

# Large Scale Document System:

Effective Public Sector Knowledge Management System

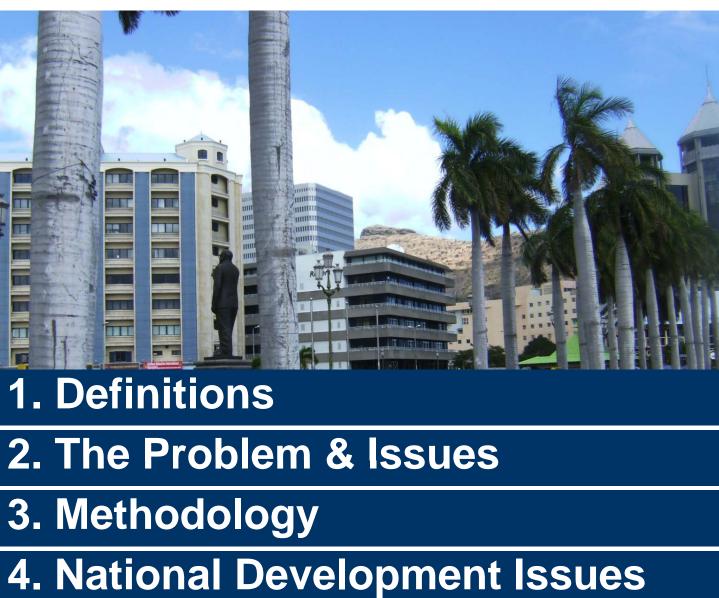
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5. Challenges & Discussions







2. The Problem & Issues

3. Methodology

4. National Development Issues

5. Challenges & Discussions



# Definitions

#### Document Management System



A computer system (or set of computer programs) used to track and store electronic documents and/or images of paper documents



# Definitions

#### Content Management System



A collection of procedures used to manage work flow in a collaborative environment.



# Definitions

#### Knowledge Management System



A range of strategies and practices used in an organisation to identify, create, represent, distribute, and enable adoption of insights and experiences.







## 2. The Problem & Issues

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# **The Problem**

#### Academic Institution



Faculties, Institutes & Centres – Intellectual Properties **Personnel Services** – Human Capital Mgt Records **Registry** – Student Life Cycle Records **Bursary** – Financial Management Records **Physical Planning –** CAD/CAE Drawings, Designs **Works Services** – Product Literature, Service Manuals **Academic Planning - Curricula Medical Services** – Health Services Records, Reports **Student Affairs** – Hostel Records, Students Relations **Library-** Books, Journals, Publications **Internal Audit** – Financial Analysis documents **Legal Department –** Agreements, MOUs **Central Stores** – Logistics Records **General Administration** – Correspondences **Public Relations - Presentations** 



# **The Problem**

#### National Documents



Rule of law - legislative records, court records, police and prison records.

Accountability to its citizens, - policy files, budget papers, accounting records, procurement records, personnel records, tax records, customs records, and electoral registers, property and fixed assets registers

Protection entitlements - pension records, social security records, land registration records, and birth/death records.

Services provisions for its citizens - hospital records, school records, and environmental protection monitoring records.

#### Government's relationship with other countries -

foreign relations and international obligations, treaties, correspondence with national and international bodies, loan agreements, etc



#### Business Process



How do documents fit into the overall business process?

# What is the Business Process Flow?

- Are documents created or required at certain steps in the process?
- Which business objects are documents associated with?
- What are the documents and what are their significance?



#### Search Methodology



How do we want to search for documents?

# What are the attributes of the document?

 Standard attributes – Description, Owner, Reponsible Lab/Office
Additional Attributes – Application, Release
Full Text Search



#### Lifecycle



#### **Define Lifecycle of Documents**

# What are the steps in the lifecycle of the document?

In Work

- Pending Approval
- Approved
- Released –No more change-Released

version remain as history



#### Change Control



# What is the change control process?

# Are updates controlled through a change control process?

- Capture reason for change, element of workflow, and digital signature for release
- Provides a complete history of when and why a document was updated
  Important for documents that are
  - critical, such as Personnel Records Date of Birth, Promotions



#### Approval Process



Is there a formal approval process?

