

Strategic Implications of E-Business and Electronic Records

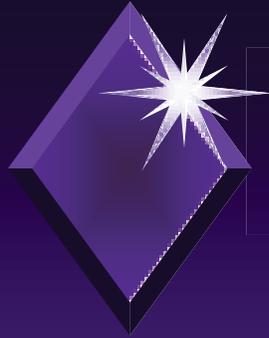


John McDonald
World Bank, Washington
June, 2001



Overview

- ◆ Organizational trends
- ◆ Technological trends
- ◆ Electronic record keeping issues
- ◆ Electronic record keeping requirements
- ◆ Managing electronic records in diverse computing environments:
 - ◆ Structured business processes
 - ◆ 'unstructured' work environments
 - ◆ The internet environment



Organizational Trends

- Restructuring
- Downsizing
- Steering vs rowing
- Service orientation



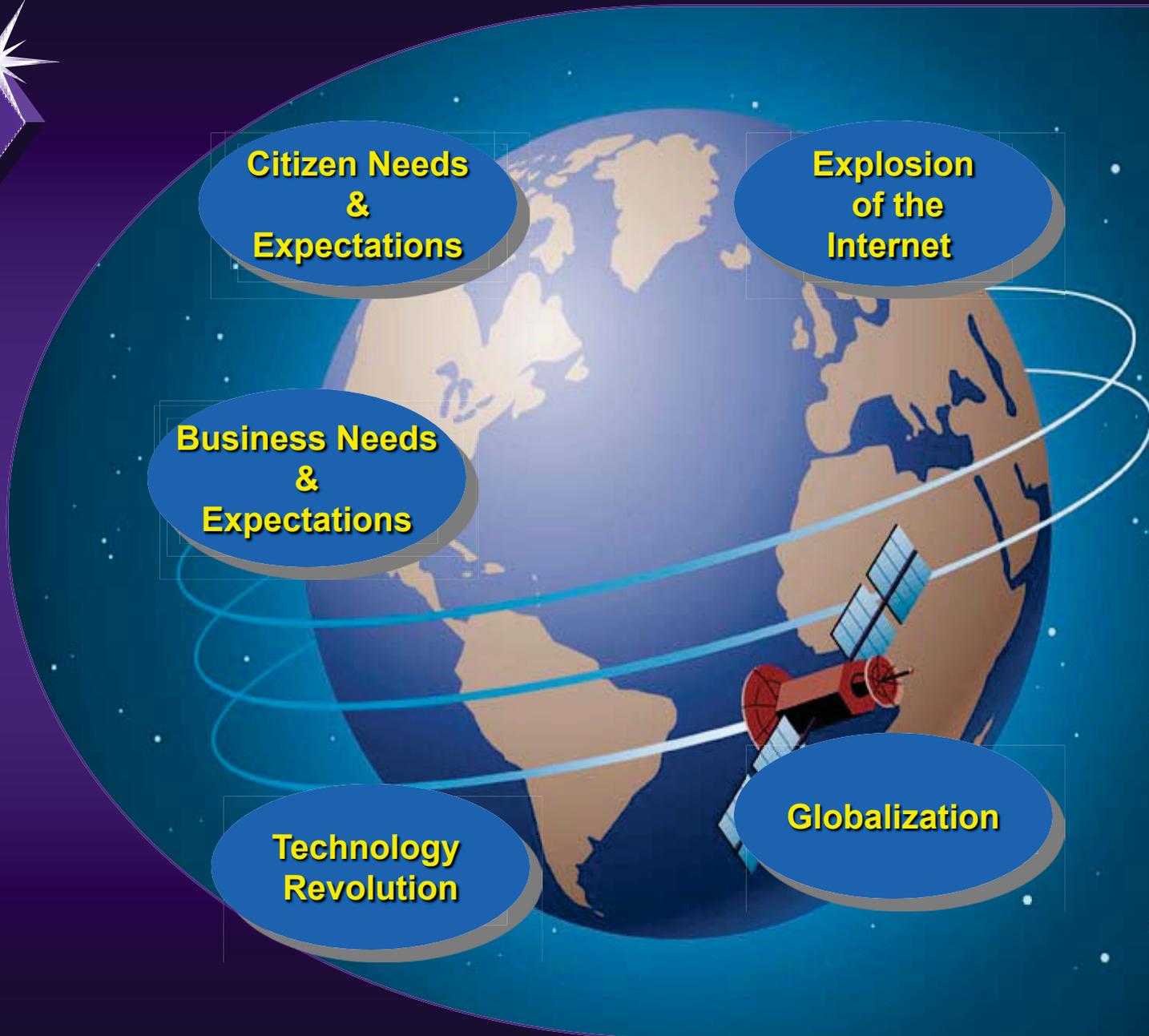
**Citizen Needs
&
Expectations**

**Explosion
of the
Internet**

**Business Needs
&
Expectations**

**Technology
Revolution**

Globalization

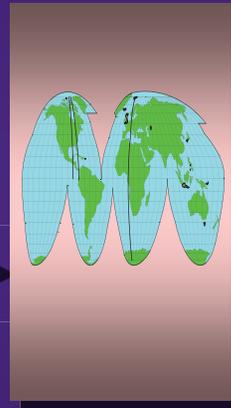


What is the enabling technology vision?

Access Options

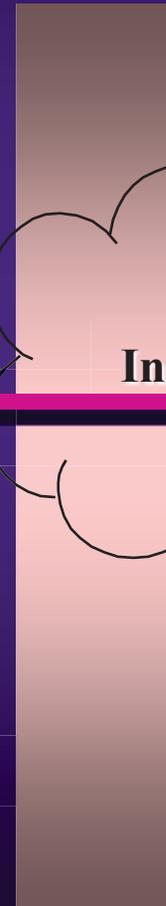


Citizen/
Partner/
Client
Business
Map



Relevant, Timely
Accessible Services
Responding to
Individual, Partner, and
Community Needs

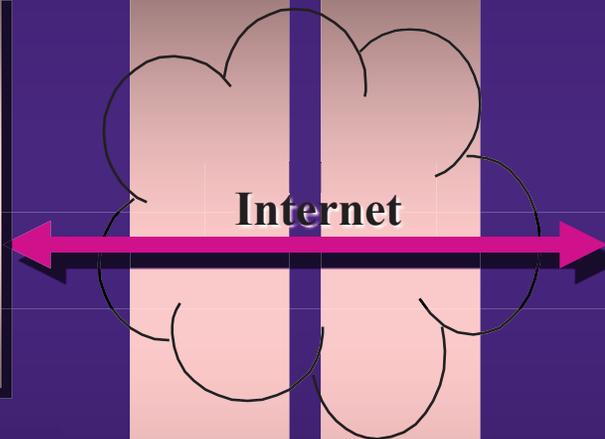
Info



Transactions



Internet



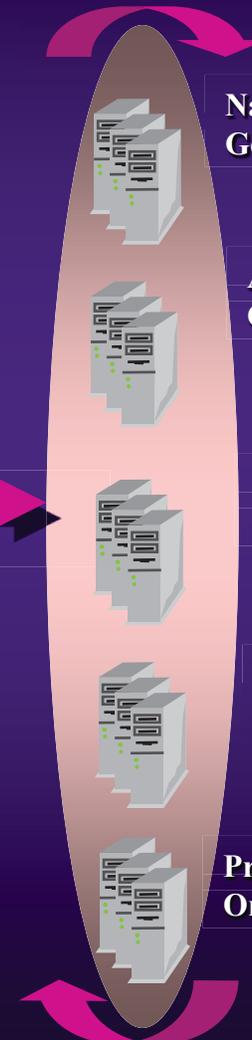
National
Governments

Academic
Organizations

International
Organizations

Non-Profit
Agencies

Private Sector
Organizations





What is the outcome?

- ◆ Transparency
- ◆ Information anywhere at anytime



Some running assumptions...

- ◆ Information may be recorded in many different forms;
 - ◆ on paper, in electronic form, in peoples' minds, etc.
- ◆ Information can be tacit as well as explicit;
 - ◆ both must be managed in an integrated manner
- ◆ Information is an asset (resource) that must be managed as any other valued asset (resource)
- ◆ The value of information is enhanced if it can be related to other information within a given context



Some running assumptions...(cont.)

