Results / Findings

The following high level findings resulted from the records management audit :

❑ The complexity and number of new institutional risk, legal and regulatory frameworks, are putting serious pressure on the Bank to comply, assess and reassess the environment and put the required mechanisms in place to deal with gaps;

❑ Almost everybody knows there is a requirement to do something but as a result of the complexity, it is difficult to know where and how to start;

❑ Employees have not been informed or do not understand the reason why certain procedures require records to be managed and kept;

❑ There are not necessarily formal records management processes or programmes in place, meaning records and content management discipline is lacking;

❑ Records are managed as part of a particular procedure (imbedded in the procedures) on an ad-hoc basis;

❑ Monitoring compliance is done by internal and external audit as part of their process compliance audit. No formal content management processes managing and measuring performance and improvement are in place;

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- ❑ In some instances retention schedules are available but are as much as 3 years old and have not been revised recently to include new legislative or regulative requirements. Retentions schedules need to be updated in order to reflect new legal and regulatory requirements regarding storage and retention;

- ❑ Lifecycle management processes and accountability for processes and records categories are not always documented and might pose a problem in terms of evidential weight and integrity : tamper proof, no traceability, no audit trail, or history;

- ❑ In terms of automating and digitising paper records or electronically created records guidance is required in terms of 'how' records need to be managed to preserve or ensure evidential weight and integrity. In some instances it might be required to keep both a paper and an electronic version of the record;

- ❑ In cases where both the original paper records as well as an electronic version are kept, there needs to be a clear reference, linking paper copy with its image

- ❑ Management of records in paper format is in most cases outsourced to Metrofile. Certain unhappiness with the service provider indicates that service level agreements need to be reassessed to reflect new institutional, legal and regulatory requirements or alternative solutions need to be found;

- ❑ Uncertainty whether and when to destroy the paper copy once transformation into electronic format (imaging) has taken place;

- ❑ Some infrastructure projects such as eGami (a FR Banking Group Imaging project for cheque images and signature cards) address some requirements for certain record categories and follow-up projects might incrementally cover other relevant records categories, e.g. 'Know Your Customer' (KYC) and FICA (Financial Intelligence Center Act) and associated customer take-on processes and associated records for e.g. the already scoped CASE : 'Customer Agreements Stored Electronically' project. Reuse possibilities and opportunities are high;

- ❑ E-mail management is not sufficiently addressed. Lots of uncertainty exists, i.e. the 'how';

- ❑ No solution exists to facilitate a central point of access or sharing of records kept for 'corporate memory and history', or for good business practice, such as policies, minutes etc, amongst members of the same business unit or across business units;

- ❑ Records Management projects are implemented in isolation without considering reuse and sharing opportunities across the FR Banking Group clusters, such as for KYC or FICA (customer) records. An example is the First National Bank (FNB) Corporate Division KYC project and the FNB customer mandates / agreements (CASE) project.

5 Future Solution : A Records Management Capability Framework

5.1 Records Management Capability Framework ('TO – BE')

According to Randolph A. Kahn in *'Information Nation : Seven keys to Information Management Compliance',* the institution must have a consistent method for determining what information is a record and how that should be managed according to a consistent set of rules across different clusters / business units across the enterprise. (Kahn 2004, p. 17)

Considering the complexity both of the FirstRand business model and the legal, regulatory and industry specific drivers impacting on the records management capability of the banking group, it is essential to establish a Records Management Strategy and Programme. The key driver and benefit will be, to promote collaboration and alignment of efforts, initiatives and projects across clusters and business units, and to drive reuse of information, content and records, and application infrastructure, ensuring compliance, effectiveness and efficiencies.

The following definition is useful in terms of indicating the basic elements that should form part of a Records Management Framework (Strategy / Programme):

According to Kahn, a records management strategy / programme can be defined as : *'A planned, coordinated set of activities needed to manage an institution's recorded information throughout its entire lifecycle. It encompasses the creation, maintenance, use, and disposition or destruction of records, regardless of format. Essential elements include issuing up-to-date programme directives, providing proper training for those responsible for implementation, publicising the programme and carefully evaluating the results to ensure adequacy, effectiveness and efficiency'.* (A definition adapted from the US Environmental Protection Agency (EPA) for the FirstRand Banking Group) (Kahn 2004, p. 35)

A Records Management Capability Maturity Framework supports:

- ❑ Efficient joint working, information exchange and interoperability between FR Banking Group clusters and business units;
- ❑ Evidence-based policy making by providing reliable and authentic information for the evaluation of past actions and decisions;
- ❑ Cognisance and effective implementation of data protection principles and electronic communication and transactions and other information policy legislation, preserving the authenticity and legal integrity of records as evidence of business transactions, policies and decisions;
- ❑ Knowledge management and sharing of intellectual and information assets across the FR Banking Group, facilitating new ways of working with faster access to higher quality and up-to-date information; and

- ❑ Relevant legislation by demonstrating the authenticity of records and supporting legal admissibility, by maintaining a record retentions schedule at FR Banking Group level.

Best practice record management standards and guidelines need to be considered for all new records management initiatives and projects, and principles and standards should be incorporated / institutionalised as part of business process improvements and supporting software applications.

Building the appropriate solution, record and information management capability across several functional areas of the FR Banking Group, i.e. strategy, risk, legal, compliance and information technology will be required. The solution must comprise:

- ❑ Policy and strategy, to support an integrated strategy and plan within and between business units;
- ❑ Information / records management policy issues, such as authentication and the retention of records as corporate memory, privacy, data sharing, transparency and freedom of information;
- ❑ Architecture and design for future records management solutions and systems;
- ❑ Interoperability issues, including a common approach to the use, and description of records through metadata and taxonomies (indexing schemas), standards and the ability to develop integrated resource discovery and information retrieval systems;
- ❑ Business process management improvement / re-engineering (on institutional and business unit levels) and the institutionalisation of records management life cycle management and archiving principles and roles, ensuring accountability and appropriate levels of access.

5.2 Records Management Life Cycle Management and Associated Processes

Life cycle management is the end-to-end approach to information and content storage management. It recognises that the value of information or content changes over time. In the simplest version of the life-cycle concept, three biological ages are seen as the equivalents of the three phases of the life cycle of a record. In the current phase, records are regularly used in the conduct of current business and are maintained in their place of origin. This phase is also recognised as 'active' records. In the semi-current phase, records are still used but only infrequently in the conduct of current business. This phase is also known as 'semi-active' records. In the non-current phase, records are no longer used for the conduct of current business and are therefore destroyed unless they have continuing value for other purposes, which merit their preservation as archives in an archival repository or institution.

A formal process is required for creating, identifying and preserving records as evidence of business activities and transactions in the context of expected or current litigation, compliance audits, investigations and other formal proceedings.

Effective management of storage can lower the total cost of ownership of storing information or content. Content needs to be categorised according to the business value of each content object at various points in the lifecycle from creation to destruction, disposal or deletion, and proper protection approaches and tools must be appropriately applied. The Content Management Process should also provide for retention periods, archiving, and currency of content, versioning and audit trails. The purpose of process enabling organisational efficiencies should also not be underestimated.
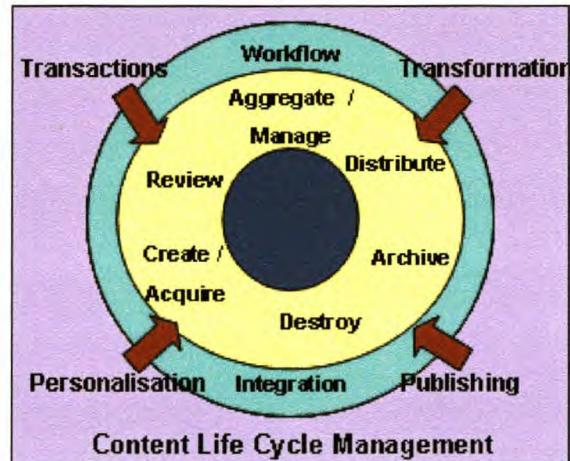
Figure 3 : Information / Content / Record Management Life Cycle

The records management 'continuum' concept is a consistent and coherent process of records management throughout the life of records from the development of record-keeping systems through the creation and preservation of records, to their retention and use as archives. The lifecycle elements are:

- ❑ **Create / Identify / Acquire / Capture / Register** : These are activities that enable capture and representation of records / content / information and making it available across the FR Banking Group;

- ❑ **Review** : These activities include the review and approval tasks and workflow for accuracy, quality, relevancy and context;

- ❑ **Aggregate / Manage / Intellectual Control** : These are activities that classify and categorise content / information / records for storage and retrieval purposes in a logical system. This point refers to taxonomies (indexing schemas, maps, processes) and maintenance information related to the management of content;

- ❑ **Present / Distribute** : These are activities through which content / information /records requests are disseminated / presented according to specific business requirements and used within the current business context, as well as kept for reference of that use;

- ❑ **Archive** : These are activities that manage, retain and archive content / records according to its perceived value for defined periods; and

❑ **Dispose / Destroy / Physical control** : These are activities that manage the disposal and weeding of outdated content in accordance with predefined "value and retention statements" for a particular purpose or process, or transfer as archives.

From the continuum principle a unified model is defined. The model reflects the pattern of the continuum. The actions continue to recur through out the life cycle of a record and cut across the traditional boundary between records and archive management. (Millar et al 1999, p. 17 - 22)

Any record or a collection of records pertaining to the same category needs to be managed through out its entire life cycle.

Outcome	Record Life Cycle / Records Management Process	Activities	Stage : Current	Stage : Semi-Current	Stage : Archive
Record created.	**Record Creation.**	Operations (transactions / interactions).			
Record owner is appointed per record category, life cycle management process / stage and retention requirements.	**(Step 1) Appointing Responsibility to individual or team.**	Assign responsibility and / accountability for all relevant records categories (content), the life cycle management process and retention drivers per BU.	As defined.	As defined.	As defined.
Record Assessed / Analysed and Identified.	**(Step 2) Analysis / Assessment / Identification.**	Record assessed and identified as record : See RRRG and Bank / BU Risk Based Approach (Only essential records should be kept).	Statutory / regulatory requirements / risk level.		Accession to archival repository.
Record Registered.	**Register / Acquire / Identify.**	Record Registered / acquired in repository	Register or receipt of records in repository.	Register or receipt of records in	Register or receipt of records in archive.

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				'secondary' repository.	
		(Unique identifier assisting future identification and tracking).			
Record categorised.	**(Step 3)** Control / **Aggregate / Manage.**	These are activities that classify and categorise records for storage and retrieval purposes in a logical system. This point refers to taxonomies (indexing schemas, maps, processes), metadata and maintenance information related to the management of content. It maps to business value of the record, the BU's risk matrix, rating historical value, and evidentiary value. Use RRRG to assist with categorisation.	Classification / Taxonomy.	Maintain arrangements and documentation.	Maintain arrangements and documentation.
Record stored, accessible, secured and appropriately accessed.	**(Step 4)** Maintenance / Use / Present / **Distribute.**	Record is stored to ensure secure and appropriate access. Integrity needs to be maintained. Versioning to indicate "updates / changes" and audit trails to track all use and interaction of record.	Accessibility / Security = Appropriate access; Versioning; Audit trails.	Accessibility / Security = Appropriate access; Versioning; Audit trails.	Preservation and conservation Accessibility : Migration / Transformation to other formats / platforms.
Records appraised / reviewed as per business value.	**(Step 5)** Appraisal / **Review.**	These activities include the review and approval tasks, and workflow for accuracy, quality, relevancy and context.	Schedule, (primary and secondary values).	Review (values).	Review (archival values for defined periods).

		This is an iterative process and needs to be repeated annually or as per business requirements.			
Record Disposed of or Transferred.	**(Step 6) Disposal / Destruction / Physical Control**	These are activities that manage the disposal and weeding of outdated content in accordance with predefined "value and retention statements" for a particular purpose or process, or transfer as archives. Three stages where after records may be purged or disposed of : ❑ Once an original paper copy has been accurately converted / transformed into digital format and the paper copy is no longer required; ❑ Where version control is active and only the latest version is required; ❑ The retention requirement and associated period (statutory and BU specific) has expired.	Transfer or dispose Appropriate sign-off mechanisms / process to govern final disposal of records.	Transfer to archival repository or dispose. Transfer or dispose Appropriate sign-off mechanisms / process to govern final disposal of records.	Dispose Appropriate sign-off mechanisms / process to govern final disposal of records.

Table 3 : The Records Management Lifecycle Continuum Approach

The Content / Records Management Process also needs to provide for the following:

❑ **Supply Chain / Sourcing / Syndication** : of both internal and external information, content and records enabling employees to *'dynamically assemble'* content required in executing FR Banking Group business processes. Service level agreement (SLA) management is required to manage the quality and integrity of content; and

❑ **Delivery Chain / Use** : knowledge workers need to have access to content relevant to their responsibilities. They need to be able to assemble tasks and content required to respond to business events. Processes, people (ensuring integrity, quality, format and context) and technology should enable the knowledge worker to control access to content required for decision-making.
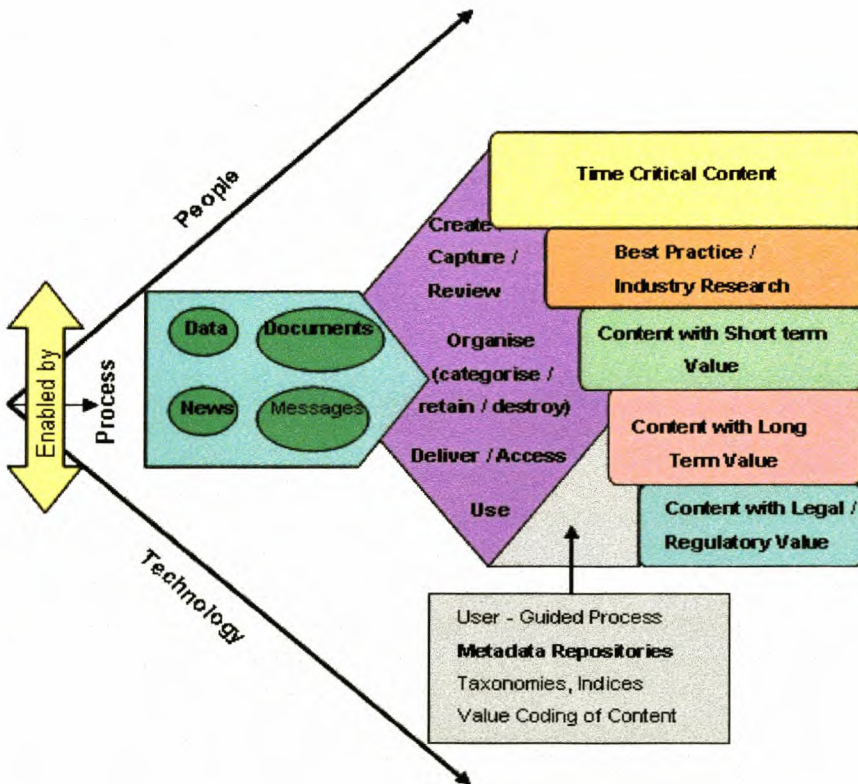
Figure 4 : Information / Content / Records Value Prism

The example below illustrates the life cycle of the content object of a Banking Product Collection (Master Product Collection (MPC).

Life Cycle of MPC Objects
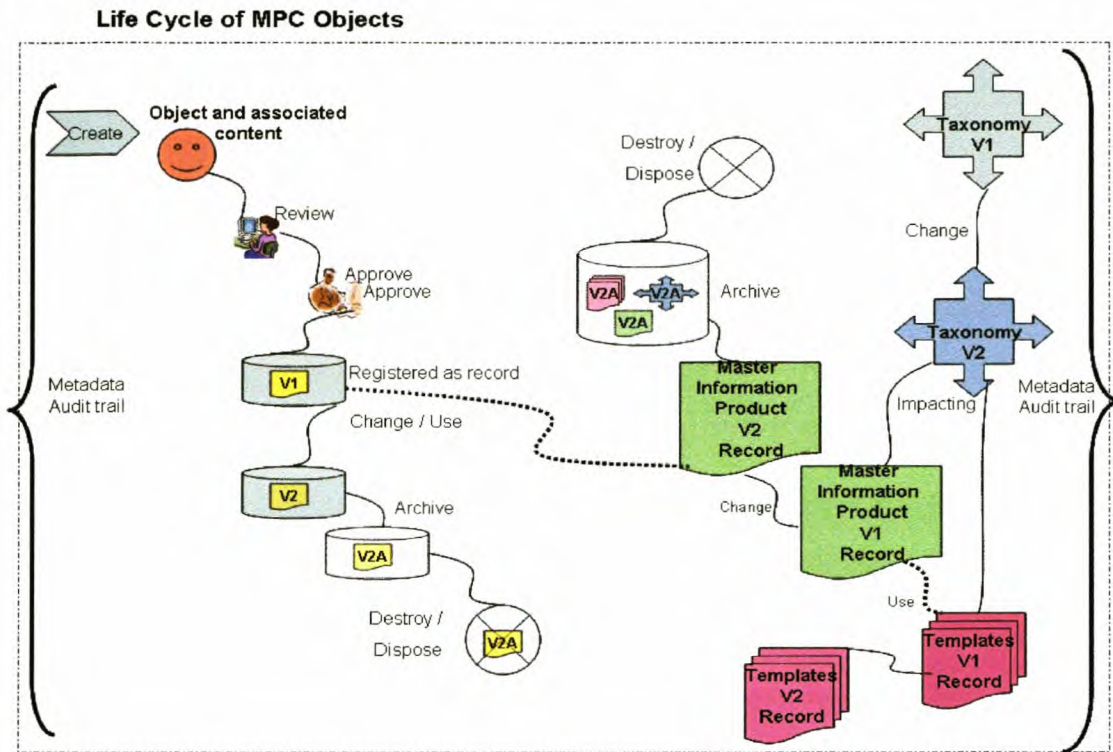
Figure 5 : Product Collection Object Life Cycle

Content Management Workflow and Business Process Management Automation assist to manage information, content and records centric processes and to effectively participate in enterprise-wide processes spanning applications beyond enterprise content management. Automation facilitates economies of scale, speed, productivity, effectiveness and efficiency resulting in capability and competitive advantage. This effectively supports collaboration in the workplace enabling sharing and innovation.

5.3   Records Management Systems Design

Systems for record management fall into two broad categories:

- ❑ Electronic records and document management systems that provide a secure environment for maintaining records that are generated by business systems and common desktop programmes, e-mail messages, graphic and scanned images, desktop published documents, static web pages, voice and video recordings, (unstructured content) etc;
- ❑ Structured data rich systems which hold transactional records or web-site databases which construct dynamic HTML or XML pages.

Issues of authenticity, reliability, integrity and audit apply as much to structured as to unstructured information / content and associated systems.

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The challenge in designing records management systems is in successfully combining the records management requirements for structure and stability in enterprise information architecture and design, with the operational and user requirement for fast and flexible access to information and fluidity of information flows. Aggregating records as an effective enterprise core asset guarantees accurate and up-to-date information, controlled versions and sustainable corporate memory, delivered to the critical presentation layers. (Public Records Office. United Kingdom 2001, p.13)

5.3.1 Records and Document Management Systems

The FR Banking Group will require both records and document management systems providing a comprehensive solution and system capability. These are closely related functions which are rapidly converging as records management becomes a mainstream application.

5.3.1.1 Electronic Document Management

Electronic document management assists the institution to exploit its information more effectively by providing better access to stored information and by supporting teams to work together in conjunction with workflow capabilities. Typical requirements are:

- ❑ Document capture of internal, as well as external documents;
- ❑ Storage and indexing at document level;
- ❑ Search, retrieval and discovery at document level;
- ❑ Access management and security control;
- ❑ Off-line archiving for semi-active or inactive documents;
- ❑ Version control;
- ❑ Audit trails on access and changes to documents;
- ❑ Document profiles (metadata); and
- ❑ Integration with document image and workflow systems.

5.3.1.2 Electronic Records Management Systems

Electronic records management systems provide a digital environment for capturing electronic records and applying standard records management practices. They manage a taxonomy, and record classification within the taxonomy and filing structure, and support formal retention and disposal or destruction and review schedules. Requirements for electronic records management in addition to electronic document management are to support:

- ❑ Capturing, storing, indexing, retrieval and discovery of all elements of the record as a complex unit and for all types of records;
- ❑ Management of records within class categories and file structures (as per taxonomy) to maintain the narrative links between records (at file or folder level);
- ❑ Record level metadata including retention and disposal and destruction rules;

- ❏ Integration, reference and relationship between an electronic record (e.g. image) with paper or original record;
- ❏ Secure storage and management to ensure authenticity and accountability, including support for legal and regulatory requirements (tamper proof, preventing alteration);
- ❏ Appraisal and selection of records for preservation and transfer for permanent archive;
- ❏ Management facilities for the systematic retention, disposal and destruction of records; and
- ❏ Migration and export of records for permanent preservation without loss of information.

