
Business Requirements Document (BRS)

DEPARTMENT OF MINERAL & PETROLEUM RESOURCES (DMPR)

Asset Management System

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**mineral &
petroleum resources**
Department:
Mineral and Petroleum Resources
REPUBLIC OF SOUTH AFRICA

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Approval

The signatories hereof, being duly authorised thereto, by their signatures hereto authorise the execution of the work detailed herein or confirm their acceptance of the contents hereof and authorise the implementation/adoption thereof for and on behalf of the parties represented by them.

Systems Development and Maintenance

Logistical and Asset Management

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Standardized approach to version updates: Version numbers 0.1, 0.2 should be used each time there is an update to the draft document. Once the document has been finalized it becomes V1.0 and signed off. Draft changes to V1.0 reflect as 1.1, 1.2 etc. and once finalized becomes V2.0 and signed off.

Revision	Version	Date	Author/Editor	Description/Summary of changes

Related Documents

Document	Version

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1. Project Overview

1.1. Project Background

- Former Department of Mineral Resources and Energy (DMRE) leveraged the Manage Engine system to customize its existing Assets Management module. This system currently manages departmental assets.
- According to the PFMA Act every public entity is regulated to improve transparency, and accountability and the Department of Mineral Resources and Energy is regulated to account and report on all the assets of the department. The current system does not support all the features needed by Logistical and Asset Management. These limitations of the current software version were identified during the development and maintenance stages with solution scheduled for future release at an undetermined date.
- This situation poses a challenge as the Department currently relies on Excel spreadsheet. Due to the intense reliance on human intervention for inputs, data could be riddled with errors which will compromise the accuracy and reliability of the asset register.
- The Logistical and Asset Management within the department is responsible for managing the stores, inventory and procurement matters for the entire department.
- The department is looking for an automated system for storing inventory records and facilitating inventory management and control activities such as annual physical inventory checks, inventory transfer, write-off of lost inventory items and disposal of assets.

1.2. Business Objectives

In implementing the Asset Management System, DMPR aims to meet or achieve these business objectives:

- Improve asset inventory control.
- facilitate inventory management (easier recording, monitoring and control);
- reduce occurrence of discrepancies between inventory records and actual quantities in hand;

- enhance planning for future requisition of inventory items (handy updated balance information, analysis and report summaries);
- allow timely arrangement of maintenance programme of inventory items; and
- shorten the time for annual inventory checking exercise.
- Be able to track assets.
- Increased efficiency; and
- Ensure regulatory compliance.

1.3. Project Scope

The Assets Management system aims to automate the management of departmental assets covering the full life span from in stock until disposal or write-off. The envisaged system is required to facilitate assets management and control activities, i.e. the arrangement of maintenance services, annual inventory checks, write-off of lost inventory items and disposal.

The project should provide System Analysis & Design (SA&D) and System Implementation as well as Training and Data Migration. The major functions to be provided by the system are listed below:

- a) Creation, updating and deleting of assets item.
- b) Transfer of assets item.
- c) Disposal of assets item.
- d) Write off or Replacement of loss asset item.
- e) Conduct Assets Verification.
- f) Generate Various Reports.
- g) Integrating with other related systems.

2. Functional Requirements

This section describes the identified requirements in detail:

2.1. Business Requirements

Use Case	Requirement ID	Requirement Description
Manage Permission and Authorization Levels	BR01	The system must provide functionality for managing user permissions. - Authorized Users should be able to assign / unassign permissions to the other user. - Permissions are set by module such as assets status, category, and reports. For instance, if a user only has assets status permission, they can manage only assets status. - The system must have different authorization levels to manage assigned tasks. It should enforce segregation of duties to prevent an individual from both drafting and approving a document without managerial oversight. The system must allow the business unit to clearly define who is authorized to control and perform each stage of a process, including initiation, approval, and execution of transactions. This is to allow the distribution of tasks so that no single person has control over an entire transaction or process.
Manage Log	BR02	The system must have the capability to manage the logs of every action made by the system users (e.g. Manager, Supervisor or any employee with access right). - Users should be able to view the activity logs for any time or duration, for any assets, for any employee. - Users should be able to export the activity logs to Excel or Pdf format.
Add New Asset/s, Modify Existing Asset, and Delete Asset	BR03	The system must allow the user to add single asset or multiple assets into the system in line with the departmental standard asset register template.