- ◆ **The purpose of information is to:**
 - ◆ support decision-making,
 - ◆ program/service delivery,
 - ◆ the achievement of strategic priorities, and:
 - ◆ the ability to meet accountability requirements expressed in law and policy
- ◆ **The management of information must be viewed within the same context as the management of the “business” of the organization.**



◆ **What is the “business” view?**

Business View

Organization

Function/activity

Business process

task

task

task

task

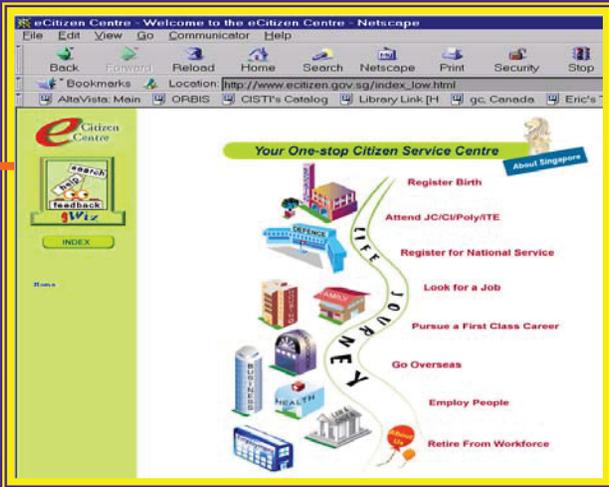
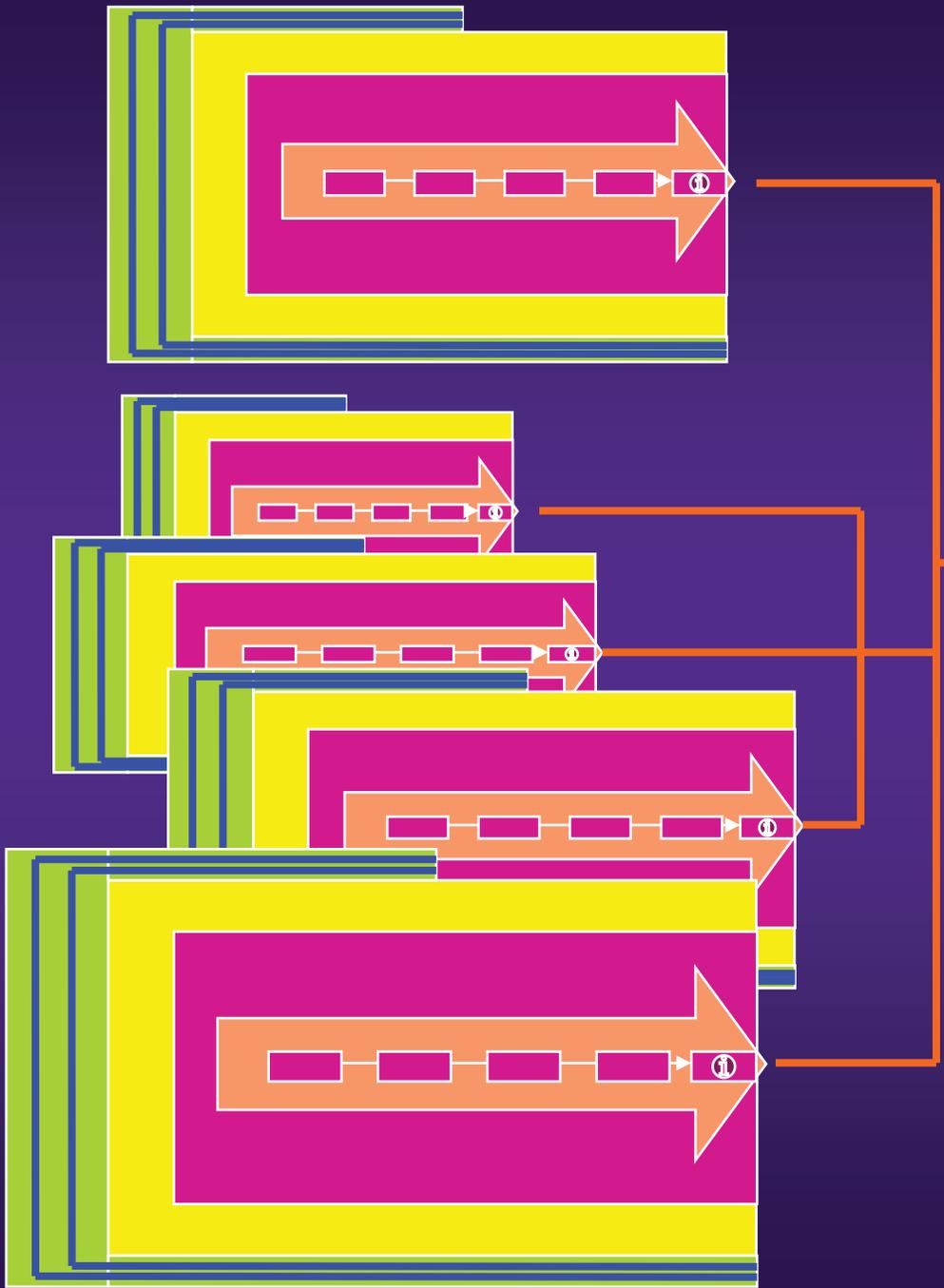
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Law

Mandate

Accountability





- ◆ **What is the information view in the context of the “business” view?**
- ◆ **(begins with an understanding of the activities performed on information)**



Information activities

- Create

- ◆ Activities organizations do to manifest information - bring it into existence - in order to support program/service delivery
 - ◆ create, collect, generate, receive



Information activities

- Use

- ◆ Activities organizations do with their information to support program/service delivery
 - ◆ access, exchange, transmit, disseminate, share