The key requirement for the electronic records management system is that electronic records need to be captured in a corporate or institutional classification and filing system and taxonomy. In addition it needs to retain the links and relationships between records, which are subject to business rules on retention and disposal. It must preserve the content, structure, and context of electronic records, and it must ensure that records are 'registered' and authentication procedures and audit trails are established. This will permit records to be used as legal evidence, will improve the Bank's accountability and will assist the institution in meeting the requirements of internal and external auditors.

It is important to ensure that in all new and future systems design, the ability to manage electronic records is a visible thread in the design, and that it permeates all aspects of the implementation of records management principles and practices. The functional requirements necessary for managing and preserving records, once identified at an early stage, can be built into the design and implementation of electronic records management systems more easily, and less expensively, than later maintenance changes. Proper assessment of requirements and proper planning as input to the design is a critical element ensuring success and interoperability with other and future initiatives and systems. Early evaluation of existing systems will also enable modifications to be suggested as part of a planned maintenance programme.

Where new systems or modifications to existing systems are planned, there is an opportunity to influence the requirements specification and software selection in ways which enable effective records management to be undertaken in the future. There might also be opportunities for suggesting changes to existing business processes which will support the generation of adequate metadata and effective handling and use of records management. (Public Records Office. United Kingdom2001, p. 16)

5.3.2   Records Management Capability and Design Principles

The following capabilities based on information / records management principles, are essential when building effective, efficient and compliant records management solutions:

5.3.2.1 Long-term Record / Information Integrity

Capability

Electronic business information should be protected from inadvertent or deliberate alteration. A system that protects records from alteration minimises the likelihood that the authenticity of electronic records will be challenged in court.

Principle

Information has integrity if it can be demonstrated that it has not been altered and remains accurate since it was created or archived. Unlike paper-based information, which has inherent features that deter alteration (such as the physical bond between ink and paper), the alteration of most digital information in its native form is easily accomplished without detection. Business best practices and many laws and regulations require digital information to have integrity.

5.3.2.2 Record / Information Completeness and Authenticity

Capability

An information storage system should retain electronic records in a manner that preserves their complete content, context, physical form, layout and metadata, especially that metadata indicating origin and provenance.

Principle

An electronic record is said to be authentic if it is in fact 'what it purports to be'. That is, the source or origin of the record can be reliably demonstrated. This often requires proof of who generated the record and who controlled it at a certain time. In addition an electronic record should remain in a complete and accurate form, and retain the context in which it was generated and used, throughout its life cycle in order to be considered trustworthy, and to satisfy a variety of business and legal requirements.

5.3.2.3 Record / Information Accessibility

Capability

The FR Banking Group should be able to access records in a timely, trustworthy and cost-effective fashion at any time during the record or information life cycle. As stated by the courts, 'utilizing a system of record keeping which conceals rather than discloses or makes it unduly difficult to locate' may be considered the equivalent of destroying records.

Principle

Information or records that cannot be readily found and accessed are of marginal utility. In the short term, responding to a regulator or a court request for records must often be completed in a short timeframe. In the long term, numerous factors such as the limited lifespan of every digital storage medium; data corruption; heterogeneous storage platform; technological obsolescence; threaten the long-term accessibility of electronic information or records.

5.3.2.4 Information / Record Security

Capability

Storage systems should provide information security controls and capabilities that protect the system and its content from alteration, corruption, inaccessibility, loss, compromise of confidentiality and privacy, and other events.

Principle

The FR Banking Group should manage and store valuable information that must be protected. In some cases, confidentiality must be maintained, and in other cases privacy protection is a legal requirement.

Security is a complex process that involves many different procedures and technologies, but is fundamental to the institution meeting it's information management goals and obligations.

5.3.2.5 Resistance to Deletion and Overwriting

Capability

Storage systems designed to store highly sensitive and regulated information should offer the capability to protect information being inadvertently or deliberately deleted or overwritten. Improper deletion or 'spoliation' of evidence can lead to serious consequences inside and outside the courtroom. In litigation the penalties can include severe fines, and even the overall dismissal of a claim.

Principle

In order to satisfy certain business requirements, laws, regulations and other criteria, electronic records may need to be stored in a fashion that ensures that they cannot be deleted or overwritten. From an evidentiary point of view, such a capability helps to demonstrate record integrity and preempts attacks on record trustworthiness.

5.3.2.6 Records Retention

Capability

A Storage system designed for the long-term storage of electronic records should offer records retention functionality.

Principle

Laws, regulations, standards and practices require the FR Banking institution to retain specific types of information or records for specified periods of time. Institutions retaining records in electronic format require storage systems that enable them to designate retention periods for records and dispose of records at the end of their life cycle.

5.3.2.7 Business Continuity and Disaster Recovery

Capability

Standard disaster recovery techniques require that data is stored in at least two physically separate locations.

Principle

Data that does not exist in two or more places can be permanently lost if the device or facility housing the data is damaged or destroyed. Thus, there is a need for institutions to copy important data to different physical locations for backup, disaster recovery, and business continuity purposes.

5.3.2.8 Recording and Storage Integrity and Authenticity

Capability

When institutions archive electronic and business information / records for future use, the reliability and integrity of the initial copy and storage process should be validated.

Principle

Information / records cannot be relied upon unless there is assurance that the information was recorded in a manner that reflects the form and content of the information as it was originally created.

5.3.2.9 Records Destruction / Disposal

Capability

Records management solutions should provide the capability to properly dispose of or destroy information or records once they are no longer required.

Principle

Disposal or destruction is the final lifecycle stage of information. Although there are relatively rare cases where information or records must be retained in perpetuity for historical and other purposes, over time the vast majority of information ceases to be of value to an institution. In the digital world, it can be difficult and expensive to ensure that electronic information is properly destroyed. This can lead to situations where records are not properly disposed of and unwanted records are recovered or recreated in the course of litigation.

5.3.3 Design Criteria Standard for Electronic Records Management Software Applications" (DoD 5015.2-STD, June 19. 2002), US Department of Defense

For the purpose of implementation and vendor and product selection, best practice and internationally accepted standards for Records Management Software, such as the *'Design Criteria Standard for Electronic Records Management Software Applications' (DoD 5015.2-STD, June 19. 2002*) from the United States Department of Defense, should be consulted as a guideline for future Records Management related initiatives / projects. (See Appendix F)

The standard outlines baseline functional requirements for records management application software. It also defines required system interfaces and search criteria to be supported by records management applications, and describes the minimum records management requirements that must be met.

5.4 Records Management Implementation Guidelines

Sharing and reuse of records and systems across clusters and business units will require a standard approach towards taxonomy (common vocabulary) and metadata structure, i.e. a standard way of categorizing descriptive elements and standard terms for their description. This is also crucial for longer term migration of records to new hardware or software platforms. In addition common metadata standards on issues such as authentication will improve reliability and accountability.

Where possible electronic records management systems should move towards the use of XML.

5.4.1 Risk-based Approach

The value of business information or records and the demands governing the access and use of the banking group's records will determine which preservation options are most appropriate and will dictate the metadata that should be created and stored along with the records.

Categorisation by business purpose or value, prioritisation, storage format, access control, managing the entire life cycle of the record or any other implementation considerations and restrictions are guided by the cluster, business unit and the specific business risk based approach regarding management of records.

The following processes could assist in adhering to the risk based approach for records management:

- ❑ Step 1 - Identify records to be managed for specific business unit or cluster
- ❑ Step 2 - Define the value and purpose of record
- ❑ Step 3 - Define accessibility requirements for the record
- ❑ Step 4 - Define which other areas require access
- ❑ Step 5 – Define solution retention requirements

5.4.2 Information Architecture

The complexity of a comprehensive set of requirements for records management - resulting from the current Legal, Regulatory, Governance frameworks - demands guidance, a multidisciplinary approach and skill sets and a proper architecture, to ensure an end-to-end solution.

Records Management is not a technical solution only and needs a well planned information architecture framework, guiding design and implementation of the comprehensive records management solution, - namely information, content, records and the supporting application and technical infrastructure.
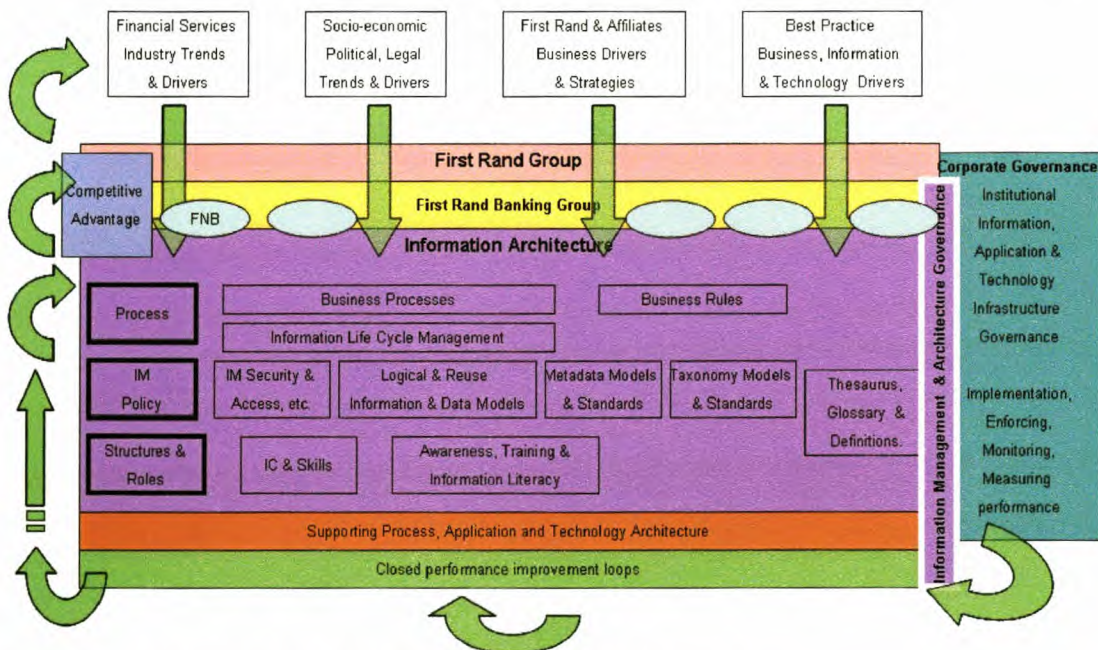
Figure 6 : Information Architecture Components / Elements

A well planned conceptual framework and supporting design will enable reuse and sharing if the information, content, record objects and application infrastructure demonstrate interoperability between all relevant interfacing systems.

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An information architecture comprising of processes, policy, structures and roles, is crucial for the effective management, discovery, retrieval, integrity and authenticity of records as an enterprise information asset. Crucial to the information architecture is the link of the record to its business process, the position of the record in the bigger information structure and the users' interaction with both the record and the system. Facilitating the ability to ensure and preserve integrity, and to track use, interaction and changes, taxonomy and metadata are key enablers. (Williams 2002, p. 9)

5.4.3   The Process and Information / Content / Record link

There is a clear link between successful records management programmes and business success as a whole. Records management supports compliance, efficiency and effectiveness as part of the corporate governance responsibility.
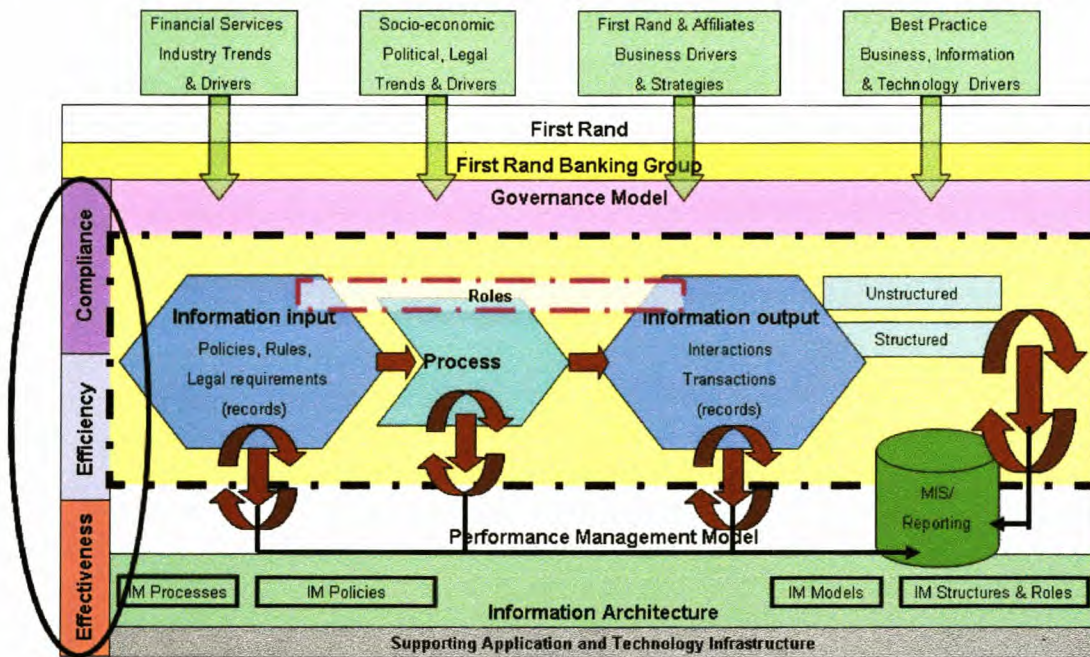
Figure 7 : Process versus information / content / record object link

Creating efficiencies demands a strong relationship between the process, and the information, content or record it is using as input (or generating as output), and the supporting applications and technology infrastructure. This is demonstrated by:

- A close and integrated working relationship and set of processes, i.e. communicating requirements and sharing and aligning visions between Group Compliance, Strategic Process Engineering, Content Management, Enterprise Architecture and Workflow are crucial in terms of creating end-to-end solutions and associated synergies, efficiencies and effectiveness;
- A strong process, information / content, roles and supporting application and technology infrastructure link, as a solution set, should operate in concert creating both efficiencies

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(attempting zero latency), as well as ensuring ownership, traceability and evidential weight and integrity;

❑ Performance management and continuous improvement within the individual components of the value chain, but more importantly, also across the value chain.

More specifically, content management discipline provides enabling mechanisms, structures and guidance, i.e.:

❑ Information management policies and standards ;
❑ Service level agreements;
❑ Collection and life cycle management practices;
❑ Accountability and ownership of information, records and content;
❑ Taxonomies, ensuring integrity, quality, relevancy, reuse and driving the application of retention schedules;
❑ Record object libraries support process modeling and procedure writing. They subsequently assist in the identification of which processes to use with which record object and which business rules need to be applied at procedural levels, e.g. checklist per process artifact.

Huge benefits can be derived by identifying reuse opportunities for information, content objects and infrastructure, generating efficiencies as well as cost savings through:

❑ Identification and documentation of reuse opportunities for inclusion into relevant Enterprise Architectures;

Enterprise Content Management
Information / content object data reuse model

	Retail	Corporate	Commercial		Reuse
Process 1	Content object 1	Content object 1			
Process 2	Content object 2	Content object 2	Content object 2		Content object 1
Process 3	Content object 6	Content object 3			Content object 2
Process 4	Content object 4		Content object 6		Content object 6
Process 5		Content object 6	Content object 5		

Mapping business process and information / content object and identifying reusable object

Figure 8 : Records Management Value : Reuse Opportunities

❑ Reuse in terms of reusable information and content objects including records, as well as infrastructure;

❑ Documentation of inventories to indicate purpose / value of object, owner, location and reuse opportunity; and

❑ Emphasising the process, information or content and infrastructure link.

5.4.4 Continuums, Components, Taxonomies, and Metadata

5.4.4.1 Records Continuum

The records management continuum reflects the idea that different stakeholders create, use, manage, and retain records not in discrete stages, but at different points throughout the record's existence. The continuum concept recognises that records pass through identifiable stages; however, these stages are reference points, not separate functions. All users interacting with the record will have an effect on all the others in the continuum. Roles and responsibilities should be coordinated, not organised autonomously. (State Archives. Department of Minnesota Historical Society 2004, version 4, p. 4)

5.4.4.2 Record Components:

The components of any record include:

❑ **Content** : factual information in the record that records the banking institution's business, e.g. 'Know Your Customer' (FICA) record;

❑ **Context** : information that shows the record is related to the business of the banking institution and other records, such as ownership, retention period, value or purpose, etc;

❑ **Structure** : technical characteristics of the record (e.g. file format, data organisation, page, layout, hyperlinks, headers and footnotes);

❑ **Configuration** : tracking changes, interaction and use and keeping an audit trail of those changes.
(State Archives. Department of Minnesota Historical Society 2004, version 4, p. 4)

5.4.4.3 Taxonomies

'Taxonomies' refer to the hierarchies and categories or series associated with groupings of records. A records category or series is a set of records grouped together as they relate to a particular subject or function, or result from the same activity. Each record category or series should be managed according to the records retentions schedule. By managing records as a group, they can be preserved, destroyed or disposed of efficiently.

The records management taxonomy plays a crucial role, as it puts the record in the context of the business process, the system and the user of both the record and system. It gives structured input to the technical design of the system ensuring efficiencies and effective use of recorded information, by facilitating reuse and interoperability with other systems. In conjunction with metadata, taxonomy plays a vital role in

ensuring retrieval and relevancy as both paper and electronic records are subject to discovery, not only for the purposes of civil litigation or government investigation, but also for the purpose of decision-making and customer service. (Gilchrist 2004, p. 177-224)

5.4.4.4 Metadata and the Dublin Core Standard

The Records Management Capability Framework supports the use of the 'Dublin Core Metadata Standard' as guideline to metadata development for the Banking Group

The Dublin Core Metadata Initiative (DCMI) is an organisation dedicated to promoting the widespread adoption of interoperable metadata standards and developing specialised metadata vocabularies for describing resources that enable more intelligent information discovery systems.

The range of activities of DCMI includes:

❏ Standards development and maintenance, such as organizing international workshops and working group meetings directed toward developing and maintaining DCMI recommendations;
❏ Tools, services, and infrastructure, including the DCMI metadata registry to support the management and maintenance of DCMI metadata in multiple languages;
❏ Educational outreach and community liaison, including developing and distributing educational and training resources, consulting, and coordinating activities within and between other metadata communities;

The importance of metadata should not be underestimated in supporting the characteristic of evidence. The way that the records are organised on any storage device will not necessarily give evidence of their use or the business processes that employed them. Therefore metadata (information about information systems, data, content and business processes), created simultaneously with the record, and its interaction over time with software functionality and profiles, must provide the appropriate evidence.

Its basic elements are a structured format and a controlled vocabulary, which together allow for a precise and comprehensive description of content, location and value to assist in retrieval. Metadata also informs the business rules and software code that transforms it into 'executable knowledge'. In more sophisticated data formats, such as XML, it allows for extraction use, and calculation based on specific components of a metadata record.