		- The assets creation screen must have various fields indicating if compulsory or optional, and the action buttons for adding New Category, New Supplier, New Location, etc. as needed. - Allow the user to edit or modify and delete the existing asset. i.e. if an asset is wrongly added, a deletion option should be provided for removal of the wrongly added asset and its corresponding details.
Capture Bulk Assets	BR04	The system must allow the user to efficiently capture and register multiple assets or assets in bulk into the system in a single operation (i.e. task completed in one step) and to reduce manual effort. - Users must be able to import bulk asset data using a standardized template (e.g., Excel or CSV format). - The system must provide a user interface that allows users to upload or input multiple asset records simultaneously. - The system must validate uploaded data for completeness, format accuracy, and duplication before final submission. - User must receive real-time feedback on any errors or missing fields during the bulk upload process. - The system must allow users to review and confirm asset entries before finalizing the bulk capture. - Upon successful upload, the system shall generate a summary report indicating the number of assets captured, skipped, or flagged. - The system shall log all bulk asset capture activities for audit and tracking purposes.
Assign Asset to User and Room	BR05	The system must have the capability to assign physical asset to specific user (an employee) and their designated rooms or locations in the buildings to improve tracking. - The system must allow authorized users to assign one or more assets to a specific user. - The system must allow assets to be linked to a designated room or location within the organization. - The assignment process must capture key details such as: - o Asset (Tag) Number or serial number - o Assigned Username - o Floor Number, Room or Location Number - o Building Name - o Branch, Chief Directorate or Directorate name, etc.

		- The system must validate that the asset is available and not already assigned before completing the assignment. - Users must be able to view current asset assignments, including historical records of previous assignments. - The system must support reassignment of assets to different users or rooms when needed. - All assignment actions must be logged for audit and reporting purposes.
Link Location with Buildings (Site), Regional Offices and Head Office, Building Floors and Rooms, Departmental Branches, Chief Directorates and Directorates	BR06	The system must enable the user to establish and maintain relationships between Region and Regional Offices including the Head Office with their respective physical locations and organizational units (Branches, Chief Directorates and Directorates) to support accurate asset tracking and reporting. - The system must allow users to define and register Regional Offices and the Head Office as distinct entities. - Each Regional office must be linkable to one or more physical buildings. - The system must allow users to view and manage these relationships.
Determine Asset Value if Capital or Current	BR07	The system must automatically determine whether an asset is classified as a Capital or Current asset based on the amount or value entered in the Purchase Amount or Cost Price field during asset registration / capturing. - The system must automatically classify the asset as either: - o Capital Asset: if the amount meets or exceeds a predefined threshold of R5000,00. - o Current Asset: if the amount is below the predefined threshold of R5000,00. - The determined asset type (Capital or Current) shall be displayed to the user at the time of recording the asset.
Transfer or Movement of Asset	BR08	The system must allow users to initiate, record, and track the transfer or movement of assets between locations, users, or departments to maintain accurate asset records. - User must be able to initiate a transfer request for one or more assets from one location, user, or department to another. - The system must capture key transfer details including: - o Asset or Serial Number - o Current location, user, or department - o New location, user, or department - o Reason for transfer