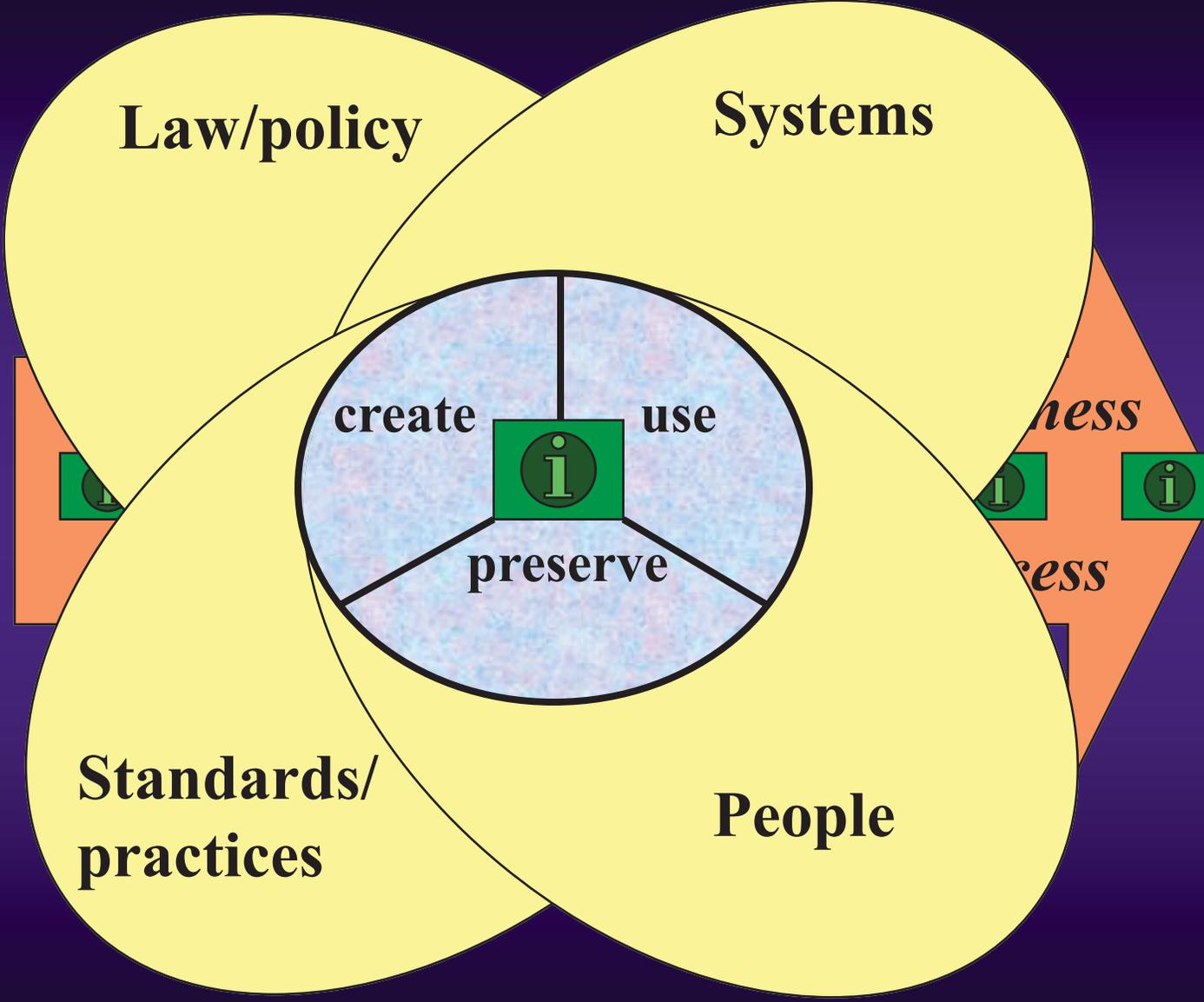
Information activities

- Preserve

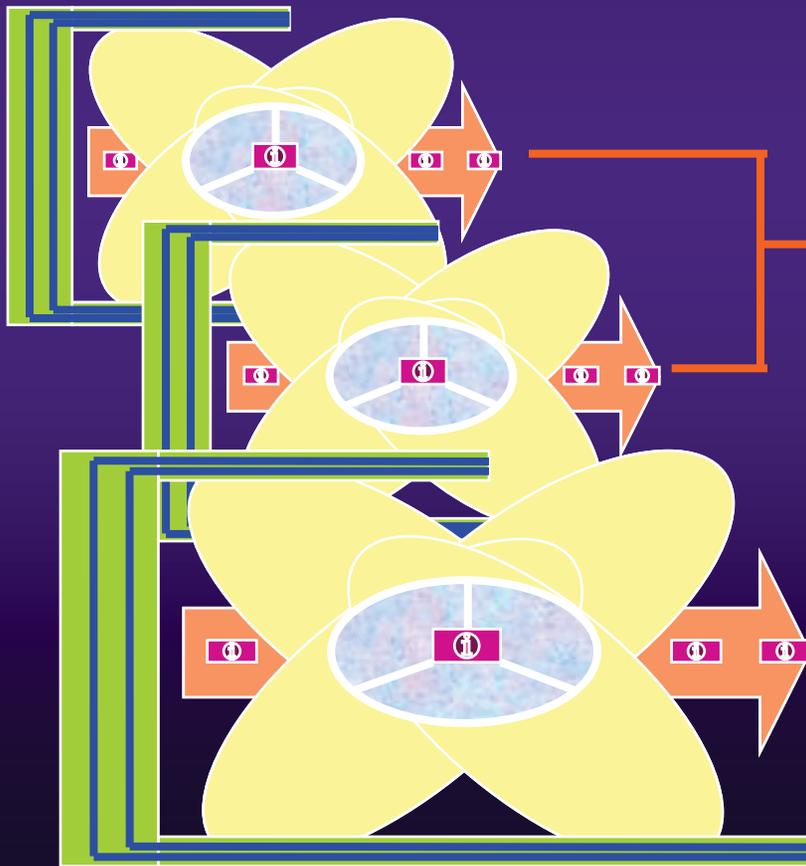
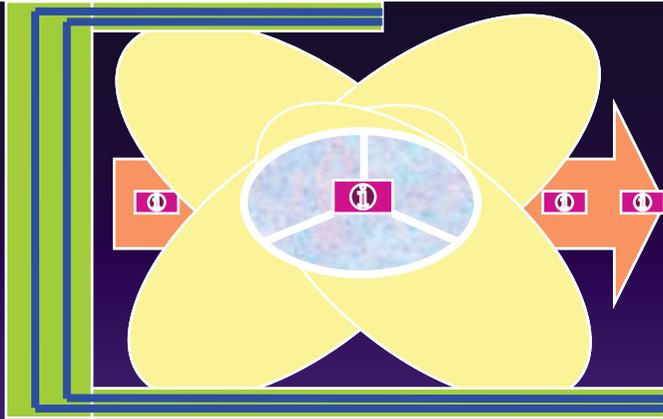
- ◆ Activities organizations do to their information to ensure that it is authentic, reliable; available, understandable, and usable for as long as required for program/service delivery and accountability
 - ◆ retain, protect, store, describe, migrate, dispose

Information View

Awareness/Understanding
Ownership/Accountability

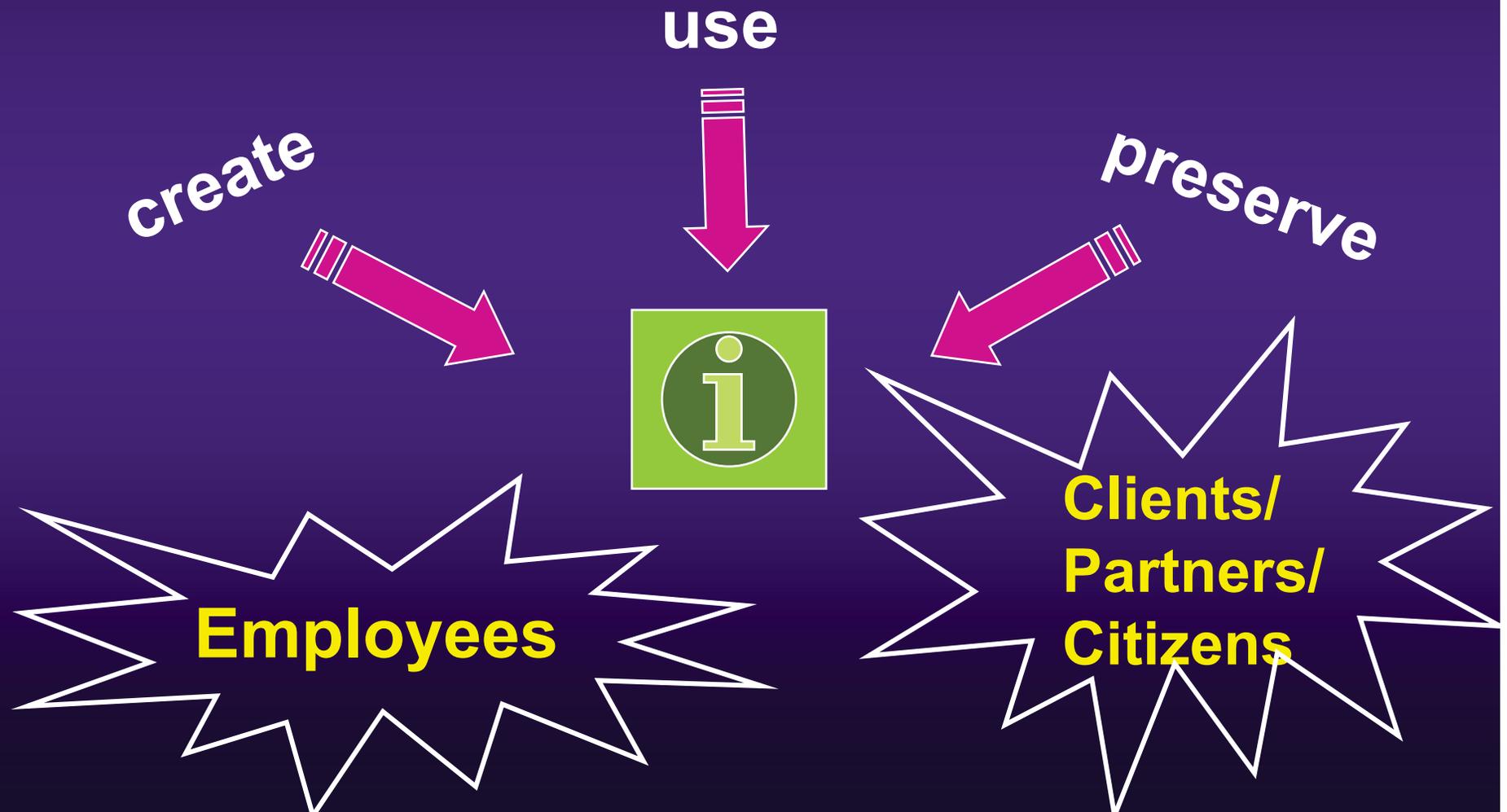


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Information Management - Issues





Information Creation

- ◆ What am I supposed to keep?
- ◆ (What am I supposed to create?)
- ◆ What should an information object look like re: authenticity, reliability and integrity?
- ◆ Recognizing that a single information object is of little value on its own, how do I relate information objects to one another so that I can understand them in context?
- ◆ Who can I turn to for help?



Information Use

- ◆ How do I access information (the information of others)?
- ◆ How do I navigate across complex, distributed information bases to find what I need?
- ◆ How do I exploit information recognizing that such information may be of value far beyond its original purpose?
- ◆ Who can I turn to for help?



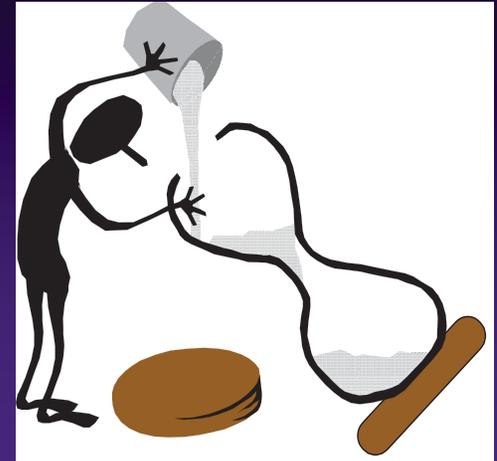
Information Preservation

- ◆ How do I maintain the authenticity and reliability of information through time?
- ◆ How do I protect information from inadvertent/unauthorized access and destruction?
- ◆ How do I make sure information is gone when its supposed to be gone?
- ◆ Who can I turn to for help?

**The information may be
required beyond the life
of the system**

and...

**Information in electronic
form is a fragile resource**





Why?

- ◆ **Stored on media that deteriorates over time**
- ◆ **Created by software/hardware that changes over time**
- ◆ **Supported by inadequate metadata leading to loss of context over time**
- ◆ **Supported by a weak accountability framework contributing to corporate amnesia over time**



Which Leads To...

- ◆ **Poor quality decisions**
- ◆ **Heightened risk**
- ◆ **Lack of trust**
- ◆ **Lost opportunities**
- ◆ **Increased costs**
- ◆ **Corporate memory loss**



Some Unfortunate Examples

- ◆ **Murders in Somalia**
- ◆ **\$1 billion in lost Canadian government grants and contributions**
- ◆ **Ollie North and the Iran-contra scandal**
- ◆ **NASA's lost interplanetary data files**
- ◆ **The FBI/McVeigh 'missing files' case**



The Requirements?

- ◆ Policies
- ◆ Standards and practices
- ◆ Systems and technologies

And...



The Requirements?

- ◆ **People**

- ◆ **Information creators/users**
- ◆ **Information infrastructure builders**

**... with the required
knowledge, skills,
and abilities**



The Solutions?