The following example illustrates the contextual elements pertaining to taxonomies and metadata as it relates to retention for object as part of a Product Collection:
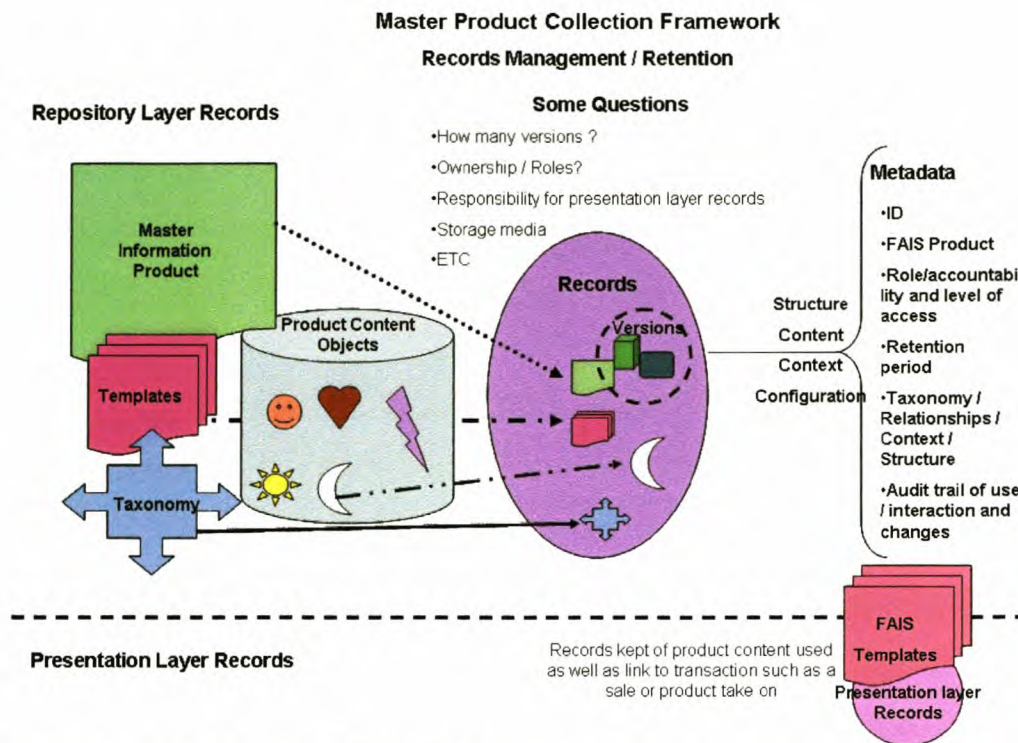
Figure 9 : Product Collection Records Management / Retention Context

In summary metadata and taxonomies are, in any system, given the volume of information it contains, the uses to which it can be put, the costs involved, and the basic tool for efficiency and effectiveness.

The following metadata elements / fields should be considered for the FR Banking Group. These elements are also supported by the Dublin Core International Metadata Standard (NISO standard Z39.85; ISO 15836 and ISO 15489).

The following elements can be grouped to reflect the total life cycle of a record, e.g.:

- **Identify**

Metadata Element	Purpose and Description
Identify	
Record identifier	An unique code / system ID for a particular record and distinguishes an object from others in the repository
Title	The name given to the record;
Mandate	A source of record keeping requirements, e.g. legislation, format directive, policy, standard, guideline, set of procedures, or FR banking group driver / expectation which (explicitly or implicitly) imposes a requirement to create, keep, destroy /

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	dispose of or, control access to and use of a record

❑ **Provide Context**

Metadata Element	Purpose and Description
Provide Context	
Author / Originator / Creator or User / Cluster / Business Unit / Function	Organisational unit / person responsible for action (creation, declaration, etc.), usage of record (intelligent name rather than User ID)
Addressee	Mandatory for e-Mail. Identifying the person the record was sent to (intelligent names)
Distribution Lists / Recipients	Mandatory for e-Mail. Identifying the person the record was sent to (intelligent names)

❑ **Content**

Metadata Element	Purpose and Description
Content	
Coverage	The jurisdictional, spatial and or temporal characteristics of the content of the record
Subject	The subject matter or topic of the record
Description	An account, free text, of the content and / or purpose of the record

❑ **Relationships**

Metadata Element	Purpose and Description
Relationships	
Related records	Indication of the relationship or link / between one record and another, between various aggregations of records, or the relationship between a record and another information resource. Will assist in managing disposal conflict and with issues concerning legal admissibility.
Relationships / links between record elements	To enable linking together of physically separate record elements that constitute the complete record (e.g. a document attachment to an e-mail message, an e-form, data, metadata).

❑ **Version Control**

Metadata Element	Purpose and Description
Version Control	
Record / document Status	Indicates the stage of the life cycle of a document /

	record, concept, draft, revised, final, active, inactive, etc.
Record version number	A sequential number for each version of a record in the electronic repository

❑ **Access Control / Rights Management**

Metadata Element	Purpose and Description
Access Control	
Rights Management	Legislation, governance frameworks and policies that govern strict access to or use of records
Access restrictions	Indicate restrictions on access to the record as a whole by indicating allowable user access groups / role
Access restriction review	Date on which access restrictions will be reviewed
Security classification	Level of security classification, which will have implications for user access restrictions
Sensitivity review date	The date at, or time period after which, a review of the security classification is appropriate

❑ **Disposal Control**

Metadata Element	Purpose and Description
Destruction / Disposal Control	
Destruction / Disposal instruction	Information about policies and conditions that pertain to or control the authorized destruction / disposal of records, or information about the, retention schedule and destruction actions to which the record is subject.
Retention period	The standard period of time for which a particularly category of records should be retained as presented by the records retention schedule
Destruction / Disposal authority number / name	Accountable person / or authority number that authorises the destruction of the record as indicated by the records retention schedule
Destruction / Disposal action review date	The date in which the scheduled destruction action was reviewed
Destruction / Disposal action review comments	A textual description indication why the destruction action was reviewed and what decision was taken against the record
Destruction / Disposal / Transfer date	The date on which the records were destroyed / transferred

Identity of person authorising the review, destruction/ transfer	The name of the person responsible for authorisation
Transfer location	Textual description of transfer location

❑ **Record Type**

Metadata Element	Purpose and Description
Record Type	
Record type	An account, free text, of the content and / or purpose of the record. The recognised form or genre a record takes, which governs its internal structure
Aggregation level	The level at which the record(s) is / are being described and controlled or the level of aggregation of the unit of description

❑ **Presentation and Medium;**

Metadata Element	Purpose and Description
Presentation and format	
Storage format / medium	The logical form (content medium and data format) and physical form (storage medium and extent) of the record
Presentation format	Linking between versions where the same record is held in different formats for preservation and for viewing, or where sensitivity editing has resulted in a variant version
Language	Language the record was created in to enable retrieval and aligning to translations that might exist

❑ **Location Information;**

Metadata Element	Purpose and Description
Location	
Physical location	Physical storage location of both paper as well as electronic records
Barcode (paper)	Identifying label for paper records or hard copy elements of hybrid assemblies

❑ **System Information**

Metadata Element	Purpose and Description
System information	
Technical platform	Information regarding the platform and application on which the records, were generated and stored

❏ **Vital Record Information**

Metadata Element	Purpose and Description
Vital record indicator	
Vital record indicator	Based on policy and records retention schedule. Protect the legal, civil and financial rights of customers. Required to continue operational responsibilities under disaster conditions (influence retention period). Protect the legal and financial right of governing bodies
Vital record review date	The date or time period after which a review of the vital record status is appropriate

❏ **Audit information**

Metadata Element	Purpose and Description
Audit trail / tracking / history	
Audit trail	Tracking of all interactions with the records through out its life cycle
Management history	The dates and description of records management actions performed on a record from its creation and registration into a records management system until its destruction or disposal
Use history	The dates and descriptions of both legal and illegal attempts to access and use a record, from the time of its creation and registration into a record management system until its destruction / disposal
Preservation history	The dates and descriptions of all actions performed on a record after its registration into a record management system which ensure that the record remains readable and accessible and the integrity of the records remains unchanged for as long as it has value for the FirstRand Banking Group

❏ **Date information**

Metadata Element	Purpose and Description
Date Information	
Record date / time created / transaction	The dates and times at which such fundamental recordkeeping actions as the record's or record series' / categories' creation and transaction occur;
Date record declared / time	The date the record was declared and submitted

	into the records management repository. It is the point at which the record came under control of the system and assists in proving the integrity of the record for admissibility purposes
Date and time delivered / read	Mandatory for e-Mail The date and time an e-mail was delivered into another system. The information is essential to prove integrity of a record for admissibility purposes
Date last edit occurred	Date of last changes before declared as record. The information is essential to prove the integrity of a record for admissibility purposes
Record version date	Creation date of the record version in the electronic repository. The information is essential to prove the integrity of a record for admissibility purposes

Table 4 : Records Management Metadata Matrix

5.4.4.5 Preservation / Storage

The '**Electronics Communications and Transactions** (ECT) **Act**' provides a set of guidelines for long term storage of electronic records. (See Appendix E.) The main purpose, in terms of appropriate storage formats and secure access, is to preserve records in such a manner as to ensure the legal / evidential weight and integrity of records.

Preservation, storage and appropriate access are determined by the record category's value and business purpose. The value and purpose defines how records should be stored, accessed and used.

The following prioritisation and categorisation criteria should guide the retention, storage sharing and access:

Record	Automated / Digitized	☐	High demand	☐	Active	☐
	Paper	☐	Low demand	☐	Inactive / Archived	☐

Only essential records should be kept. These are the records that are material to an organisation's mission-critical programmes and functions (e.g. disaster recovery), tactical decision-making, legal and regulatory compliance, and resolve any dispute between parties (events, actions, decision-making processes, risk management, etc.).

In order to preserve and create efficiency of access and use for either records in an outdated electronic format or paper based format, two techniques could be used, namely migration or transformation. Migration is the process of moving records to new computer and digital platforms in order to maintain their value. Transformation entails changing records from one format to another, such as paper to image. It is of utmost importance to maintain the accessibility of any associated metadata. Cognisance must be taken of the guidelines as posed by the *Electronic Communications and Transactions Act*.

The following options are available for off-line storage:

☐ **CD-ROM (compact disk / read only memory)**

Optical disk technology is capable of storing large amounts of data that can be read but not altered. CD-ROMS all conform to size and format standards and are well suited for colour, large software applications graphics, sound and video. CD-ROM technology adheres to ISO 9660 that covers both the physical layout of the disk and the format of the recorded information.

☐ **CD-R (compact disk / recordable)**

Based on WORM (write once read many) technology, a CD-R can store large amounts of data. CD-R technology also adheres to ISO 9660. CD-R drives have been approved to enable multi-session recording (that is, data can be added over time). Standard error checking techniques should be used to assess the quality of the blank discs being used for storage.

☐ **Magnetic tape**

Magnetic tape is a magnetically coated strip of plastic on which data can be encoded. It provides relatively inexpensive and large storage capacities. Since tapes do not allow random access to data, access time is slower on tape than on disks. Tapes are available in a range of sizes and format.

☐ **Magnetic hard disk**

A hard disk (as opposed to floppy disk) is a magnetic disk that can store large quantities of data. However, hard disk storage is more expensive than other storage media.

5.4.4.6 File Formats

The challenge is that rapid changes in technology mean that file formats can become obsolete and cause problems for long term preservation in meeting legal, regulatory and operational requirements for retention. In order to ensure long term preservation, it may be required to convert and / or migrate records to another platform or storage format. The challenge is that records need to be accessible and the context and relationships need to be retained. Sometimes compressing files in order to save space is required. During migration / conversion / transformation and / or compression, the following losses might occur and need careful consideration and mitigation:

☐ **Data** : Loss of data results in loss of some of the content of the record (Legally it is necessary to preserve records that are complete and trustworthy);

- ❏ **Appearance** : Loss of structure in converting a word processing document to a RTF format (some of the page layout might be lost). It should be determined whether this loss might affect the completeness of the record. If the structure is essential to the understanding of the record, this loss might be unacceptable;

- ❏ **Relationships / Context** : Loss of relationships of the data in the file, e.g. spreadsheet cell formulas, database files. Again this loss might affect the legal requirements for complete records.

Data migration policies and procedures must be developed to ensure that electronic records will remain readable and accessible throughout their retention period. (Williams, 2003, p. 9)

In summary, a copy of a record is legally admissible, only if the processes used to create, maintain, use and destroy a record are executed in a trustworthy manner and when the record in terms of context and content is accurate, complete and durable.

5.4.4.7 Naming Conventions

Consistently named records foster collaboration and mutual understanding of how to name files and use file names (including the file name metadata). Consistently named records also assist in meeting legal and regulatory requirements. Legally, records must be trustworthy, complete, accessible, legally admissible in court, and durable as long as records retention schedules require. Records that are consistently and logically named are easier to manage to meet these requirements.

5.4.4.8 Storage Facilities and Procedures (paper and electronic)

Service level agreements with off-site storage facility vendors need to be reviewed on a regular basis in order to ensure compliance to legal and regulatory requirements for record preservation. The following need to be considered:

- ❏ **The physical storage space** : It needs to be fit for purpose as required by law;

- ❏ **Access control procedures** : Procedures for access and use of the storage facility must detail who may access the facility, check out records, add and destroy records;

- ❏ **Damage prevention and maintenance** : Records need to be protected against pests, water, fire, etc. The environment for preservation needs to be monitored on a regular basis as does monitoring the deterioration of electronic and paper media or formats;

- ❏ **Disaster recovery** : A disaster recovery plan should have detailed instructions, procedures and responsibilities, with the purpose of having the facility operational and the greatest number of records recovered in the least amount of time.

5.4.5 E-Mail Management and Policy

Records management includes all formats of records. E-Mail as records should follow the same principles as stated in the FR Banking Group Records Management Policy and Framework and Retention Schedule.

E-Mail is increasingly becoming the primary business tool for internal and external communication and as a result should be treated with the same level of attention given to drafting and managing formal types of communication. There is common misconception that e-mail messages constitute an ephemeral form of communication. This misconception about how e-mail messages can be used could result in legal action being taken against the institution or individuals. The written and permanent nature of e-mail messages determines that they should be treated as records of business activities. To ensure that there is a full record for evidential and accountability purposes, everybody in the organisation should know that e-mails as records need to be retained and as a result how e-mail messages must be treated.

E-mail messages can constitute part of the formal record of a business transaction. All business units and staff members are responsible for identifying and managing e-mail messages that constitute a record of their work. When an e-mail is received or sent a decision needs to be made about whether the email needs to be captured as a record. Once an e-mail is captured as a record, it should be deleted from the e-mail client. The main issues to consider when managing e-mails as records are:

- ❏ Identifying those e-mails that constitute a record;
- ❏ Who is responsible for capturing the records;
- ❏ E-mail messages with attachments;
- ❏ When to capture e-mail records;
- ❏ Where to capture e-mail records;
- ❏ Treatment of encrypted e-mail records; and
- ❏ Titling e-mail records.

(Smith 15 September 2004, p. 1 - 4)

5.4.5.1 Identifying E-Mail Records

When deciding whether an e-mail message constitutes a record, the context and content of the e-mail message needs to be considered. A guiding principle on identifying e-mail records might be that as soon as the email message needs to be forwarded for information purposes, it should be considered as a record. E-Mail messages that might constitute a record are likely to contain information relating to business transactions that have taken place or are going to take place, decisions taken in relation to the business transaction, or any discussion that took place in relation to the transaction.

5.4.5.2 Responsibility

Business units, clusters or areas of work need to appoint a person to accept overall responsibility and oversee management of e-mails as records for that area. As e-mail messages can be sent to multiple recipients there are specific guidelines to indicate who is responsible for capturing an e-mail as a record:

- ❑ For internal e-mail messages, the sender of an e-mail message, or initiator of an e-mail dialogue that forms a string of e-mail messages;
- ❑ For messages sent externally, the sender of the e-mail message;
- ❑ For external messages received by one person, the recipient;
- ❑ For external messages received by more than one person, the person responsible for the area of work relating to the message.

5.4.5.3 E-Mail Messages with Attachments

Where an e-mail message has an attachment a decision needs to be made as to whether the e-mail message, the attachment or both should be kept as record. The decision as to whether an e-mail and / or its attachment constitute a record depends on the context within which they were received. It is likely that in most circumstances the attachment should be captured as a record with the e-mail message as the e-mail message will provide the context within which the attachment is used. In all cases the link / relationship between the e-mail message and its attachment needs to be retained and clearly referenced.

There are instances where the e-mail attachment might require further work, in which case the attachment would be captured as another version of the original. An audit trail needs to track and capture all changes to the original copy / attachment, or the attachment needs to be captured in another location. Under these circumstances the copy of the attachment that was used for further work will become a completely new record.

5.4.5.4 When to Capture

E-Mail messages that can be considered to be records should be captured as soon as possible. Most e-mail messages will form part of an e-mail conversation string. Where an e-mail string has been formed as part of a discussion it is not necessary to capture each new part of the conversation, i.e. every reply, separately. There is no need to wait until the end of the string. There is no need to wait until the end of the conversation before strings should be captured as several subjects might have been covered. E-Mail strings should be captured as records at significant points during the conversation rather than waiting to the end of the conversation because it might not be apparent when the conversation has finished.

5.4.5.5 Where to Capture

E-Mail messages that constitute records must be captured within a records management system or any other storage platform adhering to records management standards. E-Mails captured as records should be located with other records relating to the same business activity. Personal mailboxes should not be used for long-term storage of e-mail messages, but should be used for personal information or short term reference purposes only. When these e-mails are no longer required, they should be deleted.

5.4.5.6 Encryption of e-Mail Records

Where it is known that an e-mail has been encrypted it is important that it is unencrypted prior to capturing it as a record. If an e-mail record is captured without being unencrypted it is highly likely that there will be a problem accessing the record for long-term purposes (e.g. loss of data, obsolete platforms).

5.4.5.7 Naming Conventions / Categories (taxonomies) for e-Mails in an Electronic Records Management System

E-Mails constituted as records should follow the same principles relating to metadata and taxonomies as for other records as part of an enterprise-wide and standard approach for records management.

The title of an e-mail message does not always reflect the reason for capturing an e-mail message as a record. The problem of e-mail titles not reflecting the reason for capturing the message as a record can, to some extent, be avoided through following the guidelines for titling e-mails at the point they are created. If the title of an e-mail record does not accurately reflect the reason why it is being captured as a record it should not be re-titled within the e-mail client but at the point where it is captured within the electronic records management system. Re-titling e-mail records is particularly important when they represent different points in an e-mail string as it will help to identify the relevant aspects of the conversation. (The National Archives. United Kingdom. 2004, p.27 - 33)

5.4.6 Digital Imaging

As a general rule, it is permissible to perform document imaging and retain only the imaged document in lieu of the original. The following three principles must be complied with for the purposes of the ECT Act (Section 16):

- ❑ The electronic record must be accessible so as to be usable for subsequent reference. This requirement implies that the imaged record must be capable of being retrieved and read throughout its life cycle. It implies that the technology used to read it must always remain available, and where technology is replaced with more modern technologies they must be able to support retrieval of the specified format;
- ❑ The electronic record is in the format in which it was generated, sent, or received, or in the format which can be demonstrated to represent accurately the information generated, sent or received; and
- ❑ If the document was sent or received electronically the origin and destination that the document and the date and time it was sent or received must be determinable.

Although not an expressed requirement of the ECT Act, it is paramount for any imaging process to be recorded in an information or records management policy with a procedure manual specifically governing the imaging process. The policy must contain a record retention schedule indicating which record must be retained for which period and what form. The most optimal way to ensure legal recognition and evidential

weight of imaged records is to align the process with ISO / TR 15801. The likelihood is that this ISO standard may be adopted as a SANS standard in the near future.

Unless authorised by the FR Banking Group's legal advisors, the original paper copy of the record, should not be destroyed if the original paper copy in itself as opposed to merely the information it conveys, is important for evidentiary purposes.

5.4.7 Electronic and Digital Signatures

Electronic and digital signatures offer a cost effective way of doing business, - but all electronic signatures are not equal. The primary difference between a digital signature and other e-signatures is that the digital signatures use very secure public key cryptography, rather than various other technologies. Although digital signatures are more secure, the more important issue is what will be upheld in court. Technology issues are secondary.

When a legal document is signed, the parties involved act on certain assumptions:

❑ The signature is that of the signer;
❑ The signer is bound to whatever the document states;
❑ The document will not be changed once the parties to the transaction have signed it;
❑ A signature on one document will not be fraudulently transferred to another document.

These assumptions are valid based on centuries of law and convention, but carrying them forward in an electronic world is challenging.

5.4.7.1 E-signatures

E-signatures refer to the set-off methods used for signing electronic documents based on a variety of technologies such as:

❑ **Traditional authentication** : in the *'something you know'* category of authentication. Passwords and other knowledge and processes are used to authenticate users. Authentication often is linked to a user's stored information, which can be matched to verify identity. Authentication often is combined with other technologies for e-signatures;
❑ **Imaging** : Imaging technology scans an image, such as a pen-and-ink signature or document. This e-signature is verified when compared and verified with the stored, digitised image. Imaging also often is combined with other technologies;
❑ **Biometric** : Biometric technologies compare unique physical characteristics, such as fingerprints, iris scans, retinal scans, digital captured handwriting, speech, DNA or other digital information, to a stored template that is a digital representation of the physical characteristics that previously were registered with the system.

However the challenge is that a user's physical characteristics or environmental conditions may change over a period of time.

