

**QUICKSTART – Jan. 23, 2003**

**“Electronic Records @ The World Bank”**

---

The World Bank Group Archives’  
*Electronic Records Strategy*

consultant Peter Van Garderen  
Artefactual Systems Inc.  
(Vancouver, Canada)

# Electronic Records @ The World Bank

- Electronic records at the World Bank are the digital information that all Bank employees create and use to carry out their assigned responsibilities.
- This includes email, word processing and presentation documents, data in corporate information systems, intranet content, etc..
  - All of these records must be easily **accessible** to facilitate business processes.
  - Some of these records must be **preserved** long-term as evidence of decisions and transactions.
  - Some of these records must eventually be **destroyed** to efficiently manage digital storage and to avoid information overload

# Electronic Records: Accessibility, Preservation, Destruction

- Who is responsible for doing this?
- How can the World Bank do this
  - in a systematic manner,
  - applicable to the wide-variety of digital information,
  - given the complexity of its organizational structure?
- What are the industry standards and good practices?

# Electronic Records @ The World Bank: How, Who, What?

- This Quickstart presentation will introduce the **Electronic Records Strategy**
- currently being developed by the **World Bank Group Archives** (ISG)
- in collaboration with consultant **Peter Van Garderen** of Artefactual Systems Inc..

# Peter Van Garderen

Through my company, Artefactual Systems Inc., I provide consulting services to clients that are designing and implementing electronic recordkeeping or archives management software.

- World Bank Group Archives
- Botswana National Archives and Records Service
- International Records Management Trust
- National Archives & Ministry of the Interior of the Netherlands
- Insurance Corporation of British Columbia

# Education & Experience

- January 2001- present: Consultant, Artefactual Systems Inc.
- January 1999 – present: Adjunct Professor, UBC School of Library, Archival and Information Studies.
- June 2001- Certificate of Software Engineering, University of British Columbia
- June 1998 - November 2000 - Project Coordinator, *International Research on Permanent Authentic Records in Electronic Systems* (InterPARES Project).
- May 1996 - May 1998, Product Manager, Eloquent Systems Inc. (developers of library, archives and records management software)
- May 1997 - Master of Archival Studies, University of British Columbia.



LET'S JUST SEE HOW  
BROTHER DOMINIC IS GETTING  
ON WITH TRANSFERRING OUR  
ARCHIVES ON TO CD-ROM!

# WBG Archives

**Official repository of records selected for permanent retention**

**Custodian of semi-active records**

**Providing service to World Bank, MIGA, IFC, and ICSID**

**Under direction of the World Bank Group Archivist, within the Information Solutions Group, Information Management (ISGIM)**

# WBG Archives

- mandated the responsibility to manage all of the WBG's records, throughout their life-cycle
  - IBRD, IFC, MIGA
- AMS 10.10 – 10.12:
  - “The WBG Archives is responsible for developing any policies, standards, and procedures that may be needed:
    - to support the proper creation of WBG records
    - to support the proper management of WBG records ...
    - to support the proper retention and disposition of WBG records”
- This includes records in electronic format



# Core Archives Services

- Assistance for office staff transferring records to the Archives
- Reference and retrieval
- Vital-records/business-continuity planning
- As of 2002, responsible for providing public access to Bank Group records under the new *Disclosure Policy*

# Core Records Management Services

- Issuing policies, standards, guidelines, and procedures for record keeping
- Records schedules
- Advice on recordkeeping and records management
- Developing strategy for the management of records in the electronic environment: **Electronic Records Strategy**

# What is a Record?

- “Information created, received, and maintained as evidence and information by an organization or person, in pursuance of a legal obligation or in the transaction of business”
  - *ISO 15489 – Records Management*
- A record in digital form is referred to as an “electronic record.”
  - e.g. email, word processing and presentation documents, data in corporate information systems, intranet content

# Records Management

- “field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records”
  - *ISO 15489 Records Management*
- Records must be created and preserved or destroyed in a systematic manner to
  - provide the right information, at the right time to support the Bank’s business processes & decision-making
  - to protect its legal and fiscal accountability,
  - to maintain its corporate memory.

# What Are Electronic Records?

- Business information in digital format that has been or should be scheduled for retention or destruction.
- Business information in digital format that the bank needs to preserve and make available because of its:
  - business-use value (content re-versioning, re-purposing)
  - legal value (regulatory requirements)
  - fiscal auditing requirements
  - research / historical value (knowledge products, economic history)
  - accountability protection (disclosure – request for information)

# Electronic Records Strategy

- **objective:** ensure the systematic, enterprise-wide management of electronic records according to international standards, research and good practices.
- **management:** identification, retention scheduling, storage, accessibility, preservation, destruction
- **components:**
  - Conceptual Framework
  - Bankwide Standards & Practices
  - Archives Business System & Repository
  - Workplan
  - Networking & Collaboration
  - Education & Training

# Standards

- ISO 15489 – Records Management
  - International Organization for Standardization (November 2001)
    - Policy & Responsibilities
    - Records Management Quality Requirements
    - Design and Implementation of Records Systems
    - Records Management Processes & Controls
- US DoD 5015.2 – “Design Criteria Standard for Electronic Records Management Software Applications”
  - version 2, June 19, 2002
- MoReq – “Model Requirements for the Management of Electronic Records”
  - European Commission (May 2001)

# Research & Good Practices

- UBC Project – “The Preservation of the Integrity of Electronic Records”
- Pittsburgh Project – “Functional Requirements for Evidence in Recordkeeping”
- VERS – “Victorian Electronic Records Strategy”
- InterPARES Project – “International Research on the Preservation of Authentic Records in Electronic Systems”
- OAIS – “Reference Model for an Open Archival Information System”
- SDSC/NARA – “Collection-Based Persistent Archives”
- PERM Project – “Preserving Electronic Records Stored in a RMA”

# The Lay of the Land

- So where are these electronic records you speak of?