- ◆ **The archives and records management community**
 - ◆ San Diego project
 - ◆ INTERPARES
 - ◆ DLM functional requirements
 - ◆ Australian SPIRT metadata project
- ◆ **International standards**
 - ◆ ISO Records Management Standard
- ◆ **Industry sectors**
 - ◆ Pharmaceutical industry
 - ◆ Patents organizations
 - ◆ Others



Applying the requirements

- ◆ **Structured business processes**
- ◆ **“Unstructured” work environments**
- ◆ **The internet environment**



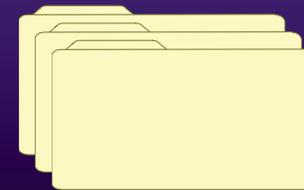
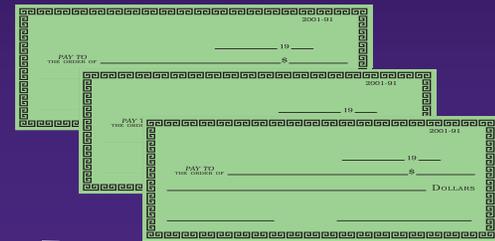
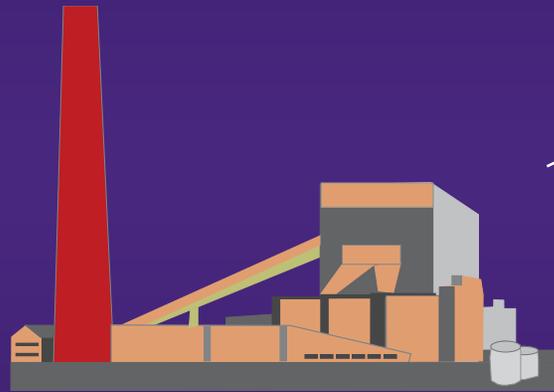
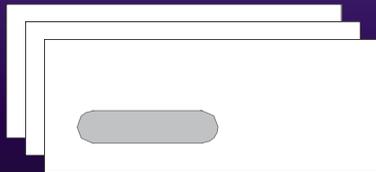
Before applying the solutions:

- ◆ **Understand the landscape**



The Technology Environment

The Factory Floor

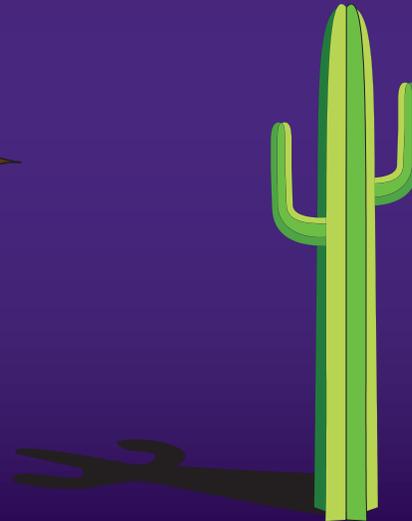




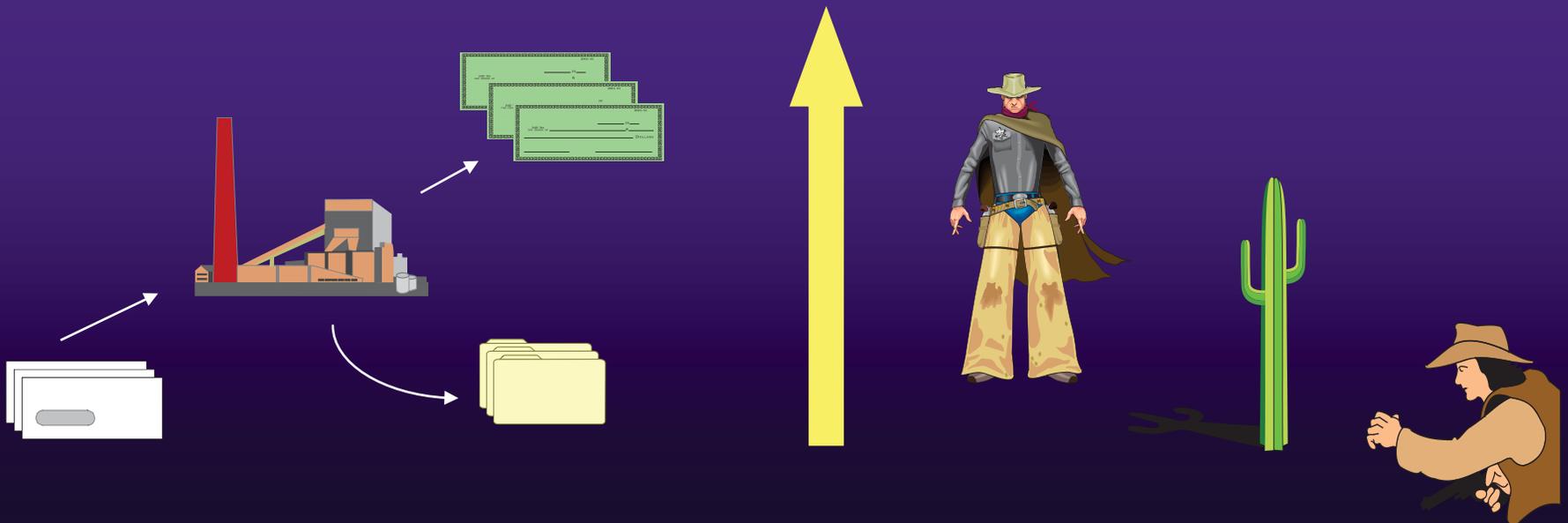
The Technology Environment

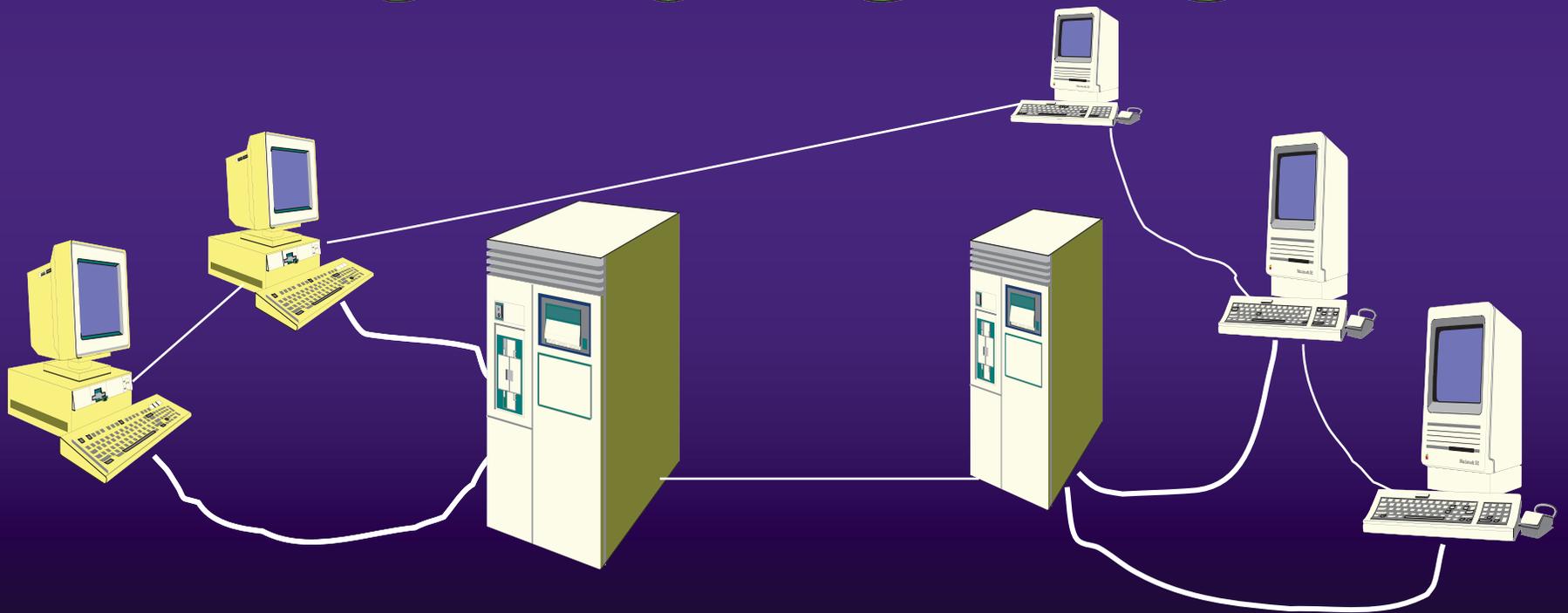
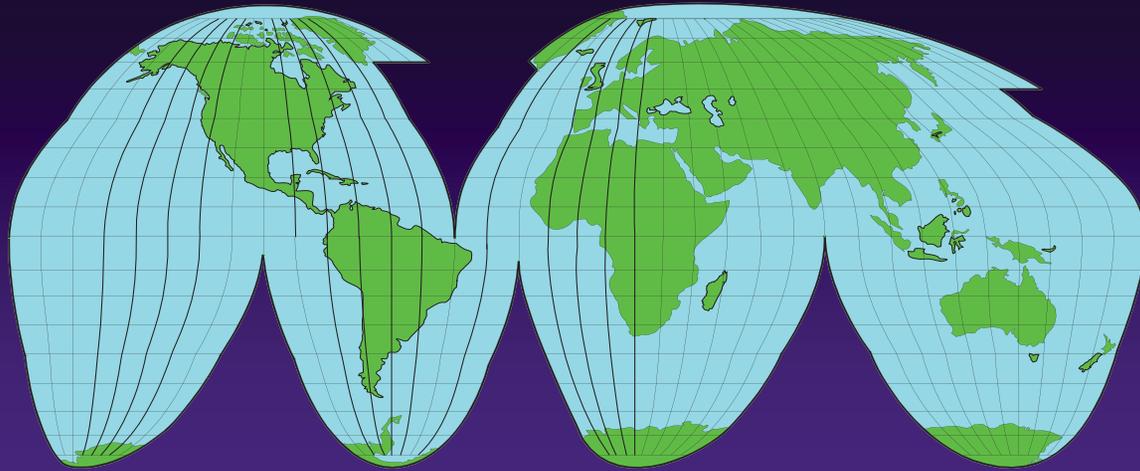