5.4.7.2 Digital Signatures

Digital signatures employ a pair of mathematical related keys, public and private, using public key cryptography:

- ❑ Cryptographic functions bind the contents of a document mathematically with a unique hash or *'message digest'* of the document, created by a one-way algorithm that takes a variable-length message as input and produces a fixed length hash as an output. Changing even one bit of the input produces a completely different output;
- ❑ The message hash is encrypted with the signer's private key and decrypted with the signer's public key;
- ❑ Any change to the document can be detected by running the same hash function against the changed document. This will produce a different hash result;
- ❑ What one key in the pair encrypts only the other key can decrypt. Successful fraud would require access to the private key, which cannot be derived from the public key.

The primary risk to digital signature is a compromise of the private key. If the private key is adequately protected by its owner, it is almost impossible for a cyber attacker to forge a digital signature because of the public / private key relationship.

International laws such as the 'US Electronic Signatures Global and National Commerce Act (ESIGN October 2000)', is technology agnostic or neutral. It makes no distinction between e-signatures types and technologies. The law focuses on ensuring that an e-signature meets the legal requirements of a signed document, and on legal issues, such as agreement and intent, rather than on technical implementations that can quickly become obsolete. (Noakes-Fry 3 August 2003, p. 1-3.)

For the best technology and process choices the following risk and risk controls need be to be evaluated:

- ❑ Identity verification : Process owners must have confidence that a signatory (the subject) is who he or she claims to be;
- ❑ Credential issuance : Once the subject's identity has been verified, he or she can be issued a credential and token to be used for signing;
- ❑ Signature execution : Before or during the signature process, the credentials and tokens must be authenticated and validated; and
- ❑ Signed-record storage and retrieval : Electronic records are signed to demonstrate an affirmative act and to bind the signer to the content of the record. Signed records are stored and retained for the purposes of retrieving them for later use, either as part of a related business process or a legal proceeding When retrieving the electronically signed record, the

organisation must be able to prove that the record was signed, that it has not be altered since it was signed and that a clear chain of custody existed throughout the process.

(Kreizman and Noakes-Fry 2 August 2004, p. 1 - 5)

There are a variety of authentication tools and methodologies the FR Banking Group can use to authenticate employees. These include the use of passwords and personal identification numbers, digital certificates using public key infrastructure (PKI), physical devices such as smart cards or other types of 'tokens', database comparisons, and biometric identifiers.

However, the FR Banking Group is not required by law to use what is commonly known as 'electronic signature' technology to sign forms, records, contracts and other business documents to be valid or official. The validity can be determined from the process by which it was generated. If a technical process is set up so that an e-record can only be processed if it had been approved by an authorised person, such evidence would be sufficient for legal proposes. The Electronic Communications and Transactions Act (ECT act), makes it clear that the law would look at the process whereby approval acceptance or authority had been given, rather than to the manifestation of such approval, acceptance or authority. (See Appendix E : ECT Act section 13, 1 - 5)

5.4.8   Web Content / Records Management

Whether the FR Banking Group web sites documents the banking institutions functions, policies, decisions, procedures, operations or transactions, is the deciding factor as to its status as a record. Web sites (intranet and extranet) that meet the criteria of the definition of a record must be scheduled and retained as per the FR Banking Group Retention schedule. The following factors should be assessed for web site record management:

- ❑   The type of web-based activity, information dissemination or transaction or both;
- ❑   The frequency and regularity of change to the web-based activity;
- ❑   The frequency of challenges to the validity of the information on the website;
- ❑   The level of risk and public visibility of the banking institution;
- ❑   The banking institution's record retention requirements;
- ❑   The banking institution's technological environment; and
- ❑   The availability of resources.

5.4.8.1 Static Web Sites

In its basic form this type of web site may be nothing more than a collection of static documents sitting in folders on a server and tied together with hyperlinks. The only interactivity provided by static sites is in the links that enable movement from one document to another or from one part of the site to another. Static sites are relatively easy to schedule:

- ❑   Identify distinct record series and map to FR Records Retentions Schedule;

❑ Include appropriate metadata in web pages that include the date that the page was made live, and the proposed disposal or destruction date;

❑ Move updated or deleted files to alternative storage medium for the length of the retention periods;

❑ If the web site has a high rate of change, it may be helpful to take periodic snapshots of the entire web site.

5.4.8.2 Static Web Sites with Forms-based Activity

Many web sites utilise forms and back end information systems. These sites consist of primary static pages with simple form based activity. There are essentially two types of forms-based interactive sites:

❑ Sites that collect information such as comments and requests from visitors;

❑ Sites that provide a search interface for back-end information resources.

These sites should be managed as static sites but additional steps should include:

❑ The back-end information system;

❑ The form itself;

❑ The human readable source code of the script or program which enables the forms functionality.

There are essentially three overall strategies for scheduling and managing complex web sites:

❑ The object driven approach;

❑ The event driven approach; and

❑ Maintaining an online web site reproduction.

The major issues dynamic sites raise is the need to choose whether to use an object based or an event based approach to managing records of web resources and activities:

❑ The objects that comprise the content of the site and any given time, or

❑ The individual transactions (events) between customers (users) and server (banking employees).

The options mentioned are not mutually exclusive. A combination of strategies should be pursued designed to fit relevant circumstances and the end environment. In more detail the approaches are:

5.4.8.3 Object-driven Approach

This approach concentrates on scheduling and managing objects that constitute or are made available via a web site. Web sites that primarily provide transactional services need to consider the event-driven approach.

❏ **Object-driven Implementation Strategy 1**

Managing records of a dynamic site using the object driven approach would involve keeping track of changes to enable its full reconstruction at any given time / date. This would require the capture, storage and scheduling of:

- User profiles;
- Style sheets;
- Search engine;
- Scripts and programs;
- Regular snapshots of the database; and
- Database transaction logs.

❏ **Object-driven Implementation Strategy 2**

The object approach could entail tracking periodic snapshots of collections of web resources in combination with tracking changes to the site and logging transaction details. The snapshots and tracking of transaction information according to the content of the web resources should be represented by the FR Banking Group Retention Schedules. Procedures for snapshots and tracking should be defined and implemented.

❏ **Object Approach Implementation Strategy 3**

Alternatively, objects and individual web resources could be separately captured and managed in association with metadata that describes the relationship between specified versions of the object and its unique URL. This approach focuses on managing the data objects and associated metadata instead of attempting to preserve entire systems that supports web resources.

5.4.8.4 Event-driven Approach

This approach focuses on capturing events or transactions that occur between the web site and the user. This approach is most suited when a dynamically generated site is database-driven and relies on stored user profiles, search mechanisms, SQL-HTML translation scripts, and other programs to enable functionality. For these types of sites, it may be feasible to capture and schedule events, -- single transactions between web site and user, -- rather than the objects that comprise the site at the time of the transaction. An event-driven approach would involve capturing:

- ❏ Date and time of event;
- ❏ IP or domain address of the user;
- ❏ User profile;
- ❏ Query or other action performed.

Any web-enabled service or transaction facility provided by the banking institution will both generate and be made possible by records. In the absence of a record, there is no evidence of the transaction having occurred. In the absence of legally sustainable evidence of a transaction having occurred, the transaction

may be repudiated and / or deemed by a court of law not to have taken place. It is therefore essential that the banking institution capture, schedule and manage comprehensive and accurate records of web-based transactions that can guarantee the authenticity, reliability and accessibility of the records.

5.4.8.5 Maintaining an Online Web Site Reproduction

An online web site reproduction is intended to replicate, at the same time of posting, all material posted to the active web site. Unlike an active web site, the online reproduction must capture past as well as present postings throughout their retention period. It is essentially an online "archive" of all the content ever included on the web site.

The main advantages of this option include:

❑ Facilitating the maximum functionality of archived postings;
❑ Providing greater accessibility to archived postings, instead of reconstructing sites from an off-line medium;
❑ Offering a more appropriate option for complex sites that are more than simple static electronic publications;
❑ Enabling the reconstruction of the site at any point in time rather than only when a snapshot is created and therefore providing greater accountability for the agency.

Where an online reproduction is carefully planned and responsibilities are documented and assigned, there are few deficiencies associated with this option. Cost and server resource space are negative implications for this strategy.

5.5 Records Management Governance, Compliance and Ownership

According to the United Kingdom Public Records Office's e-Government Policy Framework for Electronic Records Management, the governance requirements to ensure good records management practices and the design of excellent records management solutions and supporting systems, need to be supported at three levels, which complement and reinforce each other. These are:

❑ The institution level, where the overall records management policy and strategy is set, and where an organisational culture of good records management practices can be shaped;
❑ The records management level, where records management procedures are defined and built into the record lifecycle, and where the operational record management environment is shaped;
❑ The IT system and software level, where appropriate design models and approaches can be employed to build a system that can support authenticity, secure access in a tamperproof environment, sharing and resulting efficiencies.
(Public Records Office. United Kingdom 2001, p. 8)

These three levels need to operate in concert, achieving alignment and consistency with the objective of ensuring an effective and holistic records management solution for the FR Banking Group.

5.5.1 Industry, Legal and Regulatory Frameworks / Bodies / Standards

Compliance and subsequent retention of the Bank's records is impacted both by local as well as international industry, legal and regulatory bodies and frameworks. Some of the local bodies are:

- ❑ The South Africa Reserve Bank;
- ❑ The Johannesburg Stock Exchange;
- ❑ The Financial Services Board; and the
- ❑ The South African Revenue Services, etc.

Establishing a records retentions framework and identifying all the relevant record categories of the Bank that need to be retained is not a trivial exercise. Currently there are ± 900 active statutes, excluding regulations, which are impacting records retention. More than 3000 regulations are impacting the situation. The challenge is to determine which are still in operation and more specifically impacting on the retention requirements for bank records, as there is no record to qualify or quantify this requirement. Only practice notes from regulatory bodies are available regarding records retention.

Other standards (local and international) to be considered for records management are:

- ❑ SANS (South African National Standards Organisation) and ISO 15489, adopted March 2004, states:
  - · That a policy at organisational level needs to be established;
  - · That it needs to be approved by the senior management of the organisation;
  - · That it needs to be revised at regular intervals;
  - · That a retention schedule needs to be defined for each record type / category;
  - · That there should be a procedure for controlled destruction of records.
- ❑ SANS / ISO TR 15801 : for electronic imaging and information stored electronically;
- ❑ The British Standards Institute;
- ❑ Critical Databases and Electronic Communications and Transactions Act;
- ❑ The Data Protection Act (compare with Promotion of Access to Information Act);
- ❑ Sarbanes-Oxley and Basel II : applicable for banks with international listed entities;
- ❑ The Electronic Communications and Transactions Act; and
- ❑ DoD Directive 5015.2. This Standard is issued under the authority of the United States 'Department of Defence Records Management Program', March 6, 2000, which provides implementation and procedural guidance on the management of records.

5.5.2   FirstRand Banking Group Records Management Policy

A formal corporate / institutional policy for the FR Banking Group forms the agreement across the banking institution on the guiding principles by which records will be managed. The policy should demonstrate clear senior management commitment, as it is the guiding platform for future records management initiatives.

The policy has three main objectives:

- ❑   Gaining control of existing records generation and management of those records;
- ❑   Incorporation of records management principles into new records management related initiatives and systems;
- ❑   Integrating the above into an enterprise-wide plan for effective and efficient management of records as evidence of business transactions, decisions and interactions.

It must be clear in its statements, leaving no disparity of interpretation. The challenge is to establish a balance between managing risk sufficiently and bottom line earnings. It needs to establish a comprehensive standardised approach across the FR Banking Group. It needs to support an industry wide and best practice approach regarding records management initiatives.

The Records Management Policy and supporting Retention Schedule is a high-level interpretation of legislative and governance drivers and the complexity and effort to implement at business unit level is huge.

Content management skills such as information management and information architecture expertise play an important role, assisting the compliance function in aligning business unit specific requirements and supporting content management solutions and application infrastructure with the FR Banking Group Records Management Policy.

More specifically Content Management skills and expertise must assist the Compliance Function and Business Units, ensuring solutions which align with best practice thinking in terms of enterprise content management principles and standards such as:

- ❑   Taxonomies, indexing schemas and metadata, etc.;
- ❑   Collection management, life cycle management and workflow;
- ❑   Library services, audit trails and version control;
- ❑   Roles and responsibilities and relevant access to appropriate levels of content, and assisting to preserve the evidential weight and integrity of records.

The Content Management skills and expertise must deliver value by playing a unifying role, spanning multiple components of the governance model, providing business context to the mentioned frameworks and spotting the relationships, dependencies and synergies amongst the different components.
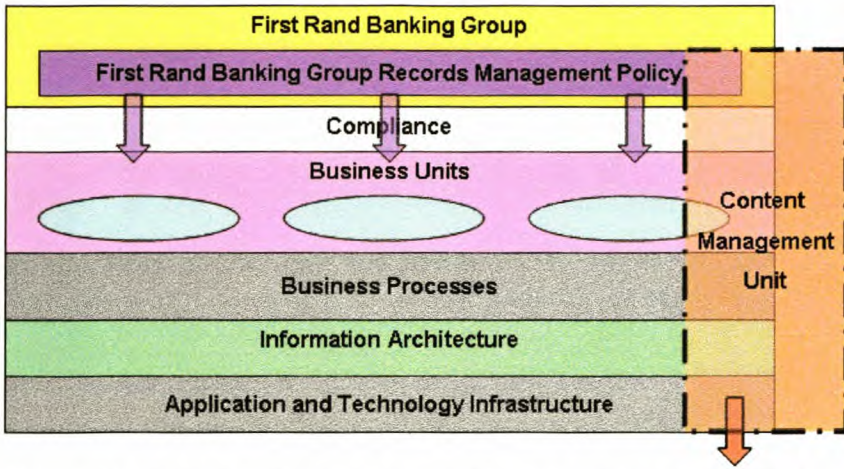
Figure 10 : Policy Implementation and alignment and Content Management Value

5.5.3   FirstRand Banking Group Records Management Steering Committee

In order to create continuity in terms of implementation of best practice principles and standards across different business units, a governance mechanism such as a FirstRand Records Management Steering Committee should accept the role of coordinating, monitoring, measuring and improving performance.
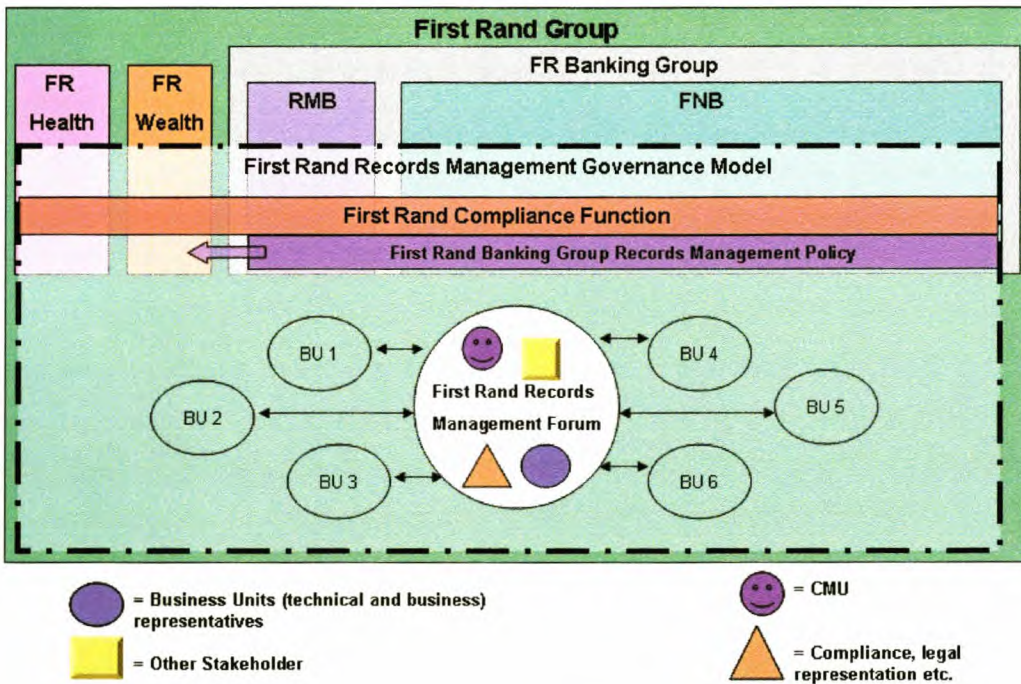
Figure 11 : FR Banking Group Records Management Forum / Steering Committee

The FR Compliance function should monitor and report compliance to relevant processes and frameworks. The Records Management Committee or Forum should coordinate and drive policy adoption, implementation and monitor and improve performance. Content Management representation assists

alignment and interpretation of all relevant (business, governance, i.e. policy and legal regulatory), information, content and supporting application requirements and implementation across business units

5.5.4   Standards, Policies, Procedures and Implementation Guidelines

A comprehensive set of standards, policies, procedures and implementation guidelines is required to deal with issues of end-to-end lifecycle management, as well as issues regarding retention, location and role, classification, ownership of records, processes, security, archiving and destruction.

5.5.5   Retention Schedules, Rules and Inventories

The retentions schedule for the Bank needs to reflect the following elements:

- ❏   The record type or category;
- ❏   Specified form and or transitional relations;
- ❏   Location of retentions.

Retention rules based on legal, regulatory and institutional frameworks, drivers and associated requirements, should guide the retention periods for categories of records. The retention schedule assists with the information classification. It ties in with identity management and other risk management initiatives. It guides business unit policy decision, i.e. when to image, when and if the original or paper copy can be destroyed.

Formats such as e-mail management should get special attention. Taxonomies and metadata are enablers for interoperability, retrieval and defining the categories and rules for retention, and other related business rules.

The Records Management Retention Schedule at enterprise level must identify and assess high level record categories, legal and regulatory drivers and retention periods and serve as a guideline of which legal and regulatory frameworks need to be considered for managing record categories at an enterprise level.

The records management inventory needs to be conducted at cluster / business unit level at a more granular level, but aligned with the FR Banking Group Records Management Policy and Retention Schedule. The inventory will assist in identifying records as objects that can be reused and shared across the banking group, e.g. 'KYC' documents, but will also indicate gaps. (See Appendix J)

5.5.6   Organisational Structure, Sponsorship, Budget and Roles

An appropriate organisational structure needs to enable sufficient support and visibility for the FR Banking Group Records Management Framework, Strategy and Programme. Sponsorship, sufficient budget and staff need to be available to achieve the goals and objectives of the programme.

The organisational structure for records management within the FirstRand Banking Group environment must be a combination of the Compliance and Risk and Legal function, the Content Management Unit, Information Technology and Records Management Projects across the different Clusters / Business Units. Representatives of all key stakeholders should have input to or be members of the FirstRand Banking Group Records Management Forum / Steering Committee. In this regard a set of processes supporting the interaction and collaboration between all the stakeholders needs to be defined and implemented.

Records Management is a complex discipline demanding skill sets and knowledge covering understanding the business of the Bank, the industry, legal implications, compliance responsibility, information management and information technology management as it relates to managing records as evidence of the Bank's activities and interactions. Therefore it is important not to attempt records management initiatives as a technology implementation only. (Launchbaugh (?), p. 1 - 2)

5.5.6.1 Training Programme

A training programme for all relevant employees will transfer knowledge regarding the purpose of records management responsibilities and how to fulfill them. The responsibility for training and knowledge transfer might need further discussion as it potentially might be part of the *'Compliance Function'* of the FR Banking Group.

5.5.6.2 Records Management Skills / Capability

The following skills are required to implement successful records management solutions:

- ❑ Knowledge of the FirstRand Banking Group, the business model and culture, its dynamics with both its employees, customers, partners and suppliers;
- ❑ Knowledge of the banking and financial services industry trends as it impacts on information and records management and related issues;
- ❑ Knowledge of the legal and regulatory environment as a compliance driver;
- ❑ Knowledge of the information technology trends and implications for information and records management; also the impact of related acts and regulations, i.e. storage and data management; and a
- ❑ Multidisciplinary approach and capability integrating all the above into one powerful solution.

5.5.7 Monitoring Compliance, Performance and Improvement

The FR Banking Group must take reasonable steps to measure compliance within information / records management policies and procedures by utilizing monitoring and auditing programmes.

5.5.7.1 Criteria for measuring performance are:

- ❑ Criteria imposed by external bodies, such as:
  - • Laws, Regulations and Industry Frameworks or Standards.