# WBG IT Architecture

- IBM Servers running Microsoft NT & Unix
- Relational database systems: Oracle, Sybase & SQL Server
- Most field offices are connected directly to the Bank's info. systems via the Enterprise Network
- Standard TCP/IP protocol is used throughout the enterprise
- Standard desktops (including country offices):
  - SAP R/3 GUI, Lotus Notes R5, & Internet Explorer v5
- Storage Area Network - H & J Building Data Centres
  - EMC Servers, IBM TSM Software

# ISG Corporate Info. Systems

- SAP 4.0
  - supports: IBRD, IFC, & MIGA
  - functions: financial accounting, controlling, funds management, project system, materials management, & workflow (decisions & approvals)
- Peoplesoft 7.5
  - supports: IBRD, IFC, & MIGA (incl. all country offices)
  - functions: personnel administration, payroll, benefits & pension
- Loan Administration System (in-house)
  - supports: loan disbursement & administration

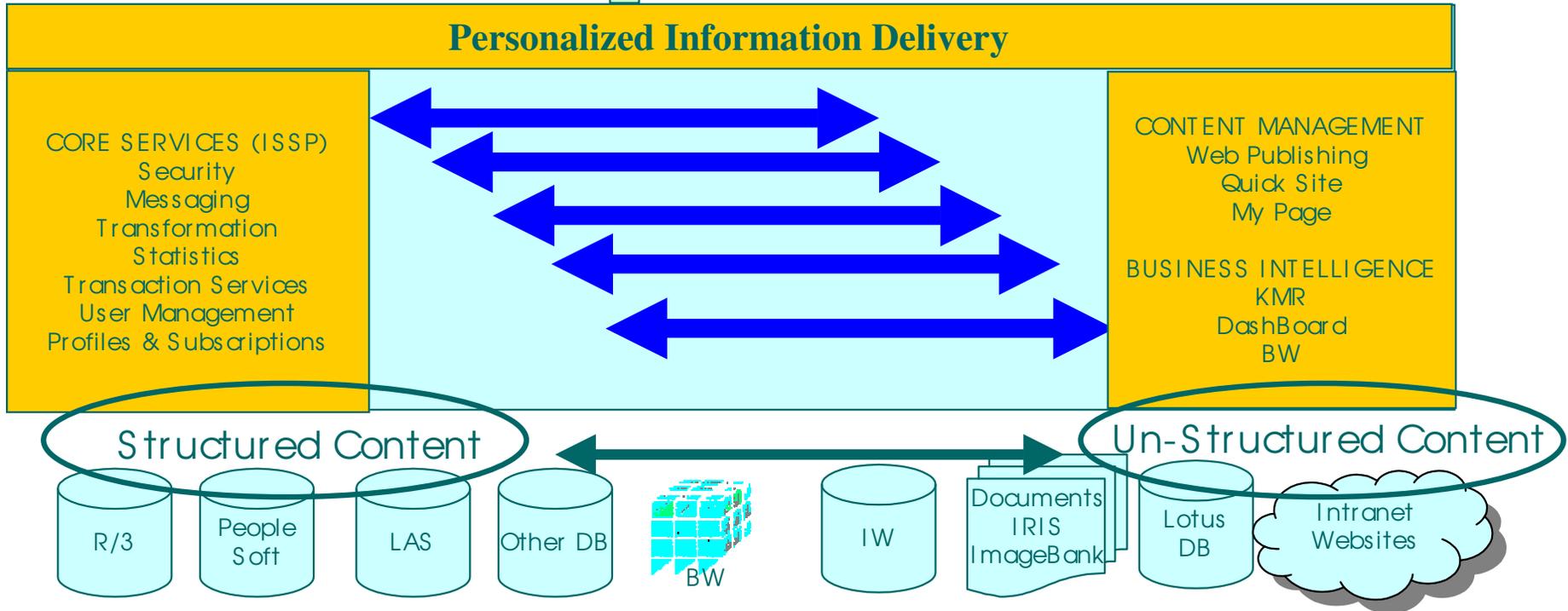
# ISG Information Delivery

- Over 600 independent websites and a variety of document management systems (eg. IRIS 3&4) along with several Lotus Notes applications help collect & disseminate operational data to the internal and external consumers of WBG information
- Website strategy: consolidate independent websites under a common framework & internet platform: Vignette & IBM WebSphere
  - Archives: bi-annual snapshots of WBG public website to preserve versions of the website as 'digital artifacts'

# Information Delivery - Architecture



| Donors Portal  | Borrowers Portal  | Project Portal  | Country Director   | TTL   | Managers   |
|--|---|---|--|---|--|
| <ul style="list-style-type: none"> <li>•My Funds</li> <li>•Trust Fund</li> <li>•Reports</li> <li>•Bills</li> </ul> | <ul style="list-style-type: none"> <li>•My Loans &amp; Projects</li> <li>•Borrower Procurement</li> <li>•Bills on the web</li> <li>•Policies</li> </ul> | <ul style="list-style-type: none"> <li>•Project Information</li> <li>•Project Teams</li> <li>•Project Documents</li> <li>•Procedures</li> </ul> | <ul style="list-style-type: none"> <li>•CAS</li> <li>•Country Reports</li> <li>•Country Projects View</li> <li>•Visitors to Country</li> </ul> | <ul style="list-style-type: none"> <li>•Projects Portfolio</li> <li>•Projects Information</li> <li>•Alerts</li> <li>•Project Teams</li> <li>•Project Documents</li> </ul> | <ul style="list-style-type: none"> <li>•Budget Reports</li> <li>•OPEs, Leave</li> <li>•Staff – resumes, lists</li> <li>•Contract Renewals</li> <li>•List of Approvals</li> </ul> |
| <b>Core Portal Features</b> * SAP Workflow * View Calendar * View eMail * Alerts * Reports * News                  |   |   |  |   |  |