		○ Date of transfer - Users must be able to view a history of asset movements, including previous and current assignment or allocation. - The system must update the asset's record to reflect its new assignment immediately upon completion of the transfer. - All transfer actions must be logged for audit and reporting purposes.
Search an Asset	BR09	The system must allow users to efficiently search for assets using various filters and criteria to locate specific items within the asset database. - User must be able to search for assets using multiple criteria, including: ○ Asset or Serial Number ○ Asset name or description, etc.
Email Notification	BR10	The system must automatically send an email notification to users when a task is assigned to them and requires their attention, ensuring timely awareness and response. - The system must send an email notification to a user when a new task is assigned that requires action to avoid having tasks pending for long time. - Notifications must be triggered immediately upon task assignment. - The system must ensure that notifications are sent only to the relevant user(s) assigned to the task.
Tasks List on Dashboard	BR11	The system must provide users with a clear and interactive view of their pending, ongoing, and completed tasks directly on the dashboard to enhance visibility and task management efficiency. - The dashboard must display a list of tasks assigned to the logged-in user. - The task list must include key details such as: ○ Task title ○ Description or summary ○ Status (e.g., Pending, In Progress, Completed) ○ Due date ○ Assigned date - Users must be able to click on a task to view full details and take action (e.g., update status, add comments). - The dashboard must highlight overdue tasks and tasks due within a specified number of days. - The system must refresh the task list in real-time or at regular intervals to reflect updates. - User must be notified on the dashboard when new tasks are assigned.

Upload Documents	BR12	The system should allow for uploading of supporting documents i.e. purchase order, delivery note and or invoices for audit trail purposes. - The Uploaded documents shall be linked to the corresponding asset record or transaction. - User must be able to upload supporting documents during or after asset registration or transaction processing. - The system must support common file formats including PDF, Excel, DOCX, JPG, and PNG, etc. - User must be able to categorize each uploaded document by type (e.g., Purchase Order, Delivery Note, Invoice). - User must be able to preview or download uploaded documents from the asset record. - System administrators must be able to configure maximum file size limits and permitted formats. - The system shall display metadata for each document, including: - o Upload date - o Uploaded by - o Document type - o File name and path name
Scanning of Asset and Assets Verification	BR13	The system is required to include a reliable scanner with the capability to scan and reference data from the asset register. - The scanner device must have a built-in application to host asset register data. This is to allow the user to physically verify assets, update information, and record discrepancies on the device itself. - The scanner device must be able to function without an internet connection. At some point Asset verifications often occur in areas with poor or no connectivity. The scanner should store collected data locally and then sync it to the central server when a connection is re-established. - When the Asset is scanned with the device it should automatically change or update the scanned date field and verification status of the asset.

		The verification status will be Verified and Unverified, the date field must reflect the recent scanned date. Upon scanning of the asset its status must change to Verified. The Unverified status arises when the Asset Management team clears the preceding or previous stock take to a new financial year. - The scanner should enable the on-site or spot recording of asset condition, usage, obsolescence, and redundancy. - The system must notify the user (Verification Team) when an asset is scanned on the floor but not found in the asset register, and must enable the entry of relevant information, such as a description including other data. - Upon scanning, the system must automatically check the scanned asset against existing records to determine current ownership and reflect or display the name of the associated user. - o If the scanned asset is already assigned to the user, the system must confirm and reflect this ownership in real time. - o If the scanned asset is assigned to a different user, the system must notify the scanning user and prompt for further action (e.g., transfer request or verification).
Donated Assets	BR14	The system must have the ability to identify assets procured through none cash i.e., donations. - The system must include a field to indicate the asset source as “Donated.” - User must be able to generate reports specifically for donated assets, including their value, condition, and current assignment.
Disposal Assets	BR15	The system must be able to identify assets that have been disposed of. - The system must allow users to specify the reason for disposal (e.g., damaged, obsolete, stolen, fully depreciated). - Upon approval, the system must allow the user to update the asset status to “Disposed”.
Dashboard & Automated Email Notification for Assigned Task	BR16	The system must have a dashboard that enables each logged-in user to view their assigned tasks. The system must automatically send an email notification to a user when a task requiring their action is triggered by another user.

		- When a task is created or assigned to a user by another authorized user, the system must generate and send an email notification to the assigned user. - The email must include relevant task details such as task title, description, due date (if applicable), and a link or reference to access the task. - Notifications must be sent immediately upon task assignment to ensure timely awareness and response. - The system must log the notification event for audit and tracking purposes.
Assets Warranty and Expiry Notification	BR17	The system must automatically notify users when the warranty period for assigned assets such as laptops, printers, and other equipment is approaching its expiry date. The system must track warranty periods for all registered assets. A notification must be sent to the responsible user at a configurable interval before the warranty expires (e.g., 30 days prior). Notifications should include: • Asset name and type • Serial number or asset ID • Warranty expiry date • Recommended next steps (e.g., renewal, inspection) Notifications must be delivered via email and/or in-system alerts. The system must allow administrators to configure the notification timing and recipients. All notification events should be logged for audit purposes.
Generate Reports	BR18	• The system must have the capability to generate various reports by applying specified parameter filters and allow exporting of the reports in CSV, Pdf and Excel format. • The system must be capable of performing automated calculations using predefined formulas, rules, or input values specified by users to support accurate data processing and decision-making. The required reports are but not limited to: - Procured Assets - Unauthorised movement of Assets - Disposal report