- ❏ Criteria voluntary adopted by the banking group internally such as:
  - • Methods, e.g. Six Sigma, Total Quality Management (TQM) or CMMi (Capability Maturity Model Integration), in order to improve the effectiveness and efficiency of operations;
  - • Voluntary standards and codes, such as those prescribed by the World Wide Web Consortium, etc;
  - • Operating procedures, such as the 'Golden Rules';
  - • Implementation standards such as the Design Criteria Standard for Electronic Records Management Software Applications (DoD 5015.2-STD 19 June 2002); and
  - • Guidelines as posed by the FR Records Management Policy, Retentions Schedule and Implementation Guidelines.

5.5.7.2 Effective Records Management Programme and Policy Enforcement

Information management / records management programme policies and procedures must be consistently enforced through appropriate disciplinary mechanisms and the proper configuration and management of associated applications and systems.
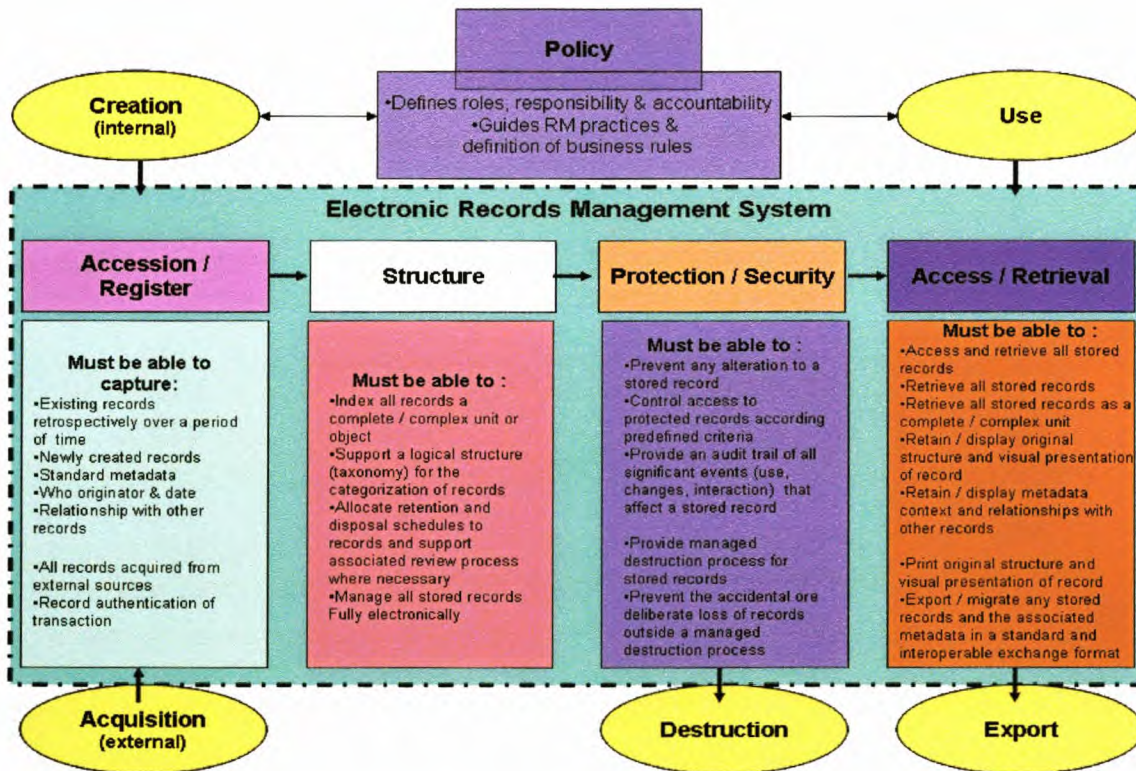

Figure 12 : RM Model and Criteria for Policy Implementation

The FR Banking Group must be able to demonstrate that:

- ❏ A formal corporate wide policy is established and implementation and practice monitored;

❑ Existing records management practices have been brought within a fully managed environment that enables the capture, management, and access of records so that the institution is able to capture all newly created internal records into an electronic records management system;

❑ Existing systems, such as Hogan and CIS (transactional systems), should interface with existing and new records management systems in order to give an integrated and contextualised view of the Bank's transactions with all its stakeholders. This will enable the institution to capture all externally-generated records and record authenticated transactions;

❑ Enterprise-wide records management systems are established that provide the capability for the capture, management, and access of newly-created internal records as well as externally generated records

❑ All new systems should be assessed with regard to their records management capability, and must align with records management principles and standards to ensure, sharing, reuse and interoperability across the FR Banking Group;

❑ Record capture capability must be able to:
  • Capture records and formats for all types of electronic records that are generated;
  • Capture who originated the record and the date it was created;
  • Capture standard metadata associated with the record, supporting FR Banking Group Metadata standards proposed (to be addressed);

❑ Records Management capability must be able to:
  • Support a logical structure (taxonomy) for the organisation of records with associated records falling into the same category;
  • Protect all captured records from change or alteration of content, structure and context at all times;
  • Allocate retention periods and disposal schedules to records, support the review process where required, and enable revision of the retention schedules applied to records;
  • Export and / or migrate (and where available, publish) from the records management system records and their associated metadata together, preserving and retaining visual presentation, structure and context;
  • Provide a managed destruction process for records as per the retention schedule;
  • Prevent accidental or deliberate loss of records outside a managed destruction process;
  • Provide an audit trail of all events that affect records.

❑ Records access capability must be able to:
  • Index and retrieve all records each as a complete and complex unit;
  • Enable the display and export (printing and migration) of the record retaining its original visual presentation, structure and context;
  • Control access to protect records according to pre-defined criteria.

5.5.7.3 Continuous Programme Improvement

When improper management of information and records is detected, the FR Banking Group must take all reasonable steps to respond appropriately to the activity and to prevent future deviations. Furthermore, learning and corrective action should be taken in order to modify and improve gaps or weaknesses in the Records Management Framework, Strategy and Programme.

5.5.7.4 Enterprise Content Management Maturity Model

The enterprise content management maturity model is based on the learnings and methodology of the Carnegie Mellon University, Software Engineering Institute Integrated Capability Maturity Model. The methodology and associated model attempts to guide and measure process and functional performance mapped to five maturity levels. (See Appendix H)

The capability maturity of the FirstRand Group has been measured as below level 2 maturity. The Records Management Migration Plan needs to follow an incremental and planned migration addressing gaps to improve maturity from a level 2 (rudimentary) to a level 3 (organized, repeatable and systemic control) and higher through a planned migration and improvement of capabilities and maturity.

5.5.8 Ownership of the Framework

The Framework and associated document, which is referred to as : *'A Records Management Capability Framework for the FirstRand Banking Group',* is owned by the FR Group Compliance and Risk Function, the FR Banking Group Records Management Steering Committee and the Content Management Unit.

The document will be maintained in line with FR Group Compliance and Risk and content management vision and associated strategies.

The FirstRand Group Compliance and Risk, the Records Management Steering Committee and the Content Management Unit are the lead authorities and accept accountability for managing the change and revision process.

6 An Approach to Migration from the Current to the Future

6.1 Records Management Maturity Model

6.1.1 Key measures for success

This section sets out a migration plan / roadmap, a three year plan (2005 – 2007), and key milestones for the development of records management capability and maturity in the FR Banking Group. The milestones and dates proposed are the latest dates by which clusters and business units should aim to put measures in place to address the issues represented by each milestone. Since different units or clusters will be starting from different strengths and have specific constraints or advantages, some aspects of the framework may be easier to advance to than others.

The key is to have a starting point with common goals to manage the current information, and create a solid basis for future records management, managed as a comprehensive and well coordinated initiative. There are three primary strategic planning points:

- ❑ The explicit inclusion of records management (including electronic) implications and principles for cluster and business unit management together with their documents and business records;
- ❑ Planning and creating an enterprise wide records management capability, integrating records management principles and standards across the FR Banking Group. Gaining control of the existing situation and incorporating electronic records management principles and standards in new systems development); and finally
- ❑ Integrating compliance related content with innovation rich content ensuring resilience and a competitive advantage.

6.2 Process Steps

6.2.1 Step One : Setting Records Management Policy and Establishing a Forum at FirstRand Banking Group level

A formal FR Banking Group Records Management Policy approved and promulgated by the relevant Risk and Compliance Boards / Forums, must form the agreement across the group on the guiding principles by which records will be managed. The policy should be given clear senior management commitment, as it is the platform for future action. The FR Records Management Steering Committee must coordinate and champion the implementation of the policy supported by the FR Risk and Compliance Forums and Boards. There are three main strands building on this foundation:

- ❑ Assessing, understanding and managing the existing electronic records management environment, including processes, transactions and resulting records;
- ❑ Planning for incorporation of records management principles and standards into new systems, services and initiatives / projects;
- ❑ Integration of both strands into an enterprise wide plan for electronic records management.

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6.2.2 Step 2 : Assessing, understanding and managing the existing electronic records management environment

In order to effectively manage electronic records, it is necessary to know what exists and how the material relates to institutional objectives and activities. The milestones require establishment of:

❑ A FirstRand Banking Group Retention Schedule and evaluation plan for assessing record value and retention : a representation of all relevant categories of records which are impacted by industry, institutional, legal and regulatory frameworks (local and where applicable international) and driving requirements for retention;

❑ An inventory of records per cluster / business unit and an indication of possible sharing with other units, based on the FirstRand Banking Group Retention Schedule;

❑ A sustainability strategy maintaining the FR Banking Group Records Management Policy and Retention Schedule, as well as individual cluster or business unit record inventories.

Figure 13 : Records Management Migration Roadmap, Capability and Maturity

The following activities will enable the FR Banking Group to progressively bring unmanaged records into a managed environment. These activities provide a framework to:

- ❏ Identify exiting records;
- ❏ Support a bottom-up analysis of records that are actually being produced on the ground, to complement a top down analysis of records that should be being produced by business processes;
- ❏ Develop a process for evaluating current record collections and categories and establish a strategy for maintaining current accessibility or migrating material to new storage and software platforms as necessary;
- ❏ Encourage changes in user habits and behavior by identifying and promoting best practice at the individual, business unit and institutional level; and
- ❏ Develop consistent organizing, indexing, and retrieving structures (taxonomies and metadata).

6.2.3   Step 3 : Planning and guidance of future records management initiatives / projects (process and systems)

To ensure that new systems do not generate records which fall outside the managed environment, strategy and planning for new records management related projects must consider principles and standards for electronic records management: The milestones for step three are:

- ❏ Recognition of records management implications for business strategies, and a strategic approach for ensuring these implications are taken forward;
- ❏ Strategic planning for electronic records management including incorporation of these implications.

Together these are the means for addressing future records management projects / initiatives and these milestones should enable clusters and business units to link business process analysis and work on information architectures with record generation and record-keeping processes.

6.2.4   Step 4 : Planning and creating an enterprise wide records management capability

Both strands, i.e. current record production and new systems planning, must be brought together in a consistent enterprise-wide approach to records management implementation. The milestones for step 4 are:

- ❏ Strategic planning for electronic records management;
- ❏ Detailed records management requirements;
- ❏ Records management implementation planning; and
- ❏ Outline the logical steps for this work.

6.2.5 Step 5 : Dynamic assembly of "records on the fly" and Integration of Compliance related information and content, and innovation rich content

Integrating the capabilities of both innovation (product and customer intelligence) rich content and compliance related content and managing that jointly as a strategic asset, could result in extensive value for the Bank. This thinking relates to the concept of a 360° view of the banking institution (products and services) for the customer as well as a 360° view of the customer for the banking institution.

Interaction of the customer with transactional systems of the banking institution demands that a record of that interaction between customer and system and interaction between system and system need to be kept in order to provide full context and tracking of the transaction life cycle at that instance in time. The trail will track the history of the transaction between the customer, product or service related information and the resulting transaction. The full spectrum of the complex transaction needs be captured as a record.
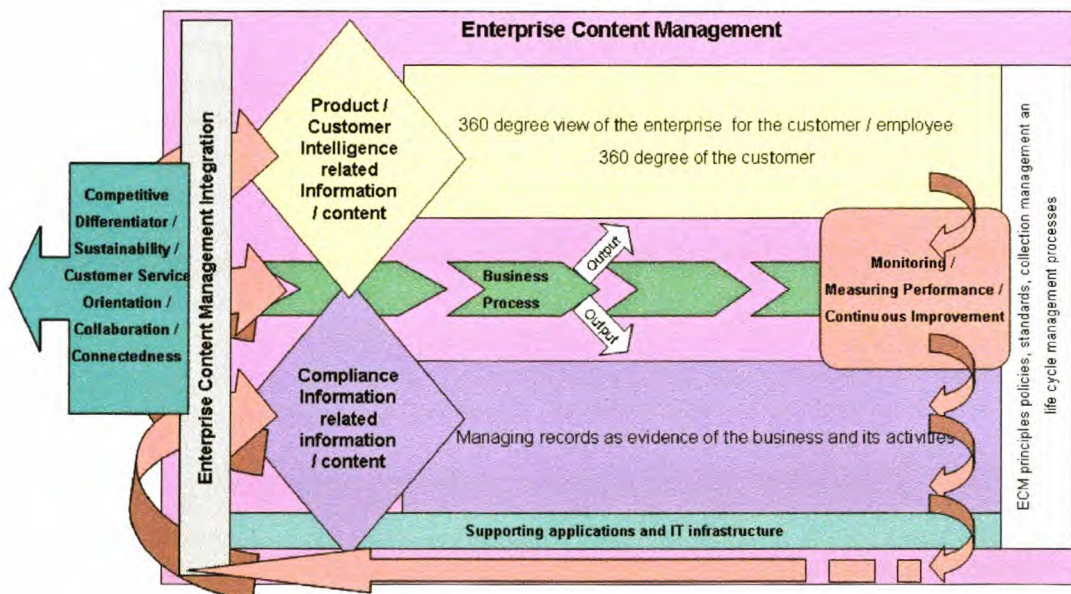
Figure 14 : Business Value : Innovation / Compliance Content Integration

6.2.6 Next steps

6.2.6.1 Focus on FICA and FAIS projects

The two top Legal and Regulatory drivers for records management capability are the 'Financial Intelligence Center Act' and the 'Financial Advisory and Intermediary Services Act', with a deadline for compliance for the latter already due September 2004. FICA and FAIS projects therefore need to receive priority treatment when prioritising and scoping projects for the FR Banking Group.

6.2.6.2 Document Management and Collaboration initiatives

Individual business units must be assisted with the design and implementation of internal document management and knowledge work space solutions and to ensure that these solutions align with the

overarching enterprise content management and information architecture principles. The existing shared server infrastructure lacks capability to increase productivity and sharing. Collaboration and document management capability will assist in institutionalising process, record and content management discipline.

6.3 Milestones for Achievement between 2005 – 2007

The following deliverables are required as part of the migration plan between January 2005 and December 2007:

- ❑ Records Management Conceptual Framework or Strategy and supporting Programme Deliverables;
- ❑ Records Management Regulatory and Institutional Retention Guidelines;
- ❑ Records Management Policy and Steering Committee;
- ❑ Records Management Implementation Guidelines;
- ❑ Business Unit / Project Records Management Inventories;
- ❑ Detailed Strategic Plan and Deliverables;
- ❑ Detailed Specifications and Models for Systems and Record Life Cycles, and Performance Improvements;
- ❑ Migration of Records in Legacy Systems or Outdated Platforms;
- ❑ Implementation Plan and Processes; and
- ❑ Review and Improvement Plan and Processes.

6.3.1 Roadmap and key deliverables : January 2005 – December 2007

Milestone	Outline	Accountability / Ownership	Driver	Completion Date	Comments
Conceptual Framework, Strategy and Programme	- Guidance document, supporting alignment, sharing reuse and interoperability and compliance and governance	- Group Compliance and Risk - Records Management Steering Committee : L vd Klashorst	- Corporate governance, Legal and regulatory and resulting projects	- 1 January 2005	
Records Regulatory Retention Schedule	- High level retention schedule of record categories affected by one or more legal / regulatory drivers - Ongoing and continuous revision of the record	- Wim Mostert - Group Risk and Compliance		- I January 2005	

	retention schedule				
Corporate Policy and Records Management Steering Committee	- Physical document -Process for BU implementation and monitoring - Ongoing revision of policy at agreed intervals	- Group Compliance and Risk - D Scott - L vd Klashorst : CM		- 31 January 2005 - Ongoing	
Implementation Guidelines, supporting existing and new initiatives	- See DoD 5015.2-STD - E-mail management, -Metadata and Indexing schemas / taxonomy -- standards, -Interoperability standards such as XML - review of guidelines at agreed intervals	- Group Compliance and Risk; - L vd Klashorst; - IT Architects		- 31 July 2005 - Ongoing	
Business Unit / Project Inventories	- Appraisal and evaluation of records in alignment with corporate policy and high-level retention schedule	- Group Risk and Compliance for BU's / projects		- January - December 2005 and as new projects are initiated	
Implementation of BU inventories	- Includes weeding of outdated records, according to schedule and inventory - Implementation of processes, roles and ownership - Implementation of metadata, and indexing schema standards	- Group Risk and Compliance - Content Management		- January - December 2005 - Ongoing	
Detailed Strategic Plan for FR Banking Group Enterprise wide	-Detailed plan for FR Group Records Management -Integration of all relevant systems	- Group Risk and Compliance for BU's / projects - Information / IT architects		- December 2005	

Records Management solutions, including Business Process improvements	- Alignment between clusters / BU's -Process improvements identified - Provision made for "dynamic composition / records on the fly"	- Content Management			
Detailed specifications and frameworks for systems, records life cycles, related processes, facilities, monitoring and performance improvements	- Architecture frameworks and record object models defined - Processes reengineered and modeled - Performance models, measures and processes defined - Detailed implementation guidelines in place	- Group Risk and Compliance for BU's / projects - Information / IT architects - Content Management		- 1 March 2006	
Migration of records in non compliant legacy systems or on outdated storage platforms	- Outdated systems and platforms identified - Guidelines for migration in place	- Group Risk and Compliance for BU's / projects - Information / IT architects - Content Management		- 1 December 2007 Ongoing	
Implementation Plan	- Detailed planning for new systems and migration	- Group Risk and Compliance for BU's / projects - Information / IT architects - Content Management		- 1 April 2006	
Implementation	- Test Packs as per project	- Group Risk and Compliance for BU's / projects - Information / IT architects - Content Management		- 1 July 2007	
Review and improvement	- Review programme performance against	- Group Risk and Compliance for BU's / projects		- 1 October 2007	

	key performance indicator's	- Information / IT architects			
	- Document deviances and gaps	- Content Management			
	- Plan and implement improvement				

Table 5 : FR Banking Group Capability Maturity Roadmap

7 Records Management Programme Benefits and Challenges

7.1 Benefits

A records management programme and strategy offers the following business value to the FirstRand Banking Group:

- Managing records as an information, intellectual and strategic asset, preserving its integrity and encouraging its collection, dissemination and sharing;
- Improved and consistent development and stewardship of corporate memory and collaboration across clusters and business units;
- Optimising resource utilisation, namely content, human and system resources;
- Preventing implementation of costly point solutions or duplication, by considering the bigger picture;
- Presenting timely, accurate, highly relevant to role and purpose information / content across channels and output formats and associated devices;
- Accelerating and supporting information / knowledge transfer and learning to and between employees, partners and customers;
- Compressing decision and business cycles, resulting in efficiencies;
- Improved responsiveness to change resulting in competitive advantage;
- Improved identification, reporting, control and scenario-building capability for market, credit, operational, - and associated information and human capital risk;
- Accelerating, improving customer service excellence and accountability;
- Avoiding costs from increasing regulatory pressures and legal risks (in the form of content life cycle management);
- 'Compliance-substantiating' information and content management practices, focusing on business critical information / content.

7.2 Records Management Strategy / Programme Challenges

Records management implementation is facing the following challenges:

7.2.1 Cultural

- Balance between focusing on sales and volumes, - and performing good corporate governance and control which drives effectiveness, trust and reputation;
- Business unit implementation and discipline and the implementation of group / corporate level policy;
- Driving consistency by adhering to local and international standards, principles best practice approaches i.e. records management; and
- Risk awareness and approach.

7.2.2 Legal and evidential weight / integrity

❏ Volume based business and use of paper / digitisation (when to keep and when to destroy);

❏ Quality of scanned documents, such as fax images;

❏ Mapping of processes, roles (accountability) and content; and

❏ Tracking of use and changes during a particular process.