The Wild Frontier



The Technology Environment



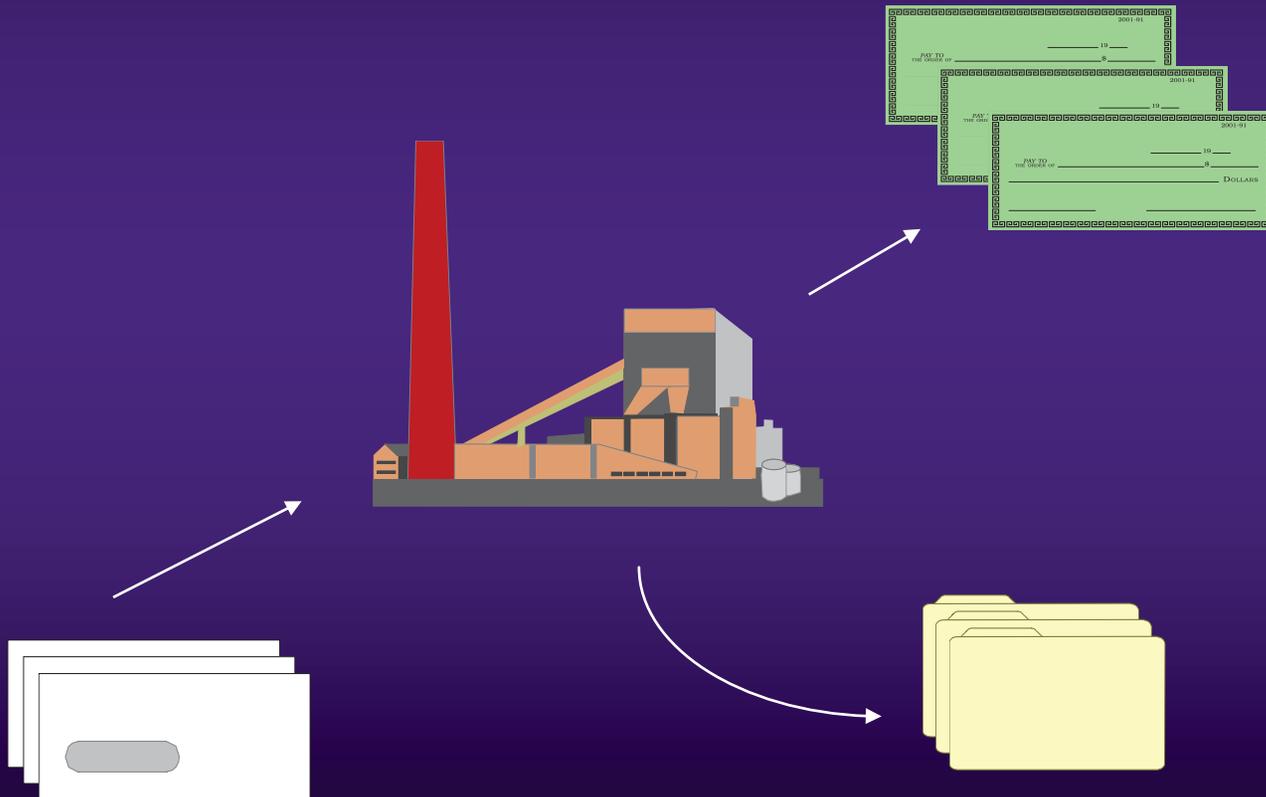


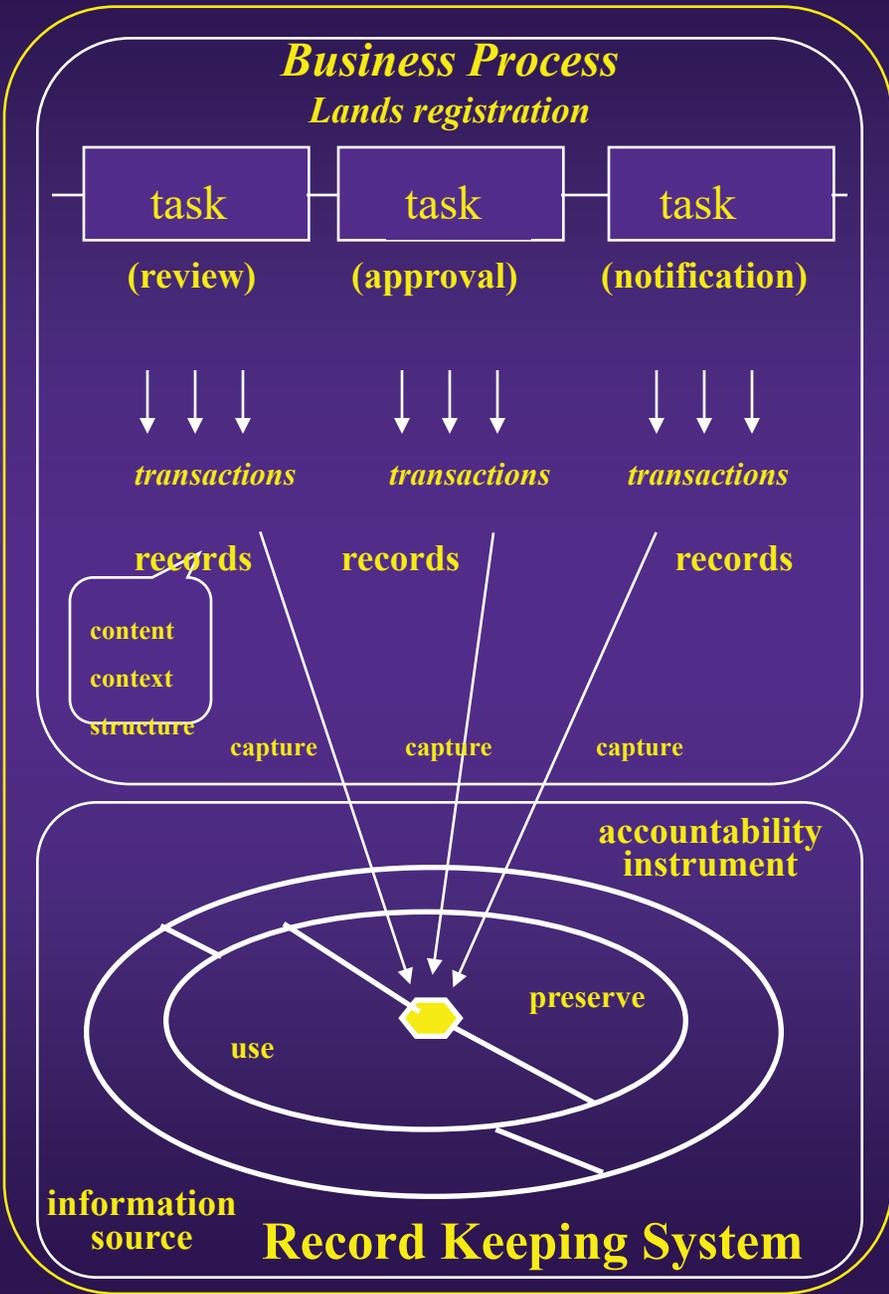


Structured Business Processes



Structured Business Processes (the factory floor)