# THE BUSINESS CASE

- It sounds like things are under control, why do we need an Electronic Records Strategy?
  - Legal discovery
  - Freedom of information
  - World Bank Disclosure Policy
  - information / records capture
  - long-term accessibility
    - retrievable, readable, usable, authentic, reliable
  - data storage management
- The Bank's most valuable asset, **its reputation as a responsible and trustworthy organization**, will be at risk unless action is taken to implement an enterprise-wide electronic records strategy

# Electronic Records Strategy

“Because of the Sept. 11 attacks, global enterprises have realized that they must assure customers, suppliers, and partners that the business is protected against internal security threats and external disaster – such assurance has become **an important part of an enterprise’s overall brand value**”

- Gartner Group Research Note (March 14, 2002)

“In the aftermath of Enron’s bankruptcy, customers, partners and suppliers will be more conscious of how an enterprise manages its vital business records. **Trustworthy partners will demonstrate that they have the systems and processes to protect those records.**”

- Gartner Group Research Note (March 14, 2002)

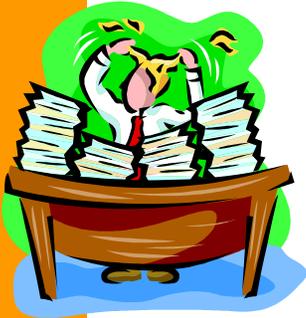
# Don't we have back-up procedures and a business continuity plan?

If we decide to back-up and maintain all of the Bank's digital business information

- storage management costs will rise
- and we won't be able to distinguish between useful and useless information.

- We need to **identify & track** the right information
- We need to **destroy** the right information.
- We need **systematic retention scheduling**

# Records Retention Scheduling



“An information retention policy must consider who will be looking for information in the future, when that future might occur and the kinds of questions that might be asked...Failure to address these questions up front will result in **a mass of impenetrable information** that is more a liability than an asset.”

- Gartner Advisory (March 22, 2002)



# Storage Requirements will continue to increase

- The world's total yearly production of print, film, optical and magnetic content requires approximately 1.5 billion gigabytes of storage, which equates to about 250mb for every person on earth
- Worldwide, over 7.5 billion office documents are created each year
  - *How Much Information?* (Berkeley, CA: University of California, 2002)

# Storage is Cheap, so What's the Problem?

- “A common misconception among many IT specialists is that computer data storage and its attendant costs do not pose a significant problem for an organization because a sizable increase in media capacity and the corresponding reductions in costs (as expressed in costs per megabyte) for the media. However this view ignores the overall costs associate with managing data.”
  - *Electronic Records Retention: New Strategies for Data Life Cycle Management* (ARMA, 2003).

# Storage Management Costs

- for every \$1 per megabyte spent on disk storage, the total spent in managing that storage ranges from \$3 - \$8 per megabyte per year
  - David Simpson, “Cut Your Storage Management Costs” *Datamation* (November, 1996)
- “Chiefly because of the explosive growth of computer data in most organizations, the total cost of data ownership continues to escalate dramatically. Data storage analysts report that the cost of operating this device is \$5 to \$7 annually for every dollar spent on the hardware.
  - Paul Wang, “Understanding Online Archiving” *Storage Management Solutions* 5, no.11 (2000)

# Storage Management Costs

- “An analyst with the META Group forecasts data increases of a hundred fold within the next five years. Moreover, the total expenditures necessary to accommodate this growth will escalate more than ten fold during the next five years. Over the next five years, given an six-fold decrease in price per terabyte and a hundred fold increase in the quantity of data to be stored, a thirteen-fold increase can be expected in total data management costs”
  - Tim Shinkle “Changing Technology Requires a New Look at Enterprise E-Mail Management” *Storage Management Solutions* 6, no.3 (2001).