7.2.3 Efficiencies and effectiveness

❏ Taxonomies and metadata (business value and retention periods, etc.);

❏ Record object libraries;

❏ Reuse models and process mapping;

❏ Monitoring and improvement; and

❏ Role based security and content.

8 Conclusion

The FR Banking Group needs to manage records as a strategic asset. Records represent an explicit corporate memory for the banking institution. Electronic records unlock the content previously difficult to access in paper format, enable effective sharing of information and contribute to knowledge networking flows. They support evidence-based policy making by providing reliable evidence of past actions and decisions, based on the requirements that record integrity and authenticity need to be retained. Records of authenticated transactions need to be kept in such a manner as to retain their qualities of legal admissibility and evidential weight / integrity, privacy and access rules. In particular, freedom of information legislation requires that electronic records be managed consistently within regulatory frameworks.

These records management requirements and drivers resulting from both institutional, industry, legal and regulatory frameworks should be built into both record-generating and records management systems. Requirements will be met, by constructing interacting systems of software, standards, policies, procedures and interfaces.

Greater commonality between records management systems, including metadata standards, taxonomies (and indexing schemas), and compatible procedural control, will ensure interoperability and joint working between clusters and business units. According to ARMA International, information related costs are important components of corporate expenses. Efficient management of recorded information contributes to corporate profitability by lowering the costs of doing business. From a cost analysis point of view, money saved is money earned. Effectively implemented, records management concepts and principles can reduce operating costs in the following ways:

- ❑ By ensuring compliance with legal and regulatory retention drivers and thereby avoiding penalties and legal action;
- ❑ By reducing the risks and burdens of pre-trial discovery in civil litigation and government investigations;
- ❑ By minimizing storage requirements (floor space and other) for recorded information;
- ❑ By reducing the time and effort required to reconstruct mission-critical information in the event of disaster, theft or other loss; and
- ❑ By reducing the labour required for organisational retrieval and dissemination of recorded information.
  (Williams 2002, p. 10)

The complexity of the FirstRand business model, the sheer size of the group, the number of industry and other institutional, legal and regulatory frameworks are creating challenges in the attempt to align Records Management efforts / initiatives across the FR Banking Group. However, no matter how huge the effort, the benefits resulting from a coordinated records management effort is even larger. Exploitation of the institution's intellectual and information assets across the group i.e. reuse of both information, intellectual

and application infrastructure assets could potentially result in significant cost and productivity savings, and mitigation of credit, operational, market and reputational risk such as posed by fines and legal suits.

In terms of strategic benefit, shareholder value and sustainability, - managing information / records as a strategic resource, will manifest in increased market share, profitability, increased process efficiencies and decreased operational costs.

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9.2   Appendix B : Research Methodology

9.2.1   Research Problem and Objectives

Good Corporate Governance and its compliance function demands that the Banking Institution manages its information as evidence, and as a record of its daily activity or operations in an efficient, effective and responsible manner and in support of good Corporate Governance Management drivers such as :

- ❑ Transparency and disclosure of information;
- ❑ Accountability;
- ❑ Efficient use of enterprise resources;
- ❑ Proactive planning and forecasting for future sustainability
- ❑ Effective decision-making;
- ❑ Proactive management of enterprise risk;
- ❑ Delivery of economic and shareholder value; and
- ❑ Management of stakeholder relationships in an ethical and socially responsible manner.

The following questions are raised in order to contextualise the different elements of Good Corporate Governance as it relates to the FirstRand Banking Group. They attempt to emphasise the complexity and challenges associated with the banking industry, the FirstRand Banking Group Business model and the Legal and Regulatory frameworks impacting the environment :

- ❑ What is meant by 'Good Corporate Governance'?
- ❑ What is the relationship between Corporate Governance and its Compliance Function?
- ❑ What are the drivers for Good Corporate Governance?
- ❑ What are the governance and compliance drivers for the banking institution?
- ❑ What is the value of effective and efficient management of information for the banking institution?
- ❑ How can responsible management of information assist the governance and compliance requirements of the banking institution?
- ❑ What are the challenges that the banking institution is facing as it relates to :
    - • The complexity of governance and compliance drivers and frameworks;
    - • FirstRand Banking Group business model;
    - • Culture, maturity and change readiness or appetite;
    - • Business process and information modeling;
    - • Information and content management discipline, integrity and ownership;
    - • Available and capable application and technical infrastructure and
    - • Governance models and mechanisms.

The objective of this research effort is to assess the capability of FirstRand Banking Group in context of a complex set of Corporate Governance and Legal and Regulatory drivers and associated frameworks. The

outcome of the assessment would potentially expose "pain" elements as lack of capability, as well as identify business units which need priority attention. It will also serve as input to a proposal or an information management framework or architecture serving this particular environment and enabling information management compliance.

9.2.2 Unit of Analysis

❑ Records management capability maturity of the FirstRand Banking Group.

9.2.3 Scope

Corporate governance, and compliance to associated institutional, legal and regulatory frameworks, demands the effective and efficient management of both structured and unstructured information, in such a way as to provide evidence (in the form of records) of all banking activities. It includes activities of both a transactional and interactional nature, for the purposes of legal evidence, regulatory compliance, managing risk, creating efficiencies, employee productivity, business continuity, customer service excellence, performances measurement and continuous improvement of both processes and products, and preserving organisational memory.

The manner in which evidence of business activities (records) is managed is dictated by international and local legal, regulatory, industry and institutional frameworks, as well as best practice principles for records management and associated information management standards.

The integrity of records as legal evidence of business activities during litigation is often questionable. Aspects such as accountability for process, information and storage, lifecycle management and retention, traceability, history or audit trails from creation to destruction of the record, are important elements considered when assessing integrity of legal evidence.

The records management capability of the banking institution needs to reflect the ability to comply with legal and institutional frameworks and best practice principles and standards for records management.

❑ **The objective of this study is:**

- To assess the records management capability of a representative sample of business units across the FirstRand Banking Group;
- To identify the challenges and requirements associated with records management compliance;
- To use the capability assessment and results as a means to understand the current environment and identify gaps, pain points and priorities; and
- To use this study as input to proposing an information management compliance framework for the future, guiding the institution towards information management compliance maturity.

9.2.4 Variables and Scale

The following variables will be measured in order to identify areas with high impact and to assess the level of maturity of the stated capabilities:

Variables and Measurement:

- ❏ Impact on and across business units
- ❏ The readiness of each unit and across the organisation

And by using those two measures and associated rating, to calculate the priority:

- ❏ High Impact and low readiness = Priority high
- ❏ High Impact and high readiness = Priority low

Scale

A scale from 1-5 will be used where the value of 1 is low and 5 high:

- ❏ 1 = extremely low
- ❏ 2 = low
- ❏ 3 = moderate
- ❏ 4 = high
- ❏ 5 = extremely high

9.2.5 Evaluation tool

The tool described below is an internally developed tool is based on best practice industry research worldwide :

1. Document all results for capability measured and consolidate rating per unit.
2. Measure and rate capabilities across the different business units for and consolidate.

Rating : 1 – 5 where 1 is low and 5 is high						
Capability Variable	**Dependent Component**					
Ability to address / accommodate / comply / align	**Business**	**Process**	**Information / Content**	**Application / IT Infrastructure**	**Culture**	**Average Capability / Maturity**
Drivers						
Legal Regulatory and Institutional Frameworks						

e-Mail Management							
Storage / Repository							
Library Services							
Versioning							
Audit Trails / History of Interaction							
Moving of Records / Migration to other formats							
Security / Appropriate levels of access per roles							
Reporting							

Table 6 : Average Capability Maturity Rating across the FR Banking group per Component / Element

Each Business Unit's capability maturity will be assessed against the elements scoped in Table 6 : Average Capability Maturity Rating across the FR Banking group per Records Management Capability / Element / Component.

9.2.6 Summary table

Document all capability components measured and consolidate per unit.

Business Unit	Impact	Capability / Maturity	Priority
Business Unit A	5	1	4
Business Unit B	5	1	4
Business Unit C	5	3	2
Business Unit D	5	1	4
Business Unit E	5	1	4
Business Unit F	4	1	3
Business Unit G	5	3	2
Business Unit H	5	2	3
Business Unit I	5	1	4
Business Unit J	5	1	4
Business Unit K	5	1	4
Business Unit L	5	3	2
Business Unit M	5	3	2
Business Unit N	4	1	3
Business Unit O	5	2	3
Business Unit P	5	1	4
Business Unit Q	5	1	4
Business Unit R	5	2	3
Business Unit S	4	2	2
Business Unit T	5	2	3
Business Unit U	5	3	2
Business Unit V	5	1	4

Table 7 : Summary Table

9.2.7   Priority Table

Priority = Impact – Readiness / Maturity

Business Unit	Impact	Capability / Maturity	Priority
Business Unit Q	5	1	4
Business Unit A	5	1	4
Business Unit B	5	1	4
Business Unit D	5	1	4
Business Unit P	5	1	4
Business Unit V	5	1	4
Business Unit T	5	1	3
Business Unit F	4	1	3
Business Unit H	5	2	3
Business Unit I	5	2	3
Business Unit J	5	2	3
Business Unit O	5	2	3
Business Unit R	5	2	3
Business Unit K	4	1	3
Business Unit E	5	2	3
Business Unit C	5	3	2
Business Unit G	5	3	2
Business Unit L	5	3	2
Business Unit M	5	3	2
Business Unit N	4	2	2
Business Unit S	4	2	2
Business Unit U	5	3	2

Table 8 : Priority Table

9.2.8   Research Design and Methodology

9.2.8.1 Design Type

This study will use a qualitative evaluation approach, which involves the use of predominantly qualitative research methods to assess the records management capability and compliance to institutional, legal and regulatory frameworks. It will focus on the impact of corporate governance frameworks on information management compliance and associated business, information and technology components of the FirstRand Banking Group in order to determine which divisions and or capabilities will need to receive priority attention.

9.2.8.2 Selection of Cases

The data to be presented will be based on questionnaires and interviews of all the divisions, which will be impacted by corporate governance issues and associated legal and regulatory frameworks in the Bank. The survey methodology will use personal interviews to clarify issues around the concepts associated with compliance and records management as well as a questionnaire presented during the interview. Follow-up sessions to collect the questionnaires and resolve all outstanding issues, will be conducted. Respondents required are all identified 'accountable' positions with associated roles for corporate compliance, risk and legal, and other relevant stakeholders, such as channel management with a customer facing responsibility.

9.2.8.3 Data Collection techniques

An evaluation tool will be developed by the researcher and member of the Content Management Unit, First National Bank, (using a scale of 1 – 5, where the value of 1 is low and 5 high), to map the level of impact and capability per division and across divisions to determine priority attention required. See "*Evaluation*

tool' for Generic table of major components and the Capability table for associated and specific capabilities required for information management compliant records management.

A set of evaluative questions will address each component and capability that needs to be measured in terms of capability, impact and priority.

Documentation from credible sources will be provided by established Industry Research Service Providers and Analysts such as Gartner Group, Meta Group and others will be used as input to support the outcome of the FirstRand Banking Group Records Management Capability assessment. Findings and resulting Records Management Capability Framework will be compared to industry best practice worldwide.

9.2.8.4 Data analysis techniques

The evaluation tool will be used to map the level of impact and readiness per division and across divisions to determine priority attention required.

Information management compliant records management demands key or essential information, business, and technology capabilities and associated maturity. These capabilities will be used as the variables in order to identify gaps in the existing system that need to be addressed. For Variables and Scale : See 9.2.4.

9.2.8.5 Time Frame & Resources

Major Resource Categories and associated Sponsors for Research effort and Records Management Capability Assessment are outlined below.

Sponsor Division / Business Unit	Time (1 August 2004 – 30 November 2004)	Information / Data (Process, industry research, best practice, trends, etc.)	Other Resources (Human Resources, Skills, Tools, Systems & Databases	Funding
All Business units impacted on by corporate governance, legal and regulatory frameworks	√	√	√	√
Business Unit A	√	√	√	√
Business Unit B	√	√	√	√
Business Unit C	√	√	√	√
FNB Content Management Unit	√	√	√	√
FirstRand Group Compliance and Risk	√	√	√	√

Table 9 : Time Frame and Resources for Records Management Capability Maturity Audit

9.2.8.6 Stages in the Research Process, Time Frame and Responsibility

Research Process Stage / Phase	Time (1 August 2004 – 30 November 2004)	Responsibility
Literature Study	2 Weeks	Researcher, FNB : CMU
Data Collection and Preliminary Analysis	4 Weeks	Researcher, FNB : CMU
Final analysis	2 Weeks	Researcher, FNB : CMU
Report : Integrating Analysis, Gap Analysis, Recommendations and Migration Plan	4 Weeks	Researcher, FNB : CMU
Document Learnings and Assess Aspects that Need Review or More Attention	4 Weeks	Researcher, FNB : CMU

Table 10 : Process Phase, Time Frame and Responsibility

In terms of required and available resources the following applies:

- All impacted business units or divisions are required to accept responsibility and take ownership of the aspects and areas that will be impacted by corporate governance and information management compliance issues;
- The amount and number of resources (including human resources and skills) and funding to this research initiative will be determined proportionally and mapped to the appropriate priority and impact per unit / division. The FNB Content Management Unit will carry fifty percent of the total cost and funding of resource requirements for the capability maturity assessment; and
- All relevant systems, solutions and supporting applications will be subject to investigation in terms of impact and compliance per business unit, major component and or capability.

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9.3 Appendix C : Capability Maturity Assessment Questionnaire

9.3.1 Interviewee Detail

Name :_____

Office Tel. : _____

Division : _____

Cell. : _____

Office Address : _____

Date : _____

9.3.2 Interviewer Contact Detail

Lizelle van der Klashorst

Information Architect / Management Specialist

Process Design and Content Management

Tel : +27 11 371-9551

Cell : 083-294-4204

Fax : +27 11 371-6886

e-mail : lvanderklashorst@fnb.co.za

1First Place, Bank City, 7th Floor

9.3.3 Audit Questionnaire

Kindly complete the audit questionnaire. Please attempt to respond to all questions. If in doubt, complete the **Notes / Remarks / Suggestions / Requirements** section

9.3.3.1 Records Management Programme

A records management programme has the purpose of managing an institution's / division's records for the purpose of business efficiency, continuity, legal & regulatory compliance, customer service, accountability and transparency.

The following are essential elements of the programme :

- Executive level responsibility, sponsorship and leadership;
- Policies and procedures;
- Organisational structures & roles;
- Communication and training;
- Auditing and monitoring programme compliance;
- Effective and consistent programme enforcement, and finally
- Continuous programme improvement.

Programme Elements	Yes	No	Notes / Remarks / Suggestions / Requirements
Are you aware of the legislative, regulatory frameworks impacting information compliance and associated records management in your division ?			
Has an information compliance audit in this division previously been done?			
Are you aware of similar initiatives elsewhere in the organisation, such as information compliance audits and awareness programmes ?			

Have you been exposed to records management training and awareness programmes		
Does this division have a records management programme in place or is it part of records management programme ?		
If yes, • Is executive / management level sponsorship, responsibility and available ?		
• Are the required records management policies and procedures defined, available and communicated ?		
• Are employees and all roles trained i.e. policies and associated responsibilities and accountabilities ?		
• Are the required roles and responsibilities defined for effective records management in this division ?		
• Are the required life cycle management processes in place, i.e. discovery and time delivery of records, value of records categories, retention schedules, archiving, storage and disposition, etc. ?		
• Are the programme compliance, enforcement, monitoring, measurement improvement processes in place ?		
• Are both paper and electronic records included in the programme ?		

Programme Effectiveness	Poor	Good	Excellent	Notes / Remarks / Suggestions / Requirements
How would you rate the effectiveness of the records management programme currently running in your division ?				

9.3.3.2 Regulatory, Legal & Institutional Frameworks

❑ Which Legal, Regulatory Frameworks have an impact on record categories for your particular division / process ?

❑ Which record categories, correspond to the frameworks identified / mentioned ?

❑ Which divisional / business unit process requires the records category ?

❑ Are these frameworks, associated record categories, identified, recorded (inventory) and managed ?

Legal, regulatory, institutional framework E.g. FICA, Basel II, FAIS, ECTA, PAIA, South African Reserve Bank, Skills Development Levy, King Report 2 (equivalent of Sarbanes- Oxley), etc.	Record Categories (as per business requirements / value)	Divisional Process	Identified		Inventory (records / records categories recorded and mapped to business unit process and legal / regulatory framework)		Managed (all record management processes monitored and measured, and traceability of these practices exist)		Notes / Remarks / Suggestions / Requirements
			Yes	No	Yes	No	Yes	No	
Example : FICA	Customer identification	Identify customer	X			X		X	

Add more lines to cover all records and aspects.

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❏   Which other records / records categories are required for this division / process which have not been documented / managed ?

Legal, regulatory, institutional framework E.g. FICA, Basel II, FAIS, ECTA, PAIA, South African Reserve Bank, Skills Development Levy, King Report 2 (equivalent of Sarbanes- Oxley), etc.	Record Categories	Divisional Process	Notes / Remarks / Suggestions / Requirements

Add more lines to cover all records and aspects.

❏   Are you aware of any reporting requirements imposed on your division / business unit by legislative or regulatory bodies ?

Legal, regulatory, institutional framework E.g. FICA, Basel II, FAIS, ECTA, PAIA, South African Reserve Bank, Skills Development Levy, King Report 2 (equivalent of Sarbanes- Oxley), etc.	Reporting Requirement	Notes / Remarks / Suggestions / Requirements

Add more lines to cover all records and aspects.

9.3.3.3 Categories / format / value / schedules

☐ Is the Ownership for records categories identified and documented ? List the category and ownership of the category.

☐ Are these record categories assessed in terms of business value : E.g. for business continuity, corporate accountability, managing risk, legal and regulatory requirements, efficiency, productivity, costs savings, decision making, etc. ?

☐ Is the life cycle of the records managed according to business value and a retention schedule applied accordingly ? Mention Time frame.

☐ Which formats associated with the categories mentioned need to be managed ?

☐ Where are these records located ?

Record Category	Ownership	Value identified as per business requirement	Mention value attribute(s)	Life cycle & Retention schedule	Time frame(s)	Formats (to be) managed / retained Paper; Web based; Image; SMS Voice-mail; e-Mail; Other; Other	Location
		Yes		Yes			
		No		No			

Add more lines to cover all records and aspects.

9.3.3.4 Organisation structures, roles, policies

❑ Are you aware of the roles required to manage records effectively ?

Awareness of roles required	Notes / Remarks / Suggestions / Requirements
Yes	
No	

❑ Do you have any roles in place. Which are they ? Are there any gaps ?

List Roles in place	List roles still required	Notes / Remarks / Suggestions / Requirements

Add more lines to cover all roles.

❑ Are you aware of the policies that are required for an effective records management programme ?

Awareness of policies required	Notes / Remarks / Suggestions / Requirements
Yes	
No	

- ❑ Are the required records management policies defined, implemented ?
- ❑ Are there processes / mechanisms in place to monitor and measure compliance, / adherence to policies ?
- ❑ Do these policies align with records management initiatives in other divisions as well as the corporate policy for records management ?

Policies defined		Policies implemented		Policies adherence monitored and measured		Alignment with corporate policy		Notes / Remarks / Suggestions / Requirements
Yes		Yes		Yes		Yes		
No		No		No		No		

- ❑ Mention / List policies defined / implemented / monitored
- ❑ Are there any gaps? Mention / List
- ❑ Mention person responsible / accountable for implementation and monitoring adherence

List Policies in place	Accountability for implementation / monitoring	List policies still required	Notes / Remarks / Suggestions / Requirements

Add more lines to cover all policies.

9.3.3.5 Control processes

❑ Are the processes identified, documented, implemented and adhered to for controlling records management activities, such as :

Control Process	Process identified	Yes	No	Process implemented	Yes	No	Process adhered to	Yes	No	Notes / Remarks / Suggestions / Requirements
Accountability & Ownership : must be assigned ensuring authenticity, integrity										
Privacy : ensuring personal information is protected										
Identifying / declaring : those documents that needs to be managed as records										

9.3.3.6 Applications and infrastructure

Applications, functionality and storage	Yes	No	Notes / Remarks / Suggestions / Requirements
Is a supporting records management solution(s) in place ? (Mention which)			
If yes, • Does the solution address imaging, workflow and archiving requirements ?			
• Does the solution provide for a universal repository structure and integration of all relevant systems ?			
• Does the solution provide the functionality and associated capability to capture and manage e-mails as records ?			
• Does the storage infrastructure cater for all retention and archival requirements ?			
• Does the solution manage security sufficiently as per the value and retention schedules of specific categories of records ?			
• Does the solution provide the functionality and capability for audit trails (history of the lifecycle management of the record) ?			
• Does the solution provide for the ability to manage older records (on legacy systems)			
• Does the solution provide the capability and functionality to move records according to the value and retention schedule ?			
• Does the solution comply with the industry standards and best practice for records management ?			