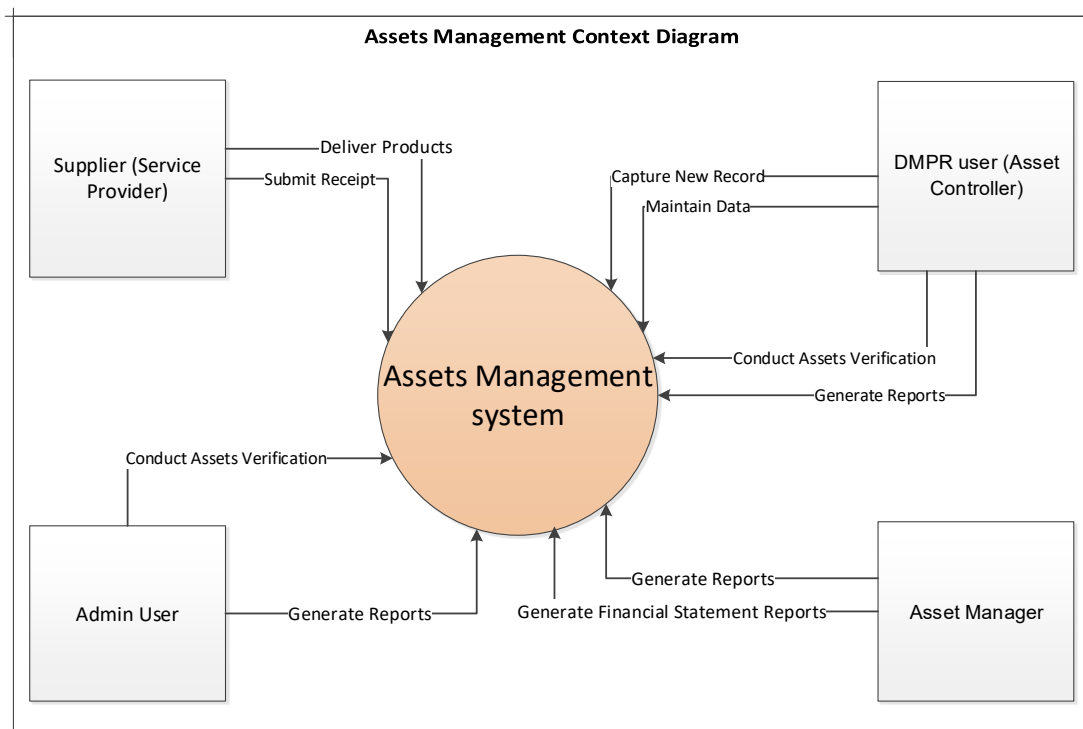
		- Lost asset report - Asset on loan - Assets out for repairs and or maintenance. - Interim financials - Annual financial - List Assets by Category report The purpose of this report is to list the assets per location per category. Below is a list of parameters required to filter information. - List Assets by Status - Print Inventory List The purpose of this report is to display a list of assets that are attached to certain employee in their workstations. - Physical Location Reports - Asset Register Report The purpose of this report is to list all details of assets. - Order Enquiry report The purpose of this report is to view the information of issued order numbers linked to procured assets for a certain period. - Purchase Enquiry by: - o Assets Number - o Supplier - o Department (sections / units) The purpose of this report is to allow user to inquire assets information using asset number, supplier and department. - Assets Type by Department - Capital Report by Department / Class The purpose of this report is to list assets that were captured with an amount more than R5000 and above per Directorates (classification). Filter per Assets classification or items. This shows
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		summary of major assets which were captured for a branch / section. These assets are selected according to the class code, e.g., Computer Server and, Computer Equipment (Desktop & Laptop). - Summary of Classes by Department The purpose of this report is to list the number of assets that were captured in the department (sections). It lists the number of equipments under each department per class. - Warrantees & Guarantees The purpose of this report is to display the warranty and guaranty information for one / multiple asset/s by purchase date, warranty start and end dates.
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3. Proposed System Overview