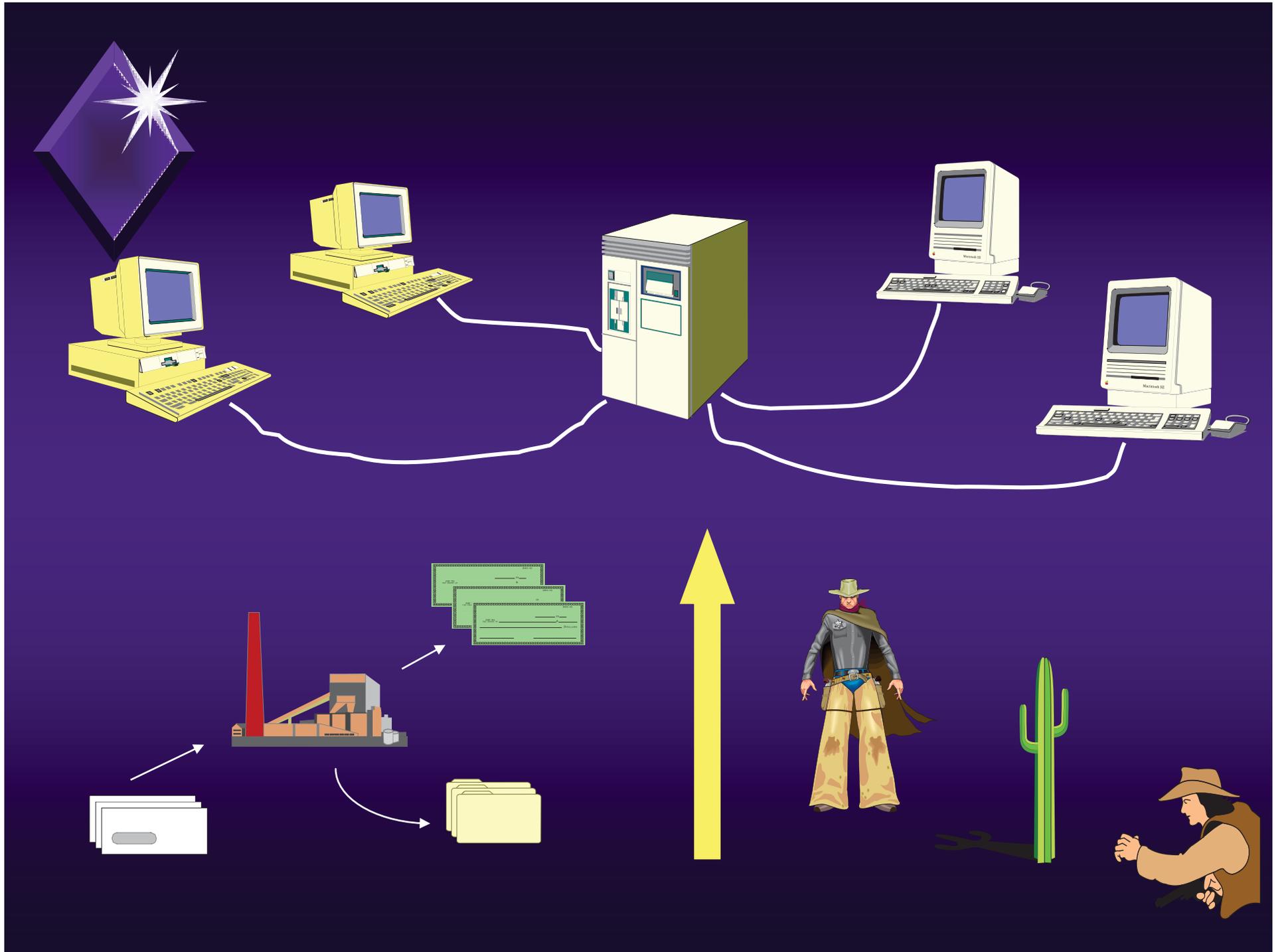


Structured Business Processes

- ◆ **Build approach to record keeping based on systems development/maintenance policies, standards and procedures**
- ◆ **Tap into the existing accountability framework**
- ◆ **Focus on functional requirements for incorporation in systems design**
- ◆ **Use systems audits and reviews to measure compliance**
- ◆ **Enhance record keeping awareness**

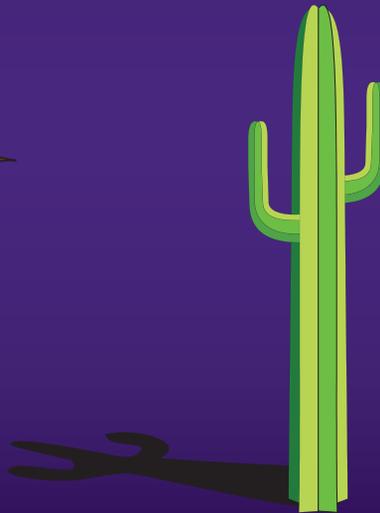
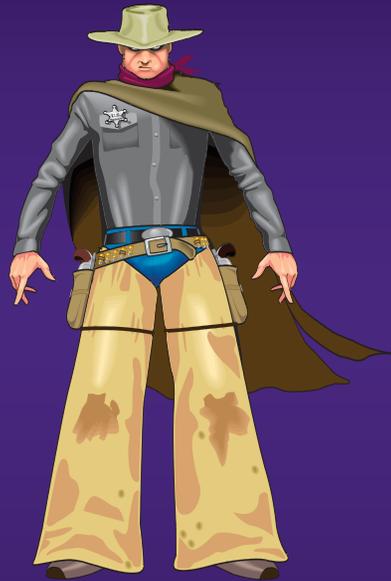


Managing Records in Shared Drives





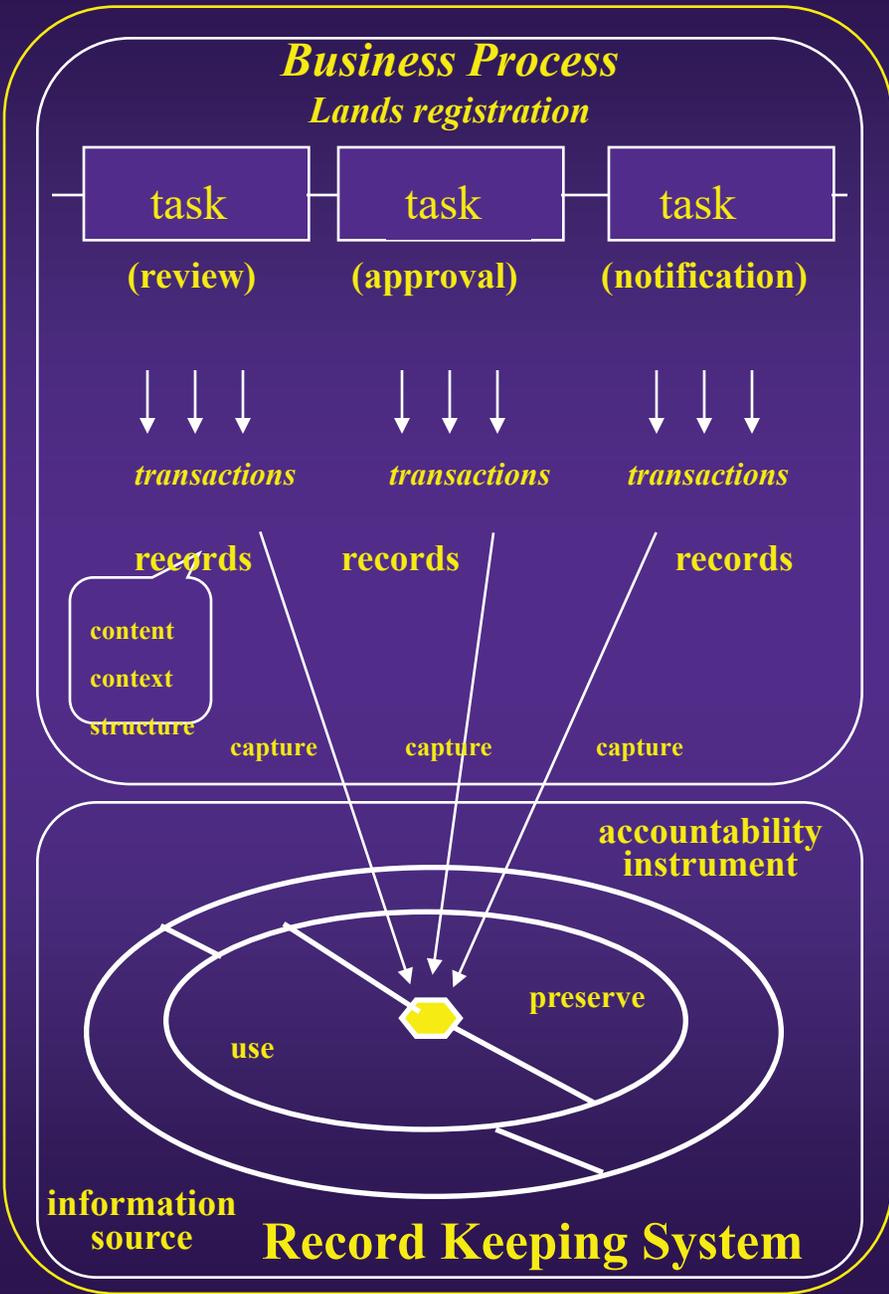
The wild frontier

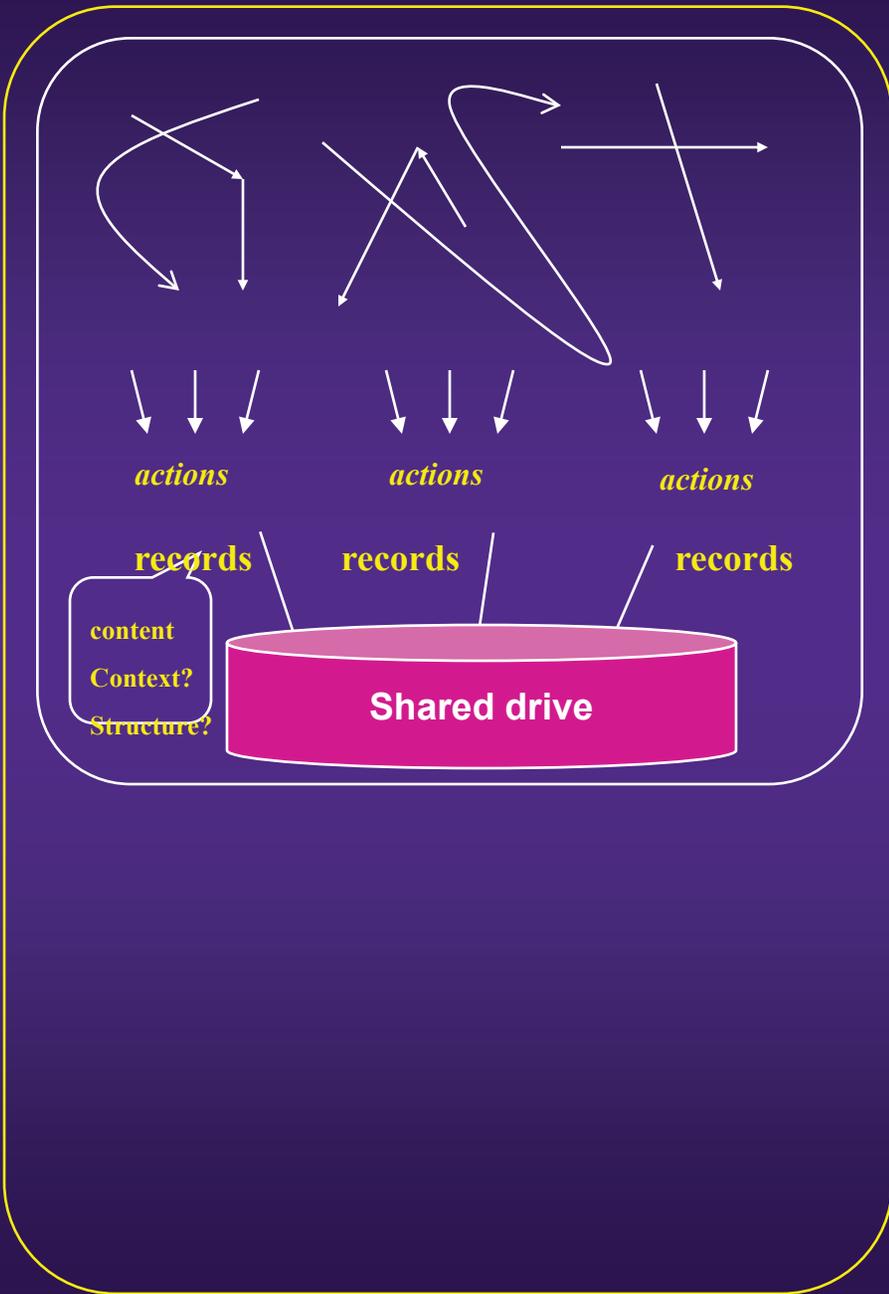




Problem

- ◆ Finding relevant electronic documents in a timely manner
- ◆ Bringing together the complete 'story' of an issue, project, etc.
- ◆ Distinguishing the wheat from the chaffe
- ◆ Building confidence re: compliance with information laws and policies