9.3.3.7 Training & Communication

Training interventions	Yes	No	Notes / Remarks / Suggestions / Requirements
Are awareness programmes conducted, to communicate the importance of record management policies and practices ?			
Are employees enabled with the right tools to adhere to policies and manage records effectively ?			
Are training programmes conducted to train all relevant staff and other relevant stakeholders, in their roles, responsibilities, processes and policies ?			
Is Change Management an integral part of the records management programme, facilitating cultural change and providing incentives ?			

9.4 Appendix D : Some Acts and Regulations Impacting the FR Banking Group

(Kindly note that the list below is not meant as an exhaustive list of Acts and Regulations impacting the FR Banking group)

- **King II (SA corporate governance);**
- **Companies Act;**
- **Financial Intelligence Centre Act (FICA);**
- **Closed Corporations Act;**
- **Financial Advisory and Intermediary Services Act (FAIS);**
- **Income Tax Act;**
- **Value Added Tax Act;**
- **Customs and Excise Act;**
- **Stamp Duties Act;**
- **Prescription Act;**
- **Insolvency Act;**
- **Basic Conditions of Employment Act;**
- **Skills Development Act;**
- **Compensation for Occupational Injuries Act;**
- **Labour Relations Act;**
- **Promotion of Access to Information Act, 2000 (PAIA);**
- **South African Reserve Bank Regulations;**
- **SA Banking Act;**
- **Electronic Communications and Transactions Act, 2002 (ECTA).;**
- **SA Code of Banking Practice;**
- **Standard practice & other legal and regulatory frameworks.**

9.5 Appendix E : Extracts from the Electronic Transactions and Communications Act

(Available on request)

9.5.1 Relevant Extracts

The central concept in the ECT Act (a 'data message') is defined as:

> "data generated, sent, received or stored by electronic means and includes – (a) voice, where the voice us used in an automated transaction; and (b) a stored record".

9.5.1.1 Legal recognition of data messages

11. (1) Information is not without legal force and effect merely on the grounds that it is wholly or partly in the form of a data message.

9.5.1.2 Writing

12. A requirement in law that a document or information must be in writing is met if the document or information is -

> (a) in the form of a data message; and

> (b) accessible in a manner usable for subsequent reference.

9.5.1.3 Signature

13. (1) Where the signature of a person is required by law and such law does not specify the type of signature, the requirement in relation to a data message is met only if an advanced electronic signature is used.

(2) Subject to section (1), an electronic signature is not without legal force and effect merely on the grounds that it is in electronic form.

(3) Where an electronic signature is required by the parties to an electronic transaction and the parties have not agreed on the type of electronic signature to be used, that requirement is met in relation to a data message if -

> (a) a method is used to identify the person and to indicate the person's approval of the information communicated; and

> (b) having regard to all the relevant circumstances at the time the method was used, the method was as reliable as was appropriate for the purposes for which the information was communicated.

(4) Where an advanced electronic signature has been used, such signature is regarded as being a valid electronic signature and to have been applied properly, unless the contrary is proved.

(5) Where an electronic signature is not required by the parties to an electronic transaction, and expression of intent or other statement is not without legal force and effect merely on the grounds that –

> (a) it is in the form of a data message; or

> (b) it is not evidenced by an electronic signature but is evidenced by other means from which such person's intent or other statement can be inferred.

9.5.1.4 Original

14. (1) Where a law requires information to be presented or retained in its original form, that requirement is met by a data message if -

(a) the integrity of the information at the time it was first generated in its final form as a data message or otherwise has passed assessment in terms of subsection (2); and

(b) that information is capable of being displayed or produced to the person to whom it is to be presented.

(2) For the purposes if this subsection 1(a), the integrity must be assessed –

(a) by considering whether the information has remained complete and unaltered, except for the addition of any endorsement and any change which arises in the normal course of communication, storage and display;

(b) in the light of the purpose for which the information was generated; and

(c) having regard to all other relevant circumstances.

9.5.1.5 Admissibility and evidential weight of data messages

15. (1) In any legal proceedings, the rules of evidence must not be applied so as to deny the admissibility of a data message, in evidence -

(a) on the mere grounds that it is constituted by a data message; or

(b) if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form.

(2) Information in the form of a data message must be given due evidential weight.

(3) In assessing the evidential weight of a data message, regard must be had to -

(a) the reliability of the manner in which the data message was generated, stored or communicated;

(b) the reliability of the manner in which the integrity of the data message was maintained;

(c) the manner in which the originator was identified; or

(d) any other relevant factor.

(4) A data message made by a person in the ordinary course of business, or a copy or printout of, or an extract from such data message certified to be correct by an officer in the service of such person is, on its mere production in any civil, criminal, administrative or disciplinary proceedings under any law, the rules of a self regulatory organisation or any other law of the common law, admissible in evidence against any person and rebuttable proof of the facts contained in such record, copy, printout or extract.

9.5.1.6 Retention

16. (1) Where a law requires information to be retained, that requirement is met by retaining such information in the form of a data message, if -

(a) the information contained in the data message is accessible so as to be usable for subsequent reference;

(b) the data message is in the format in which it was generated, sent or received or in a format which can be demonstrated to represent accurately the information generated, sent or received; and

(c) the origin and destination of that data message and the data and time it was generated or received can be determined.

(2) The obligation to retain information as contemplated in subsection (1) does not extend to any information the sole purpose of which is to enable the message to be sent or received.

9.5.1.7 Production of document or information

17.   (1) Subject to section 28, where a law requires a person to produce a document or information, that requirement is met if the person produces, by means of a data message, an electronic form of that document or information and if -

(a) considering all the relevant circumstances at the time that the data message was sent, the method of generating the electronic form of that document provided a reliable means of assuring the maintenance of the integrity of the information contained in that document; and

(b) at the time the data message was sent, it was reasonable to expect that the information contained there in would be readily accessible so as to be usable for subsequent reference.

(2) For the purposes of subsection (1), the integrity if the information contained in a document is maintained if the information has remained complete, unaltered, except for –

(a) the addition of any endorsement; or

(b) any immaterial change, which arises in the normal course of communication, storage or display.

9.5.1.8 Notarisation, acknowledgement and certification

18.   (1) Where a law requires a signature, statement or document to be notarised, acknowledged, verified or made under oath, that requirement is met if the advanced electronic signature of the person authorised to perform those acts is attached to, incorporated in or logically associated with the electronic signature or data message.

(2) Where the law requires or permits a person to provide a certified copy of a document and the document exists in electronic form, that requirement is met if the person provides a print-out certified to be a true reproduction of the document or information.

(3) Where a law requires or permits a person to provide a certified copy of a document and the document exists in paper or other physical form, that requirement is met if an electronic copy of the document is certified to be a true copy thereof and the certification is confirmed by the use of an advanced electronic signature.

9.5.1.9 Other requirements

19.	(1) A requirement in a law for multiple copies of a document to be submitted to a single addressee at the same time, is satisfied by the submission of a single data message that is capable of being reproduced by that addressee.

(2) An expression in a law, whether used as a noun or a verb, including the terms "document", "record", "file", "submit", "lodge", "deliver", "issue", "publish", "write in", "print" or words or expressions of similar effect, must be interpreted so as to include or permit such form, format, or action in relation to a data message unless otherwise provided for in this Act.

(3) Where a seal is required by law to be affixed to a document and such law does not prescribe the method or form by which such document may be sealed by electronic means, that requirement is met if the document indicates that it is required to be under seal and it includes the advanced electronic signature of the person by whom it is required to be sealed.

(4) Where any law requires or permits a person to send a document or information by registered or certified post or similar service, that requirement is met if an electronic copy of the document or information is sent to the South African Post Office limited, is registered by the said Post Office and sent by that Post Office to the electronic address provided by a sender.

9.6 Appendix F : Design Criteria Standard for Electronic Records Management Software Applications (DoD 5015.2-STD 19 June 2002)

This Standard is issued under the authority of DoD Directive 5015.2, "Department of Defence Records Management Program," March 6, 2000, which provides implementation and procedural guidance on the management of records in the Department of Defence. This Standard sets forth mandatory baseline functional requirements for Records Management Application (RMA) software used by DoD Components in the implementation of their records management programs; defines required system interfaces and search criteria to be supported by the RMAs; and describes the minimum records management requirements that must be met, based on current National Archives and Records Administration (NARA) regulations.

Records Management software applications and supporting suppliers / vendors need to be accredited and aligned with this standard. The purpose of accreditation and alignment with the standard is to ensure adherence to the minimum requirements for capability and quality of solutions offered by vendors leading the records management space in the market place. The FirstRand Banking Group should use this standard as input when conducting 'Request for Information' (RFI's) and 'Request for Proposals (RFP's) for vendor selection.

Available on request or :
http://www/dtic.mil/whs/directives

9.7 Appendix G : ISO standard 15489-1 and -2

ISO (the International Organisation for Standardisation) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organisations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the Intenational Electrotechnical Commission (IEC) on all matters of electrotechnical standardisation.

International Standards are drafted in accordance with the rules given in the ISO / IEC Directives. Part 3

The main task of the technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 15489 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15489 was prepared by the Technical Committee ISO /TC 46, *Information and Documentation,* Subcommittee SC 11, *Archives / records management.*

ISO 15489 consists of the following parts under the general title *Information and documentation – Records management.*
- Part 1 : General
- Part 2 : Guidelines (Technical Report)

The standardisation of records management policies and procedures ensures that appropriate attention and protection is given to all records and that the evidence and information they contain can be retrieved more efficiently and effectively using standard practices and procedures.

This part of ISO 15489 was developed in response to consensus among participating ISO member committees to standardise international best practice in records management using the Australian AS 4390, *Records Management*, as a starting point..

9.7.1   Part 1 : General
Part 1 includes:

- Definitions to clarify meaning and significance of terms commonly misunderstood;
- A summary of the benefits of records management;

- The need for and how to establish policies, procedures and practices to ensure its business need for evidence;
- Accountability and information are met;
- The fundamental principles of records management and how these are realised through a comprehensive programme;
- The design and implementation of a record keeping system and the characteristics of recorded information;
- A suggested design and implementation methodology for sustainable record keeping systems;
- Records management processes and controls; and
- Monitoring, auditing and training.

9.7.2   Part 2 : Guidelines (Technical Report)

Part 2 is a technical report which expands on the design and implementation methodology suggested in Part 1, which itself is broadly based on the DIRKS methodology (Design and Implementation of a Record Keeping System). This tried and tested methodology has been specifically adapted to implement the standard. It gives an overview of the processes and factors to consider in order to be compliant with the standard. To illustrate:

- What are the steps involved in designing and building systems for managing records?
- What are the key issues and questions when a company is involved in a merger or acquisition or when parts of its activities are outsourced?
- How can a business activity classification scheme be developed and what will provide a framework for organising, keeping and relating records to make them accessible, usable and capable of being shared with appropriate persons of external organisations?
- What factors influence the development of a retentions policy and how could it be implemented?

ISO 15489 supports other ISO standards where specific records keeping requirements are indicated. For example: The ISO 9000 family identifies "quality records" as having certain characteristics – they must demonstrate conformance to specific requirements as well as effective operation of the quality system. ISO 15489 supports quality systems for addressing why, where and how records are created and used.

ISO 9000 requires retention periods to be established and implemented. ISO 15489 shows how to develop them in support of the business needs and risks and within the external environment (including legal and regulatory).

ISO 9000 notes that records should have suitable protection. ISO 15489 shows how to identify vital records as well as create the provisions of physical and logical security.

ISO 9000 states that records should be stored and retained for ready access. ISO 15489 covers record keeping system requirements for active and inactive records.

In summary ISO 15489(1 and 2) can be used in a number of ways:

- ❑ To measure that existing strategies and programmes are effective in achieving their aims based on international best practice;
- ❑ To realistically offer those benefits which many technology lead projects often promise but do not deliver;
- ❑ To provide a bench mark against which diverse and complex organisations and geographically separate systems for managing records can be measured and brought into accord; and most importantly
- ❑ To support the translation of business plans, goals, and objectives into practical information policies, strategies and programmes.
  (McLean, Robert, J. (?), p. 1-2)

9.8 Appendix H : Enterprise Content Management Maturity Model

Enterprise Content Management services and practices need to be planned, monitored, measured and improved on a continuous basis, achieving progression towards the identified maturity levels.

Capability, Services, Functionality and Methodologies required for Content Management and associated Maturity are:

- Services that capture, organise and provide access to the FirstRand Banking Group's content assets, considering all sources, formats and presentation layers;
- Services that facilitate the ability for employees to share and collaborate the enterprise's collective content assets in order to stimulate innovation, reuse, enable management decision-making, organisational learning and improve the performance and productivity of employees;
- Services that facilitate the ability to leverage content assets providing services exceeding customer expectations;
- Value, Culture and Process Frameworks which enable sharing, collaboration and innovation across the whole of the internal and extended organisation to eventually include partners and suppliers;
- Access to content when required and where required;
- Collaborate and share content and information with employees, stakeholders, trusted partners and customers;
- Capture, create or collect, organise and store, manage the lifecycle and deliver all content and information;
- Manage content and information as a strategic asset and use it as a true differentiator in the marketplace;
- Utilise content and information to enhance the innovation and operational processes;
- Use / reuse content / information for new purposes; and
- Modularised approach to enterprise content supporting dynamic and personalised assembly and delivery.

A maturity model maps an evolutionary path to achieve a set goal focusing both on the development of required capabilities and change required to leverage the identified capabilities. It facilitates the alignment and integration of the incremental development of practices in various clusters (i.e. processes, applications and infrastructure, management and content management practices), as well as the much needed cultural change required to institutionalise these practices.

The maturity model is a strategic planning tool, outlining the required steps necessary to reach defined outcome. It provides:

- The opportunity to plan initiatives, outcomes and associated deliverables in a progressive, incremental, holistic manner, avoiding "silver bullets", "big bangs" and expensive point solutions;

- ❑ A roadmap and clear milestones with defined goals and outcomes, which provides focus and motivation in achieving those outcomes;
- ❑ Clear performance indicators and associated metrics in order to measure and identify deviations, gaps and plan for improvements;
- ❑ A basis for conversation with business, - managing expectations and nurturing relationships;
- ❑ A framework, managing the structured and continuous development and improvement of capabilities, processes, supporting applications and infrastructure and associated outcomes, in the quest for productivity and efficiency and resulting short and long-term business value;
- ❑ A journey, an evolution through the maturity levels, where practices are transformed from an ad hoc, unstructured, undisciplined state to a disciplined, measurable and reusable state, capable of predictable results.

In order for the FirstRand Banking Group to manage its strategic assets optimally, performance needs to be measured on regular and continuous basis in order to assess maturity and progress.
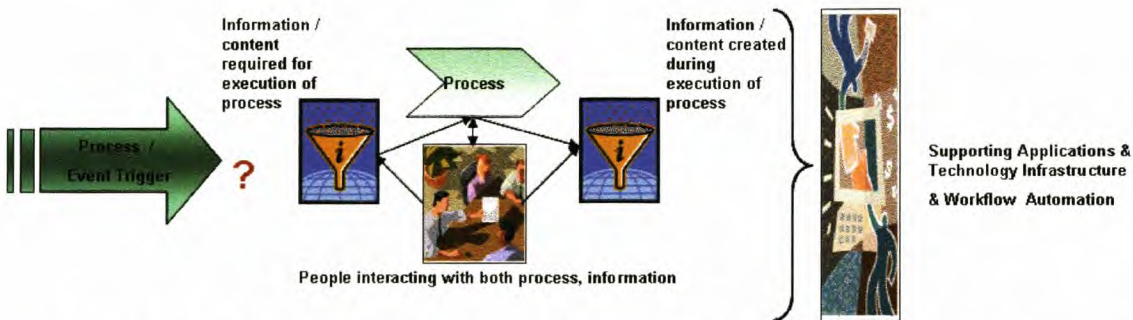

Figure 15 : Performance Measured across Processes, Information, Content and Applications

Although performance and progress need to be managed across process, information and content, people and supporting applications and infrastructure, the link between process, information and content (and implicitly people interacting with both process and information or content) cannot be separated. Thus Information or Content Management Maturity, and Process Maturity are mutually dependent on each other.

Process maturity measures the ability of an organisation to:

- ❑ Deliver information and content products that consistently meet customer needs;
- ❑ Produce information and content products in an effective and cost efficient manner;
- ❑ Provide for a learning oriented workplace;
- ❑ Reuse objects of both process and information / content;
- ❑ Move towards reliability, monitoring quality, consistency, standardisation;
- ❑ Move towards continuous improvement and innovation;
- ❑ Define roles and responsibilities; and
- ❑ Work towards ownership, custodianship and ongoing commitment.

The CM Capability & Maturity Model maps performance and maturity to 5 levels as depicted below:

• **Level 1 :** Reactionary & crisis oriented. Business expectations framed by what is presented to them. Once off publication of content without planned management of lifecycles for value, relevancy and currency. Technology shapes the solution

Impact : Duplication, redundancy, Questionable quality, integrity and authority, contents is outdated and fragmented

• **Level 2 :** Emerging structure & practices for needs of specific services, such as a product launch are in place. Silo based practices & solutions. Rudimentary practices are abandoned due to business pressures, continuously changing requirements. Business starts to give input into shaping solutions

Impact : Duplication, redundancy. Life cycle management only partially addressed

• **Level 3 :** Conscious awareness of the relationship between ECM & business value & requirements. The organisation becomes convinced of the value of ECM. Organisational commitment towards uniform standards and good practices. Content is being shared & reused between services. Silo ownership of content. CM principles & techniques shapes solutions, as well as the business drivers for a relevant single version of the truth

• **Level 4 :** ECM vision included in the organisational vision. Strong relationship between ECM and business drivers, requirements and value. Organisational commitment to organised & repeatable practices. Critical mass of collections coverage. ECM acknowledged as effective by the organisation. ECM performance management entrenched in the organisation with resulting continuous improvements. ECM services & solutions driven by ECM principles & approaches, as well as business strategy and user experience models

• **Level 5 :** Content shaping business innovation and competitiveness. Continuously challenges practices & standards for ECM in order to shape change innovation. Continuously striving to exceed customer expectations.
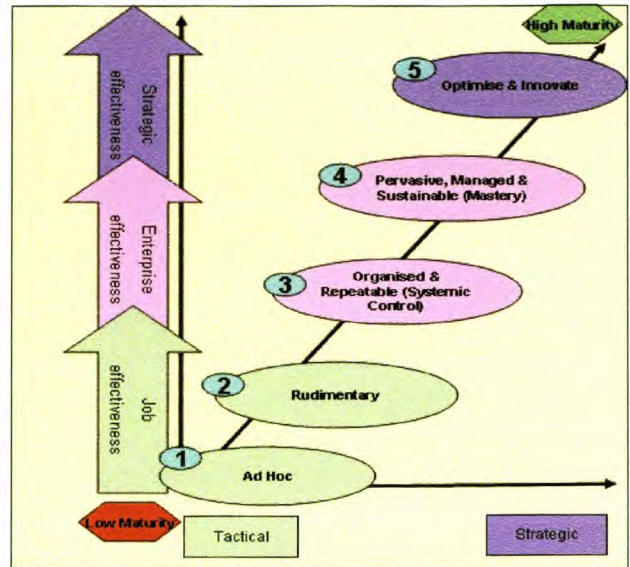

Figure 16 : Content Maturity Model

The following critical success factors are essential for defining and implementing the CM Maturity model and monitoring maturity & continuous improvement

• Identify and model key Business Processes & associated Information / Content collections in order to measure business performance, using the information / content audit as tool

• Assess each level of maturity & define objectives for each, criteria for measurements & associated metrics, in order to measure & manage performance

• Record performance statistics, identify gaps and plan for performance improvements / enhancements after each event of assessment for each level

• Maturity is a journey and performance management & measurement should be iterative (closed loop improvements) in order to work towards joint content and business performance goals & objectives

• Clearly defined milestones

• Prerequisites for moving to next phase to be clearly stated (distinguish between optional and required ones)