# The 80:20 Rule – Let's Get Rid of What We Don't Need

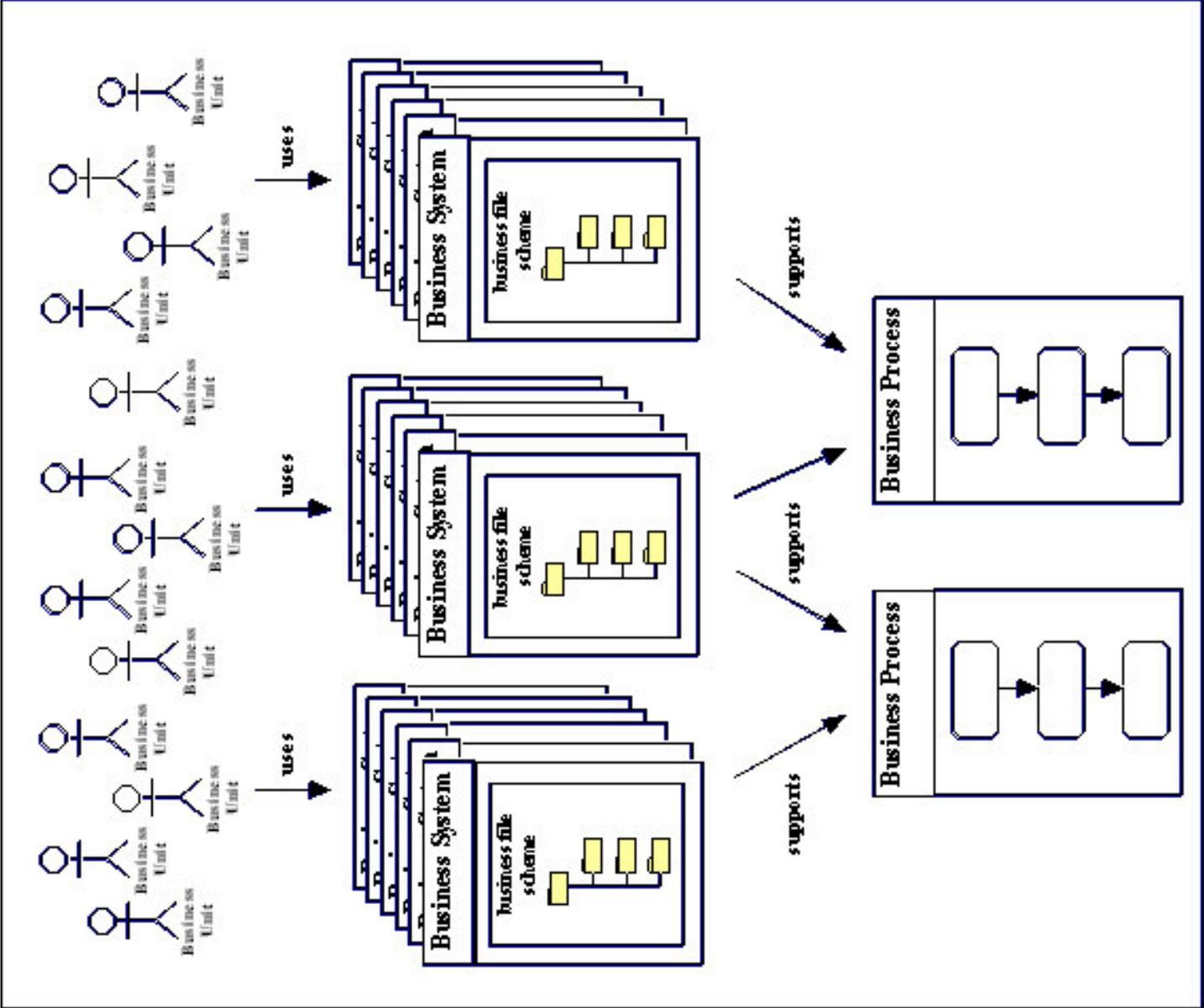
- 80 percent of the data stored by an organization is hardly ever accessed
  - “More than 80% of the data on any magnetic disk on a typical network has not been touched in 30 days; more than 50% has not been accessed in several months; only 20% of the disk contains active data”
    - Mark Osgood Smith “HSM to the Rescue” *Imaging Business* (January 1995)
  - The probability of reusing data falls by 50 percent after the data is three days old. After 30 days since creation, the probability of reuse normally falls below a few percentage points.
    - Fred Moore, “Digital Data’s Future” *Computer Technology Review* (October 2000)