Mandate

Functions

Land Management

- Rural Land Development
- Urban Land Development
- Lands Registration
 - applications
 - review
- Land Use Analysis
- Regulation
- Internal Resource Management

Organization

Ministry of Lands

- National Land Management Directorate
 - urban development division
 - rural development division
- Office of the Registrar of Lands
- Research and Mapping Directorate
- Policy and Monitoring Directorate
- Corporate Services Directorate

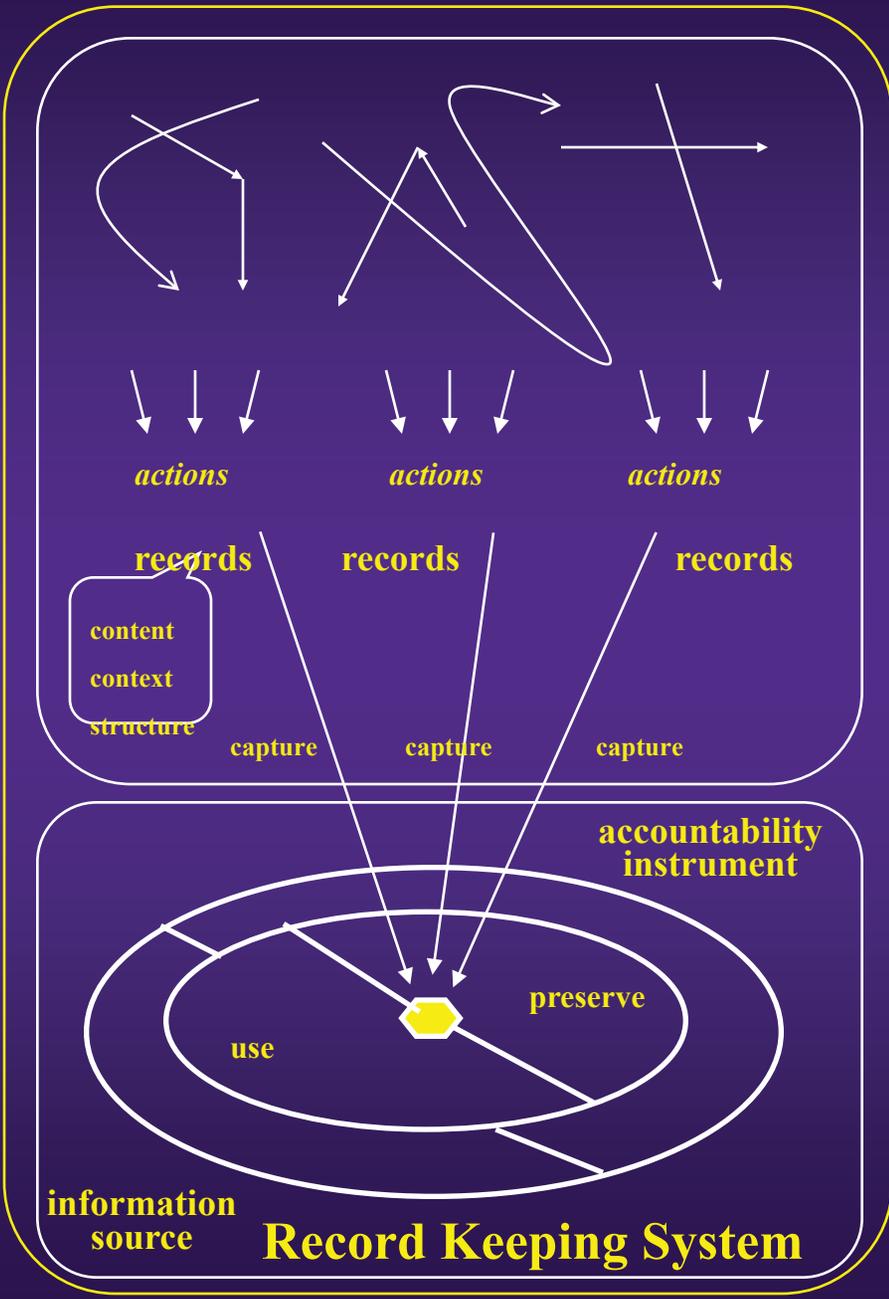


Solution

- ◆ **Configure the shared space to reflect the functions/activity based classification scheme;**
- ◆ **Migrate relevant folders to the new directory structure;**
- ◆ **Encourage e-mail messages to be stored on the shared drive in order to maintain the ‘complete story’;**
- ◆ **Establish business rules for the filing of e-mail messages and other electronic documents;**
- ◆ **Assign responsibility for managing the integrity of the shared space.**



Electronic Document and Records Management Systems (EDRMS)



Mandate

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The Advantages

- ◆ **Ensures the authenticity and reliability of records as evidence of actions and transactions;**
- ◆ **Facilitates information access and retrieval in context;**
- ◆ **Protects information for as long as required to support business and accountability requirements;**
- ◆ **Provides the trustworthy environment that clients, partners, citizens, and employees can depend upon with respect to their information needs.**



The Challenges

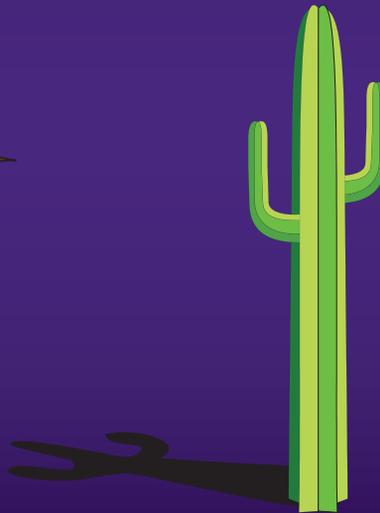
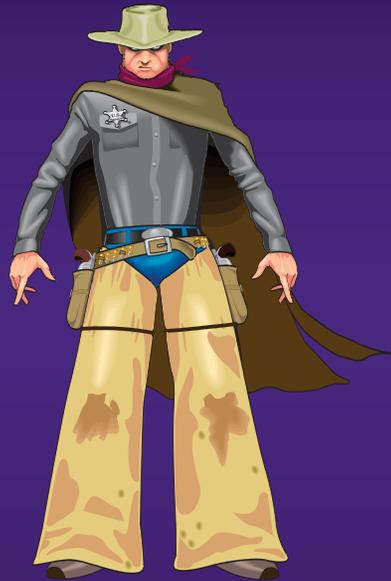
- ◆ Weak accountability
- ◆ Absence of work flow
- ◆ Systems integration issues
- ◆ Lack of clarity re: costs vs benefits
- ◆ Corporate culture – the ‘sharing’ issue
- ◆ Capacity re: systems integrators, records managers, etc.



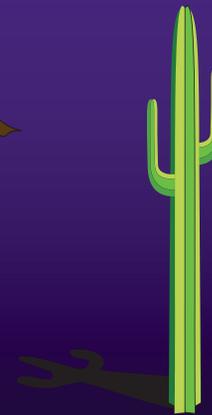
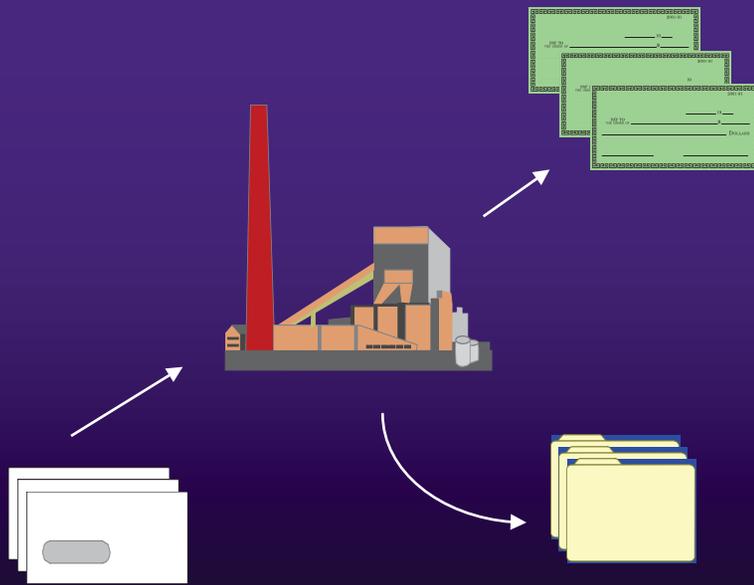
Internet and Workflow Enabled Record Keeping