• Need to highlight the role of a central theme and vision that will for strategy as improvisational theater (guidance i.e. planning and scoping)

• Need to understand when it is possible to fast track (skip)
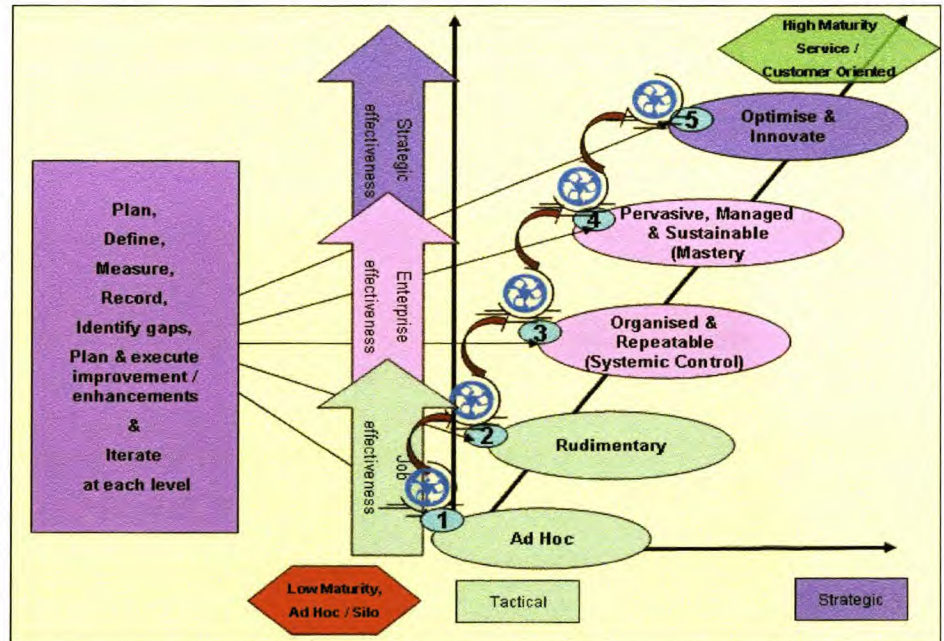

Figure 17 : Content Maturity Model Implementation Criteria

The following challenges need careful consideration:

❑ Measuring and monitoring Content Management performance demands proper planning, motivation and discipline;

- Content Management performance needs a champion to drive and manage governance models and mechanisms such as policies, principles etc., and communicate business benefits and value;

- Content Management performance and maturity is a journey; - it is an iterative approach striving for continuous and ongoing performance in support of business goals;

- Business Processes and associated content are directly linked to business drivers, performance drivers or key performance indicators;

- Change management expertise is required to assist in managing perceptions and the value and benefit for both the individual employee, as well as the organisation;

- Criteria for maturity levels, measurements and metrics (qualitative and quantitative) needs to be clearly defined and documented in order to prevent confusion;

- Expected performance for each level needs to be base-lined and only deviations under or above the norm, should demand effort, time and attention;

- The outcome of each performance measurement event at each level needs to be documented and reported to the necessary forums in order to facilitate ongoing support and buy-in for Enterprise Content Management (ECM) initiatives;

- Measurements and metrics need to be defined for each project and associated ECM deliverable, component or element in order to measure value and demonstrate business value and benefit;

- Both successes and mistakes need to be recorded as learnings. Gaps and lack of skills or supporting content management applications and supporting infrastructure, need to be recorded in order to prevent repetition.

9.9　Appendix I : Content Management Value Proposition

On a strategic level a Content Management Capability provides guidance in terms of Enterprise Content Management initiatives. Conceptual frameworks for Collection Management, Taxonomies, Repositories, Security and Dissemination / Distribution guide implementation of content related initiatives across the enterprise, facilitating reuse of content, solutions, models and methodologies, and compliance to associated legal and regulatory frameworks.

More specifically, it:

- Provides decision-support tools based on integrated information capability within a collaborative business model ;
- Ensures the management of Business Unit Information Assets as Enterprise Information Assets;
- Defines models for the optimal capture, distribution and reuse of information within business units and the broader enterprise, and across all distribution channels;
- Defines content management standards, policies and principles, guiding standardized implementation of content related initiatives;
- Manages customer information experience from perception to end fulfillment (how may we help you);
- Anticipates the impact of projects involving specific information products, and involves further stakeholders accordingly;
- Analyses the information-specific risks of information-reliant initiatives, and makes the appropriate recommendations;
- Defines and provides guidance relating to content life cycle management and end-to-end content management processes;
- Provides expertise and guidance in terms of technology pertaining to Enterprise Content Management;
- Provides guidance in terms of metadata and taxonomy creation for structured and unstructured data;
- Assists in realising efficiencies through automated workflow and content management processes;
- Assists in designing and implementing team knowledge, document management and collaboration workspaces; and
- Assists in future initiatives where integration between desk top applications, knowledge, document management, collaboration workspaces, other legacy content rich systems, alignment with the vision and principles of the overarching enterprise content management strategy, is required.

A holistic view is required in order to institutionalise records management and associated principles and standards across the group. Content Management skills and expertise could play an important role i.e. facilitating and giving input to most of the components below:
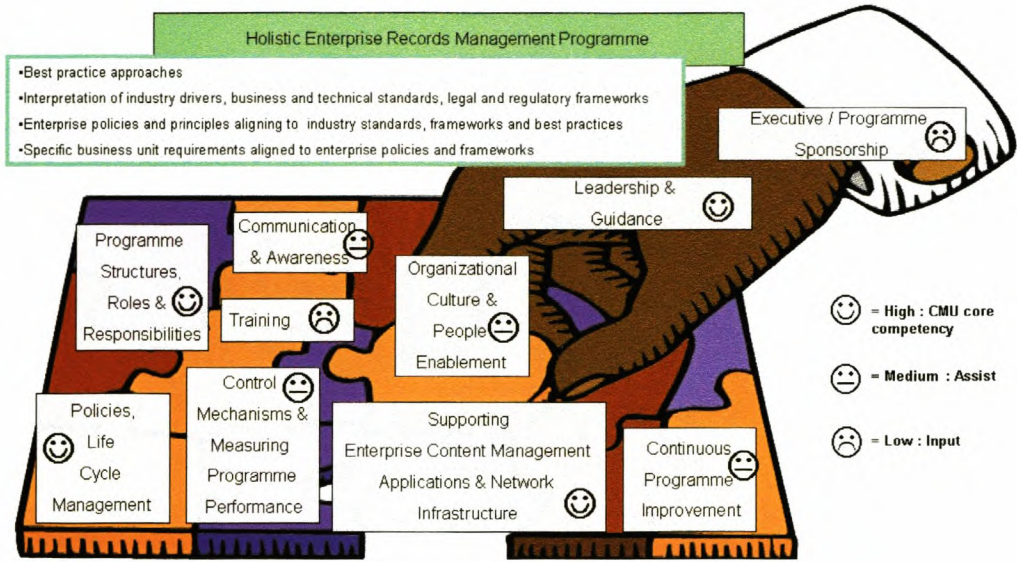
Figure 18 : Content Management Value : Records Management Programme Participation

9.10 Appendix J : FirstRand Banking Group Records Retention Schedule and Inventory

Record ID	Category	Name / Description	Minimum Retention Period	Retention Form paper	Retention Electronic format	Location	Requirement for destruction	Government / legal instruction	Risk appetite	Comments	
(to be the reference between original and image)	Transaction	Deposit slip	1 y 2 y = minimum retention requirement = 2	Original / certified copy Y	Image	Metrofile eGami (Documentum)	Data protection legislation and ECT act	Act 1 Act 2	Security level/ Access / Sensitivity / Value		

Table 11 : FR Banking Group Regulatory Records Retention Guideline (FRBG RRRG)

Business Unit Record Inventory

Author	Title	Security (Role based)	Location (folder / server/ system)	BU Process / Function	Business Rules	Business Purpose / Value	Category	Retention Period	Archive Active (A) Inactive (I)	Versioning Yes No	Comments

Format	File size	Key users	Distribution Requirements	Search & Retrieval Traffic	Ownership / Accountability	Reuse / Sharing with other BU's	Legal / Regulatory Driver	Roles Administrator Author Reviewer Approver Reader			Comments

Table 12 : Record Inventory for Business Unit Implementation of FR Banking Group Regulatory Records Retention Guide

9.11 Appendix K : Glossary

TERM	DESCRIPTION
Access	The 'right, opportunity, [or] means of finding, using, or retrieving information' (ISO 15489-2001, Part 1, 3.1)
Accountability	The 'principle that individuals, organisations, and the community are responsible for their actions and may be required to explain them to others' (ISO 15489-2001, Part 1, 3.2)
API	Application Programming Interface: a user-friendly (usually object-based) interface that compiles program code according to actions taken by a user. APIs are usually specific to a particular system, and allow interfaces to be created between systems
Appraisal	The process of assessing records to determine whether they should be retained, and for how long
Architecture	An enterprise-wide architecture is a logically consistent set of principles that guide the design and development of an organisation's information systems and technology infrastructure
Archives	Records which have enduring historical, informational, evidential or other value. Traditionally, the term has been used to describe records no longer required for current use which have been selected for permanent preservation. Such records should be kept in special environmental conditions and managed by professional archivists. They are normally transferred to an archive office for this purpose
Authentic record	A record that can be proven to be what it purports to be, to have been created or sent by the person purported to have created or sent it, and to have been created or sent at the time purported
Authorware	Software that provides a user interface for inserting content in a database. Authorware typically provides a form and/or WYSIWYG editor into which the user captures text, which is subsequently inserted into the database
Business rule	A rule or operation method/ policy as laid down/ required by the business defining a certain operation/ activity/ process
Checksum	A checksum is a count of the number of bits in a transmission unit that is included with the unit so that the receiver can check to see whether the same number of bits arrived. If the counts match, then one can assume that the complete transmission was received
Classification	The 'systematic identification and arrangement of business activities and/or records into categories according to logically structured conventions, methods, and procedural rules represented in a classification system' (ISO 15489-2001, Part 1, 3.5)
Collection	A conceptually distinct grouping of content objects

Collection management	A process that governs the inclusion of any object in a collection, as well as the maintenance of these objects throughout their lifecycle
Compact Disk (CD)	A type of optical disk storage media, compact disks come in a variety of formats. These formats include CD-ROMs that are read-only, CD-Rs that you can write to once and are then read-only, and CD-RWs that you can write to in multiple sessions
Compliant Records System	A system managed in compliance with all requirements arising from current business, the regulatory environment, and community expectations
Compression	A process, using special software, that reduces the file size of a given electronic file
Content	Enterprise information assets in meaningful semiotic format that can be deployed to communicate with an interlocutor or intended interlocutor through any medium
Content Object	Basic unit of data/information that, in combination with other content objects, can be used as the building blocks of a document or publication
Conversion	Changing a record's file format, often to make the record software-independent and in a standard or open format
Current Records	Current records are records which are required for the day-to-day running of the organisation and which are therefore in frequent use, regardless of their date of creation
Database	A structured assembly of logically related data designed to meet various applications but managed independently of them
Delivery mechanism	The technology that will be used to deliver the content to the user, such as web technology, print, digital streaming, etc.
Digital Audio Tape (DAT)	A type of digital storage media, DATs are in a cartridge format a little larger than a credit card. The industry standard for DAT cartridge format is a digital data storage (DDS) cartridge. DDS cartridges provide sequential access
Digital signature	A transformation of a message using an asymmetric cryptosystem such that a person having the initial message and the signer's public key can accurately determine: (1) whether the transformation was created using the private key that corresponds to the signer's public key; and (2) whether the initial message has been altered since the transformation was made
Digital streaming OR Digital Asset Delivery	A data-intensive content distribution mechanism that can broadcast digital data (such as electronic signage) in real time. This distribution mechanism is particularly suited to sound, animated text and video assets
Digital Versatile Disk (DVD)	An optical disk with more storage capacity than CD-ROMs, these disks are also called digital video disks, but do not necessarily include video. Common types of DVDs include: DVD-ROM (read-only), DVD-RAM (rewritable), DVD+RW (competitor to DVD-RAM with similar functionality

	slightly greater storage capacity
Digital Versatile Disk–Random Access Memory (DVD-RAM)	These DVDs are rewritable disks with exceptional storage capacity
Digital Versatile Disk–Read Only Memory (DVD-ROM)	These DVDs are read-only disks that also have enough storage capacity for a full-length feature film. They are accessed using a special DVD drive attached to a personal computer. Most of these drives are backward-compatible with CD-ROMs and can play DVD video disks. DVD-Rs can be written to once and are then read-only
Digital Versatile Disk + ReWritable (DVD+RW)	DVD+RW is a direct competitor to DVD-RAM with similar functionality and slightly greater storage capacity
Dimension	When applied to taxonomy: a structure for viewing, according to a schema, a set of values and the pre-determined relationships between them. The relationship between any two given values may vary from dimension to dimension
Disposal / Disposition	The implementation of appraisal and review decisions, by means of the destruction of records, or the transfer of their custody (usually to an archive for permanent preservation)
Disposal Date	The date on which the records retention period for a given records series expires and the records may be disposed of
Document Type Definition (DTD).	A specification that accompanies a SGML or XML document and identifies the content and relationships of mark-up elements in the document
Domain	For the purposes of this document, a conceptual thematic or operational grouping of ideas, processes or users. While mutually distinguishable, different domains may easily have objects or values in common
Electronic Records / Digital Records	Records capable of being processed in a computer system and/or stored at any instant in a medium which requires electronic or computer equipment to retrieve them
Entity-relationship Diagram (ERD)	A diagram showing, and used to define relationships between key objects, as well as the attributes and characteristics of those objects
Erasable Optical (EO) Disk	The user can write to, read from, and erase from EO disks as often as they can magnetic disks. EO disks require special hardware
Extranet	A type of Internet site to which organisations allow only selected external access
Granularity	The property of a content object that refers to the inverse of its density of meaning. Highly granular systems store content in the smallest possible semiotic units, while solid state systems store complete documents as a single content object
Extensible Hypertext Markup Language (XHTML).	A reformulation of HTML 4. When HTML is mentioned assume XHTML as well
File Plan / Business	A tool used in records management planning where the records of an

Classification System	organisation are categorised by function, subject, or processes, to facilitate their capture, retrieval, maintenance and disposal
Functional Appraisal	The analysis of the functions and processes of an organisation in relation to the records it produces, and the evaluation of their long-term value
Hypertext Mark-up Language (HTML)	The set of mark-up symbols or codes inserted in a file intended for display on a World Wide Web browser page. HTML is the language of today's web
Hybrid repository	A repository that can store native content and reference and index virtual content
Indexing	A database function that references the occurrence and location of the contents of a field in binary strings so that these contents can be retrieved quickly and easily
Integrity of a Record	The quality or condition of a record being complete and unaltered
Integrity of a Records System	The quality or condition of a system that prevents unauthorized access, destruction, alteration, or removal of records including the negative impact of system malfunction, upgrade, or regular maintenance
Intermediary	An entity that distributes, by means of one or more delivery mechanism, content from another source
Magnetic disk	A type of digital storage media, magnetic disks include the hard disk found in your computer that stores the programs and files you work with daily. Magnetic disks provide random access. Also included are removable hard disks, floppy disks, zip disks, and removable cartridges
Magnetic tape	A type of digital storage media, magnetic tapes come in reel-to-reel as well as cartridge format (encased in a housing for ease of use). The two main advantages of magnetic tapes are their relatively low cost and their large storage capacities (up to several gigabytes). Magnetic tapes provide sequential access to stored information, which is slower than the random access of magnetic disks. Magnetic tapes are a common choice for long-term storage or the transport of large volumes of information
Metadata	"Data about data". Information that describes the thematic, structural, behavioural or management attributes of a content object or collection of content objects. Metadata is an essential component of XML and composite/dynamic documents
Migration	Te act of moving records from one system to another, while maintaining the records' authenticity, integrity, reliability, and usability
Native content	Content that is stored within a repository, as opposed to the referenced content that is stored "virtually" in a virtual repository
Object	For the purposes of this document, synonymous with artefact. The smallest possible unit of content that has meaning without requiring additional context. An object may be a single metadata value or a complete document

Optical Character Recognition (OCR)	OCR is the recognition of printed or written text characters by a computer. This involves analysis of the scanned-in image, and then translation of the character image into character codes, such as ASCII. OCR is being applied by libraries, businesses, and government agencies to create text-searchable files for digital collections. OCR is also used to help process checks and credit card slips and sort the mail
Parsing	The execution of a query within a database, but also the transfer of content from a database into a presentation layer, often according to parameters specified by a user or system
Presentation Layer	A formalised and uniquely distinguishable delivery mechanism or set of delivery mechanisms. The space where users will receive and use the content, such as the intranet, extranet, automated teller machines (ATM), call centres or other channels. Delivers stored content with meaningful structure and context
Reliable Record	A record for which the contents can be trusted as a full and accurate representation of the transactions, activities, or facts to which they attest and can be depended upon in the course of subsequent transactions or activities
Records Management	The area of general administrative management concerned with achieving economy and efficiency in the creation, maintenance, use and disposal of the records of an organisation through their entire lifecycle and in making the information they contain available in support of the business of the organisation and/or to comply with regulatory, legislative and audit requirements
Reliable Records System	Any system deployed to manage records that is capable of continuous and regular operation in accordance with responsible procedures
Repository	A database that is capable of storing large volumes of content, specifically for deployment to a broad scope of users or delivery mechanisms. A repository typically also sources information from a broad variety of sources
Retention Period	The period of time, usually based on an estimate of the frequency of current and future use, and taking into account statutory and regulatory provisions, that records need to be retained before their final disposal
Retention Schedule	A list of record series indicating how long each series must be retained and which records should be permanently preserved
Re-use (noun)) Re-use (verb)	The practice of using existing objects to develop new "documents"; the process of linking to an element of reusable content that is then displayed in the "new" document. When the reusable element is updated in the source, it updates wherever it occurs in the presentation layers
Schema	In the context of XML, a set of rules for the presentation of marked-up content

	In the context of taxonomy, a set of rules that dictates the structure of a domain
Secure Destruction	The process of eliminating records beyond any possible identification or reconstruction
Security	For the purpose of this document, the processes that ensure appropriate access to content objects
Semantic	Refers to the meaning of words. In a thesaurus, values that are placed in close proximity are semantically related
Semantic Web	An extension of the web using Resource Description Format (RDF) in which content is made meaningful allowing sharing and reuse across application, enterprise, and community boundaries
Semiotic	Refers to the medium of transfer of meaning from a source to a destination (e.g.: written word, spoken word, icon, image)
Semi-Current Records	Records no longer in day-to-day use but which need to be accessed for a number of reasons, such as for reference in conducting current business, for appraisal and review, or for legal enquiries
Standard	A definition, format or specification that has been approved as a recognised standard within an organisation and / or has been accepted as a de facto standard by an organisation and / or industry
Syndication	Storage (for the express purpose of republishing in a different context from the original) of content generated by an external party, or party that has not created the content for the particular purpose for which it will be reused
Taxonomy	A type of relational (often hierarchical) representation of information components (terms, concepts, graphics, sounds) and metadata and the relationships among them that supports the discovery and access to information
Thesaurus	A list of values that enumerates semantically equivalent or approximately equivalent values
Uniform Resource Locator (URL)	The unique address for a file that is accessible on the web
Value	For the purposes of this document and in the context of metadata and taxonomy, any object that provides a universal descriptor for any given set of objects. Values are the atomic building blocks of taxonomies, thesauri and vocabularies
Virtual repository	A repository that references content that is already stored in another repository. This obviates the requirement for doubling up on storage space. Content objects in a virtual repository are normally stored as a hyperlink or file path, together with some metadata or other descriptors
Vocabulary	A list of values and their definitions specific to a particular thematic or operational context
Web Content	Information that is sent from a server to a browser via Hypertext Transfer

	Protocol (HTTP) when a URL has been activated
Web Services	The programmatic interfaces that allow application to application on the web
XML	Extensible Mark-up Language: a freely structured, semi-standardised extension of HTML (Hypertext Mark-up Language) that can be used to mark up the components of a document (usually structurally for presentation purposes). XML values are delivered to and interpreted by an intermediary layer immediately preceding publication, according to a set of compatible rules. Thus, a product name may be marked up with the tag set <product_name></product_name>, and be displayed in a certain manner, according to the proprietary rules (schema) contained in the intermediary layer.
XML Schema	A convention to define the structure, content and semantics of XML documents. Schemas are replacing DTD's for XML