- ◇ Save money on storage management costs & make it easier to find relevant information

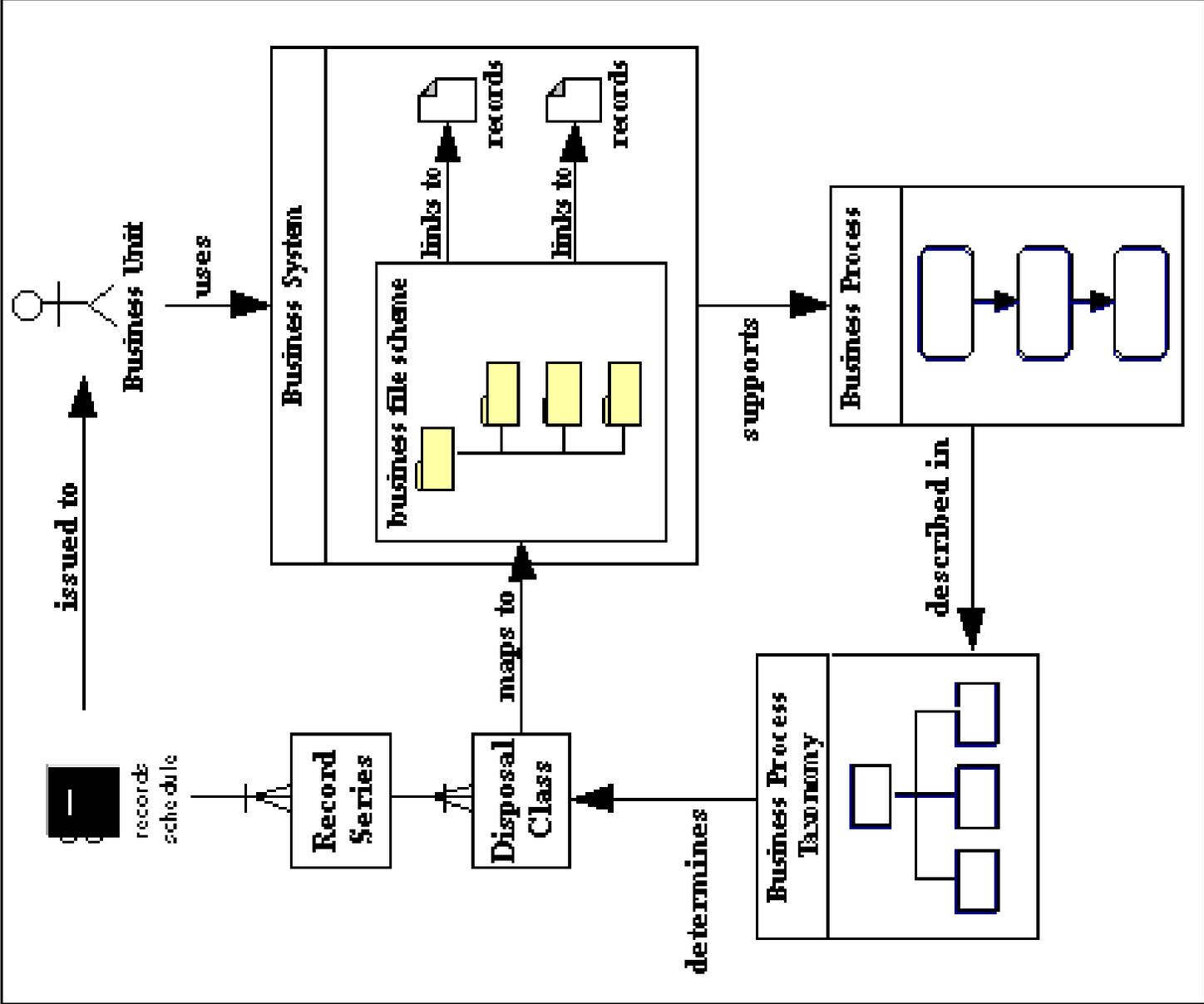
# RETENTION SCHEDULES

- identify disposal classes (a group or set of common records),
- the retention period assigned to each disposal class (e.g. 5 years or 7 years)
- and the final disposition for each disposal class (e.g. destroy or preserve).
- Disposal classes which are related (e.g. through a common business unit, business process, filing scheme, media format, etc.) are grouped together as record series.
- A record series usually contains multiple disposal classes but may contain only one disposal class.