The wild frontier (isn't so wild anymore)



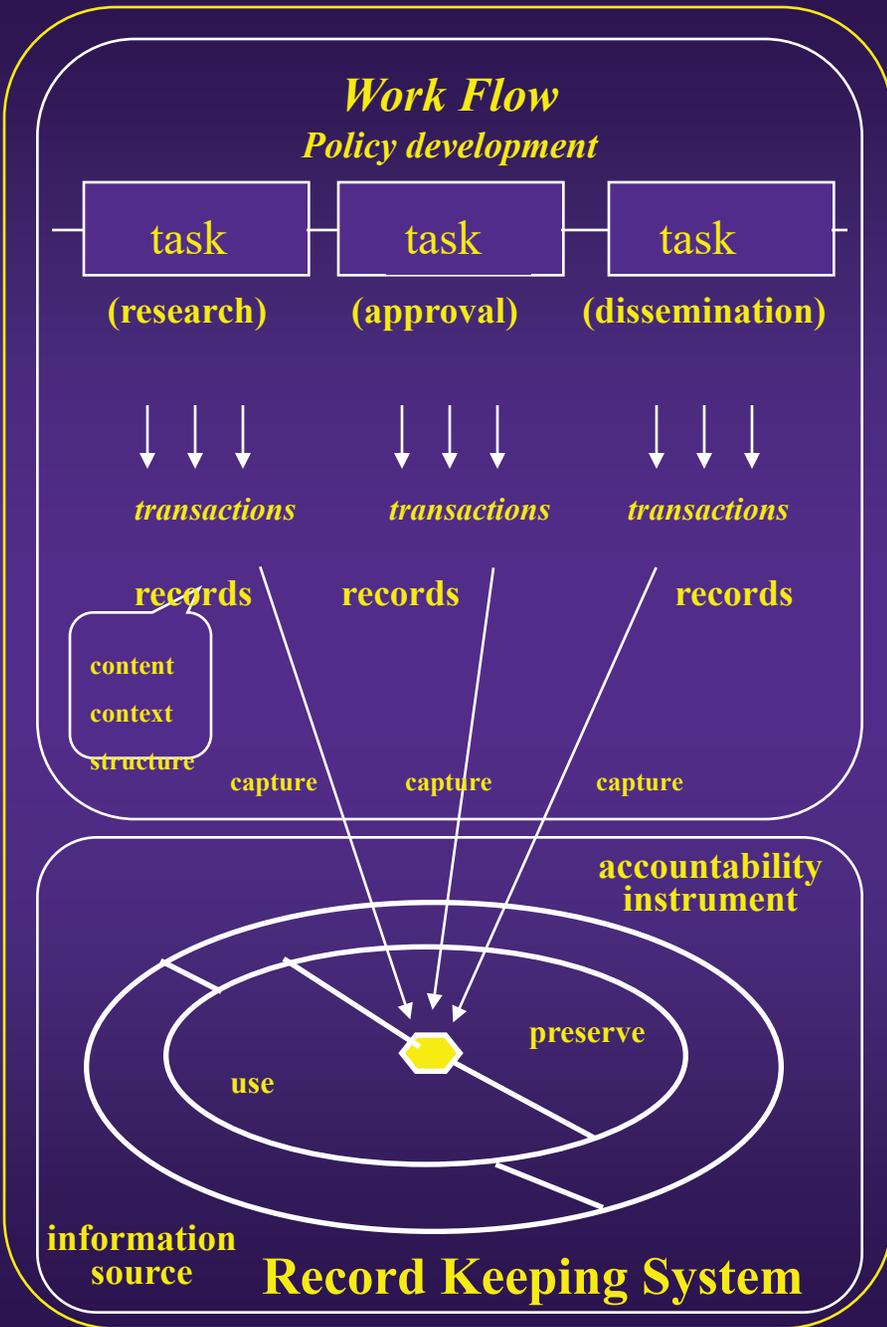
Internet and workflow enabled record keeping





Workflow-enabled record keeping

- ◆ **Work processes are automated**
- ◆ **User interfaces are work activity not utility driven**
- ◆ **Records are kept in electronic form**
- ◆ **Records capture happens automatically**
- ◆ **Records capture and record keeping is transparent**
- ◆ **Records are kept only for as long as required – disposition is automatic**



Mandate

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The Strategies

- ◆ **Interim Strategies**
 - ◆ Print to paper
 - ◆ Manage e-mail and other electronic documents in existing technological environments (e.g. shared directories)
 - ◆ Develop functional requirements for electronic document and records management systems
 - ◆ Incorporate functional requirements in systems design
- ◆ **Advanced Strategy**
 - ◆ Migrate to internet and workflow-enabled record keeping



The infrastructure

- ◆ policies (to assign accountability)
- ◆ standards and practices (including business rules)
- ◆ systems and technologies
- ◆ people
 - ◆ records creators/users
 - ◆ records infrastructure builders



The Competencies

- ◆ know what a record is (and is not)
- ◆ know the purpose of records
- ◆ know how to set standards
- ◆ know how to set requirements for creating and capturing records
- ◆ know how to set requirements for accessing and retrieving records
- ◆ know how to set requirements for maintaining authentic and reliable records through time
- ◆ know how to adopt a user perspective

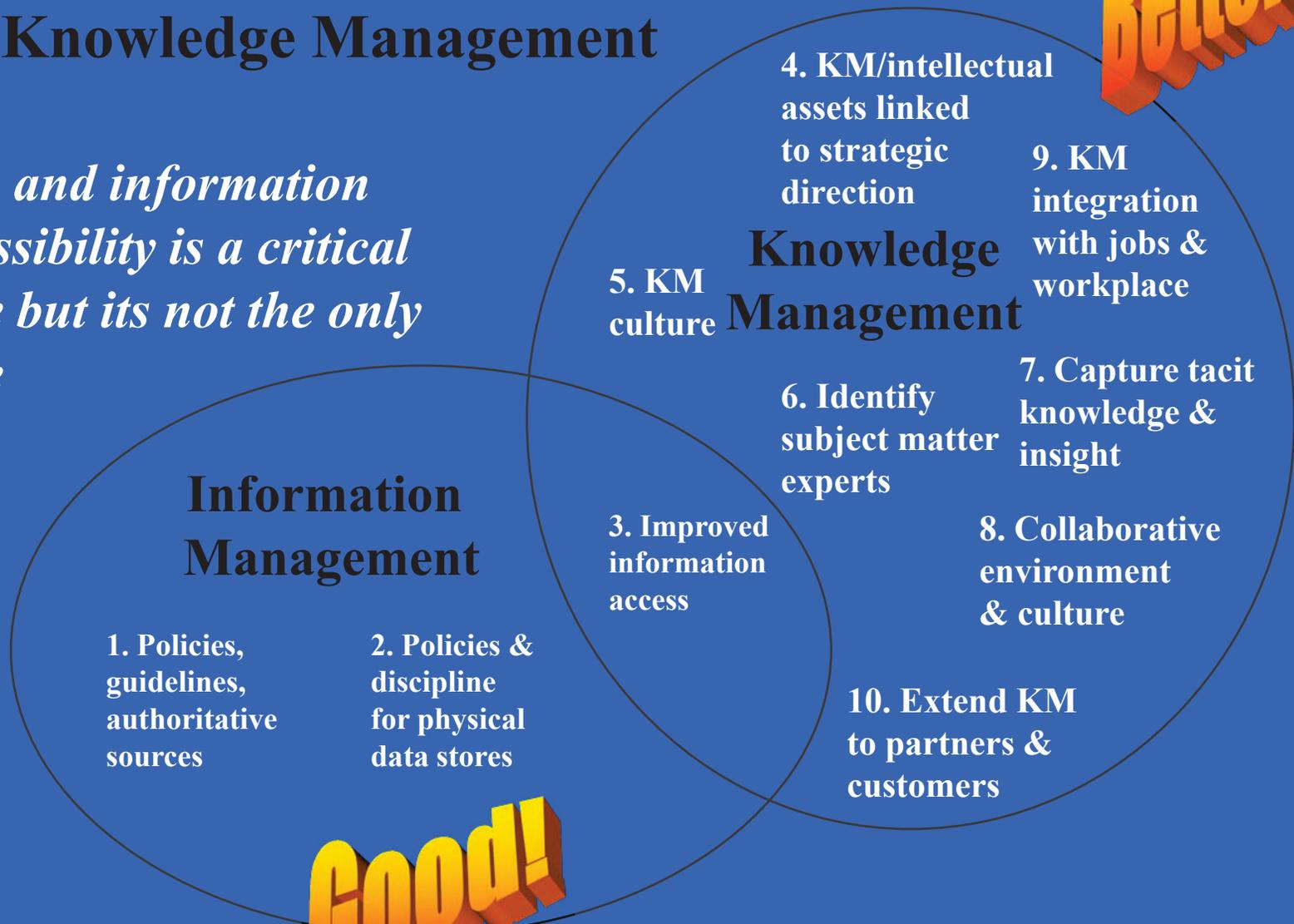


Summary

- ◆ Understand the landscape and its evolution
- ◆ Understand the issues
- ◆ Understand the requirements
- ◆ Understand the record keeping options and associated infrastructure needs
- ◆ Understand the competencies

Information Management and Knowledge Management

*Data and information
accessibility is a critical
issue but its not the only
issue*



Better!!

Good!!