#### Before a document is officially released, does it go through a formal approval process?

- Example Change of Student Fees
- Facilitated through a workflow process
- □ Might require digital signature
- Formal approval results to a released version of document with record of the approver
- Further change to document must be by a new version





## Security



What are the security requirements?

What roles in the business are allowed to change each document?

Consider status for changes – In Work seen by select group and Release seen by all.

SAP provides complex set of conditions used to control access – document type, status, authorisation group

#### Application Files



What type of application files will be stored?

# What output file of a specific application is stored?

Microsoft Word, Adobe Acrobat, Autodesk AutoCAD

Application configured to behave in a certain manner when associated file is launched for display or change



# Versions & Revisions



How are versions and revisions used in the business?

#### What do the term Version and Revision mean to the Business

- Version is a separate instance of a document that has its own status such as In Work or Released. It is a snapshot in time
- Revision level is assigned to a document version and is associated with a release state. Represents a major change
- For each document you can store multiple versions. With each version, you can assign a revision identifier



#### Multi-Languages



Do you need to support searching and maintenance in multiple languages?

# Maintain some attributes in multiple languages?

 Attribute Description could be maintained in English and French
Capability to maintain entry, display and search attributes in multiple languages



#### Size



What is the volume and size of documents to be stored?

# How large is document to be stored?

- Infrastructure requirements to be considered
- □ Size Content Server appropriately, say 10 TB
- Size of each file help in Network Sizing, say 2Mbps
- Document consumers may be in a number of different geographic locations – Require Cache Server



# Location of Users



#### Location of Creators vs Consumers

# What are the different locations of creators and Consumers?

- Creator is someone who generates and stores document in the system
- Consumer is someone who searches and displays documents
- For large number of Creators install Content Server at that location
- For large number of Consumers install a Cache Server
- This helps reduce the impact on the performance of WAN





#### Retention



Are there document retention requirements?

How long should document be stored or made available based on business and legal requirement?

- Physical Planning CAD, building design retained for life
- How to handle document when retention period expires, say archived or deleted
- What does the national & international law require?





#### **Neural Format**



Do documents need to be converted to a neutral format for long term retention?

# What neutral format should be used?

- Neutral formats such as PDF or TIF
- Applications have life, eg doc and docx
- Conversion is carried out automatically by SAP
  - DMS when the status of released is reached
- Conversion Server can be installed







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# Identification Analysis



Document	Quantity
Human Capital	3 million
Student Life Cycle	5 million
Intellectual Properties	3 million
CAD & Logistics	1 million
TOTAL	12 million



#### **2. Digitisation**



# Fast Scanning *'rasterises'* the records to become searchable

Book Marking



#### 3. Content & Knowledge Management



Search and Classification/taxonomy

**Content Servers –** Document generation

**Cache Servers -** improving search performance by consumers



#### 4. Data Warehousing



# Vault Secure StorageBackup & Recovery







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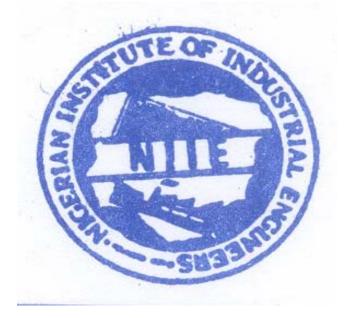
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# **National Development**

#### National Development Issues



Good Governance

- Equitable Judicial System & Enforcement of Human Rights
- Accountable Financial System

## Effective and Transparent National Development Process



# **National Development**

#### **Benefits**



Secure storage

- **Easy retrieval**
- **Excellent search capabilities**
- □A controlled environment for updates
- Complex security rules to control access
- Increased visibility of key documents
- One source and one set of rules for managing documents
- Reduced time and effort

Ability to maintain document history to meet legal requirements







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# Discussions

#### Challenges



There is a low awareness of the role of records management in supporting organizational efficiency and accountability.

There is an absence of legislation to enable modern records management practice.

 There is an absence of core competencies.
Overcrowded and unsuitable storage of paper and electronic records;

Absence of purpose built record centres such as Content and Cache Servers

Absence of a dedicated **budget** for records management

**Poor security and confidentiality controls** 

□Absence of vital records, disaster recovery and preparedness plans

Limited capacity to manage electronic records.



# Discussions



## **Capacity Building**



# Legislative Structures & Budgets

## **ICT & Power Infrastructure**