# Business Function Methodology

- “One of the newer trends in retention scheduling is to develop schedules based on relatively broad generic or functional categories. Functional schedules are typically developed at the business process level – one schedule for each major functional area.”
  - *Electronic Records Retention: New Strategies for Data Life Cycle Management* (ARMA International, 2003)
- Business Function Taxonomy
  - ISG Data Administration
- Standardized Criteria for Appraisal
  - business use, legal, audit, accountability, research value



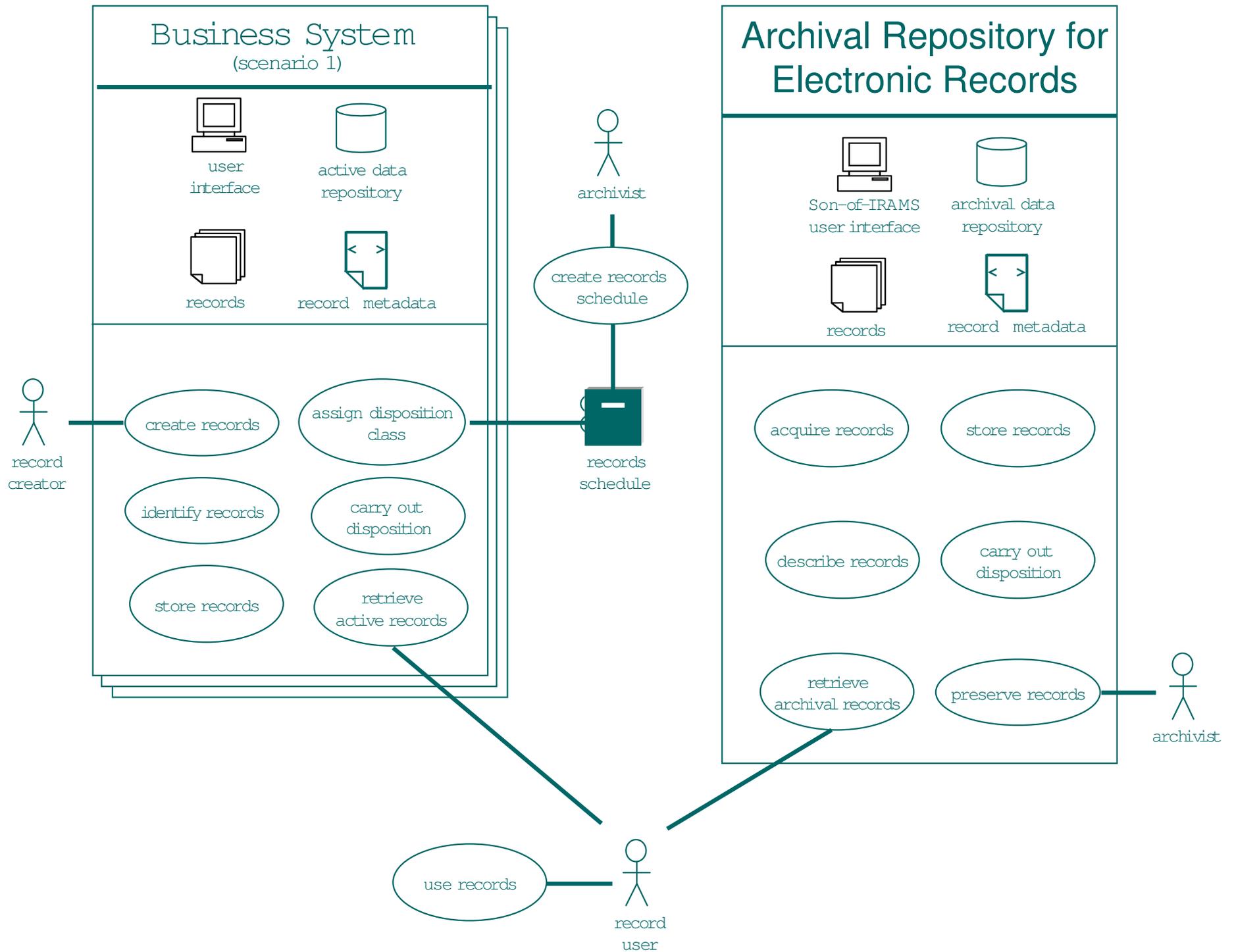


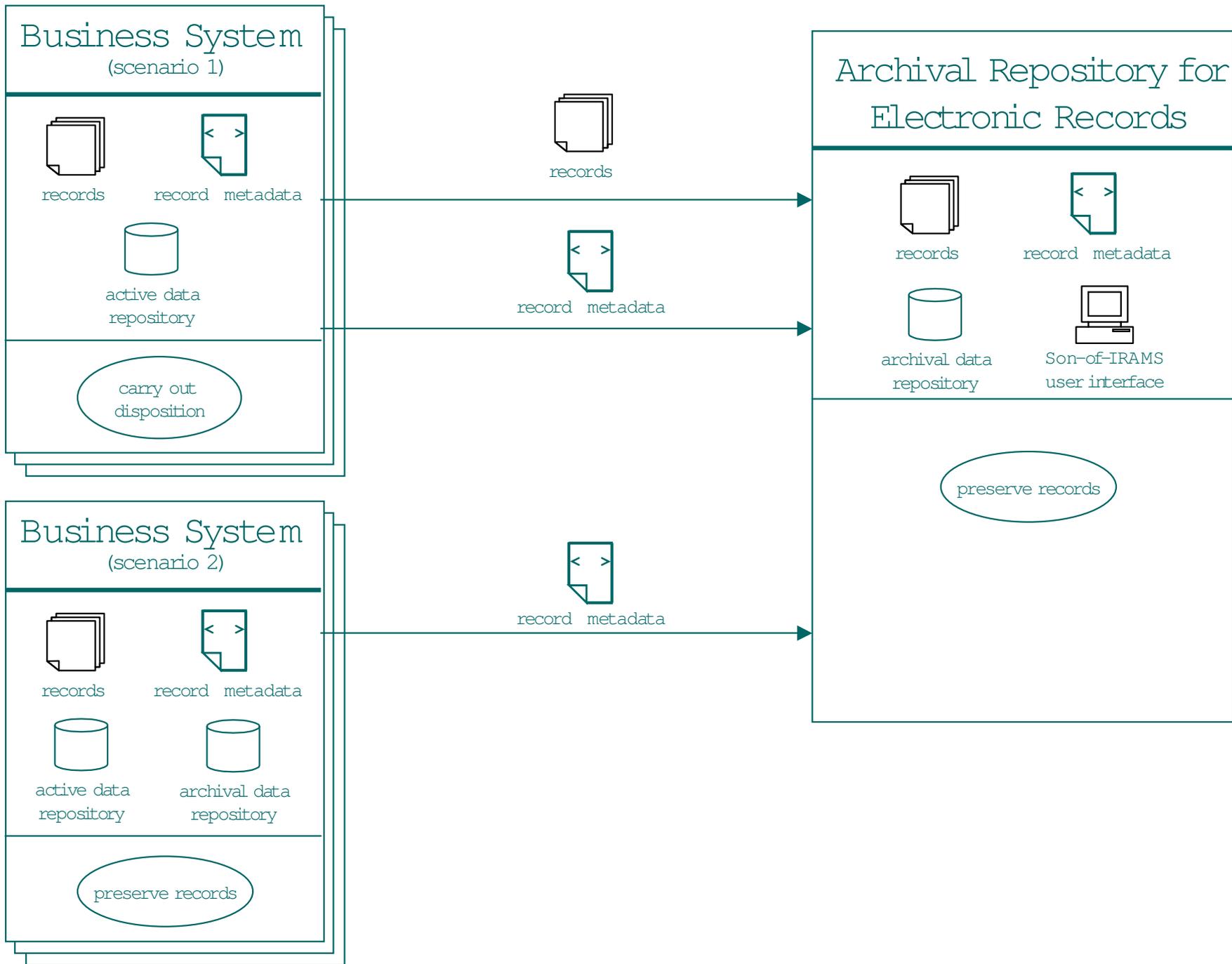
# Business Function Methodology

- “Business processes can no longer be second-class citizens cast in concrete the way they are in today’s applications and systems integration practices. **The ‘business process’ must supersede the application as the primary unit for packaging software.**”
  - *Business Process Management: The Third Wave* (2002)
- Business information systems at the Bank are being designed with the business process as the core organizing principle.
- This will make it easier to map disposal classes (based on business functions) to business information systems
  - and to integrate retention schedules with classification & retrieval schemes based on business functions

# WBG Standards

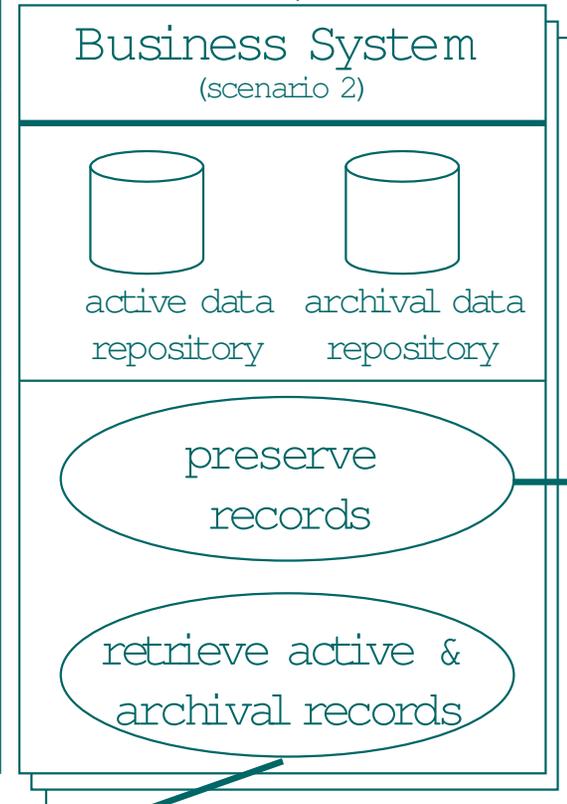
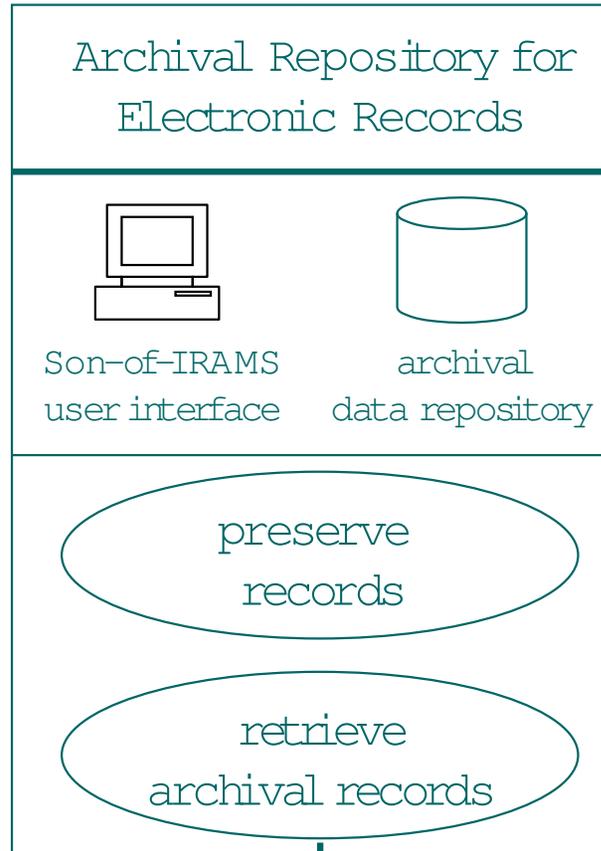
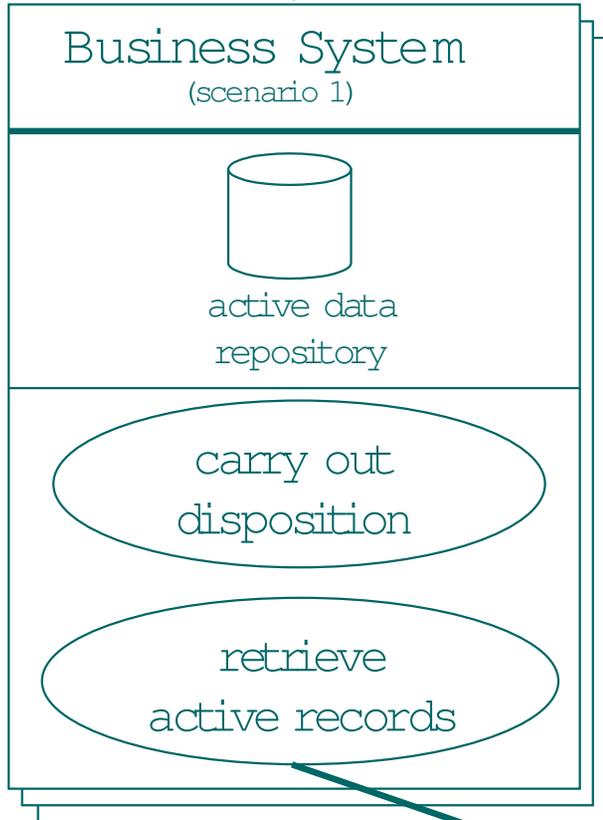
- Directive References in the WBG Administration Manual
  - [10.00 Information Management & Library Services](#)
- Standard for Recordkeeping in the Electronic Office Environment.
  - staff procedures for the proper creation and use of electronic records at the desktop level
- Standard for Unit Records Management Programs
  - records management framework intended to provide staff with the resources and support at the business unit level to meet their recordkeeping responsibilities
- Standard for Recordkeeping in Business Systems
  - a core set of recordkeeping requirements at the systems level intended for WBG staff responsible for designing, engineering, and administering WBG business systems.





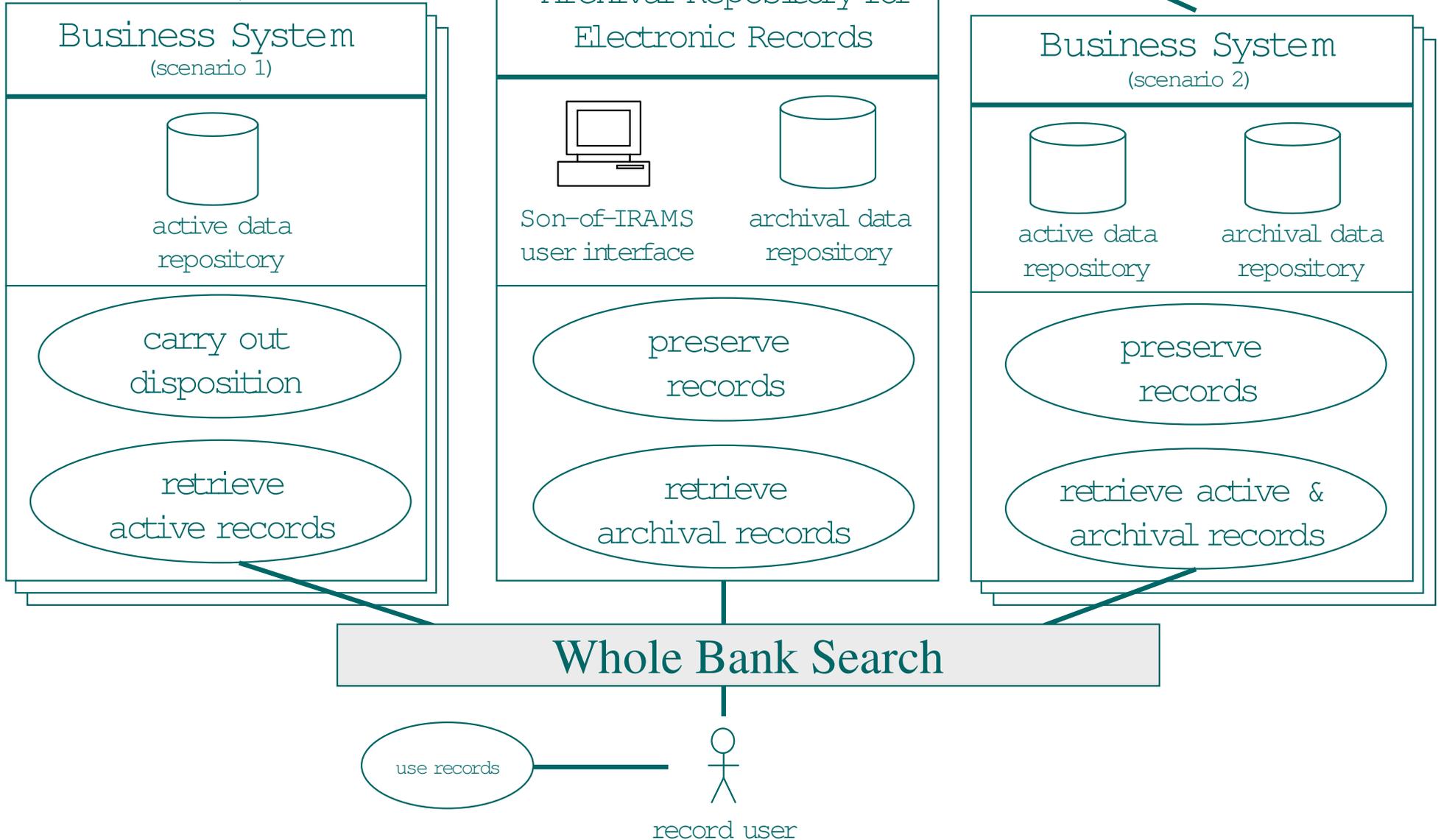


Standard for Recordkeeping in Business Systems

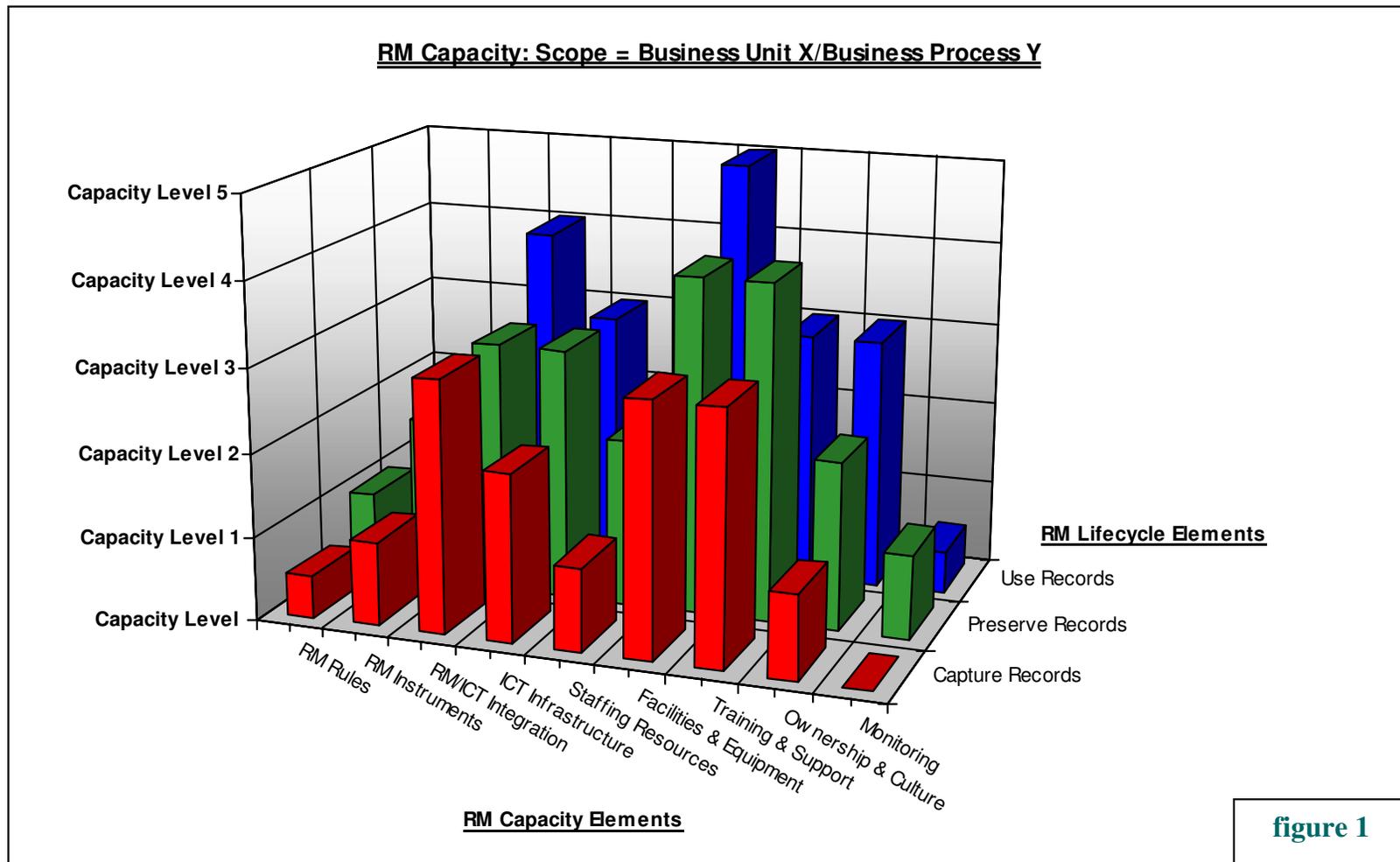




Standard for Recordkeeping in Business Systems



# Records Management Ownership & Culture



# Electronic Records Strategy: Current Status & Next Steps

- ERS roll-out strategy – first ISG environment (then expand to IBRD, IFC, MIGA)
- Current Phase (FY2003-04): Analysis, Design & Testing
  - Business Function Methodology for Records Retention Scheduling
  - Implementation of Son-of-IRAMS
  - Transferring retention schedules to business systems
  - Disposal Triggers in Business Systems
  - Transfer of Metadata
  - Transfer of Electronic Records
  - IRIS 3, IRIS 4, SAP
- ERS website – coming soon...
  - Andres McAlister - [amcalister@worldbank.org](mailto:amcalister@worldbank.org)