3.1. Description of proposed Assets Management System

This context diagram presents a high-level overview of the proposed system, outlining its boundaries as well as the external and internal users/systems that will interact with it. Additionally, it highlights the primary or major requirements identified in this document.



3.2. System User Profile

The table below provides list of external and internal users of the proposed Assets Management system.

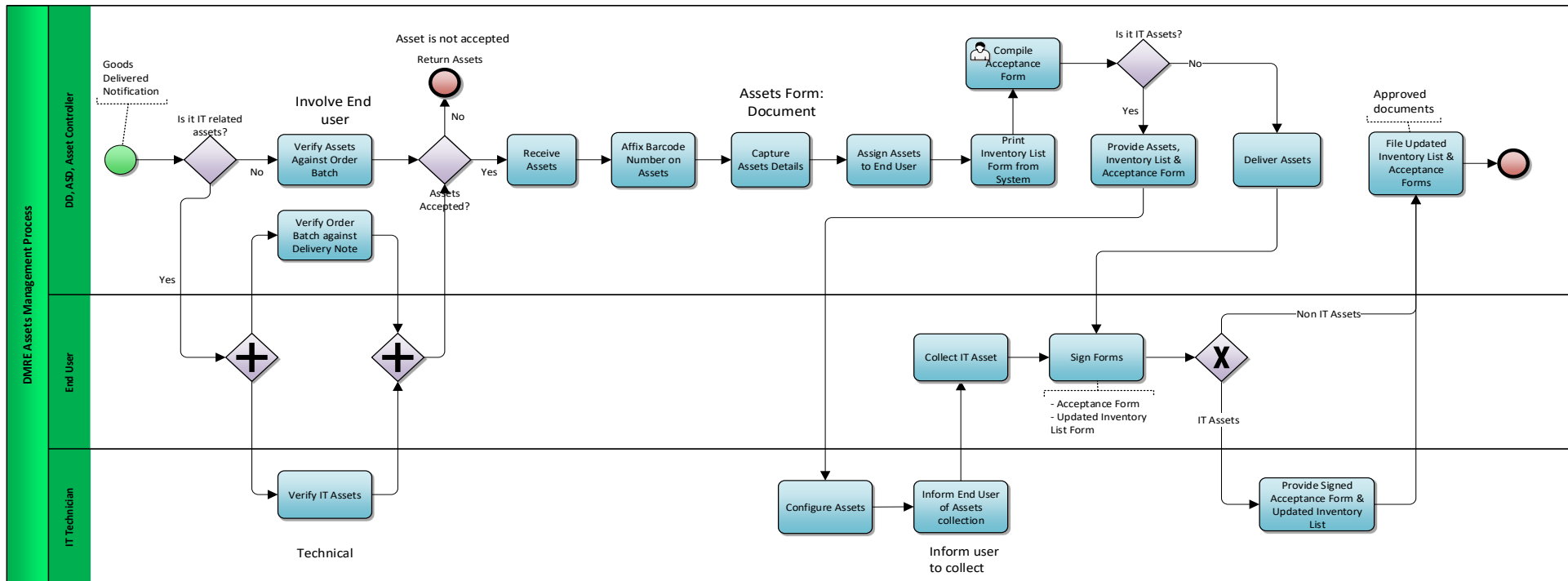
No.	User Role	Responsibilities
1	System Administrator	Assist Assets Controllers to maintain up-to-date inventory records. Responsible for system administration of the assets management system.
2	Inventory / Assets Controller	Responsible for ensuring the accurate entry of new assets into the system and updating records.

3	Assets Manager	Approval of transactions e.g., asset transfer, disposal, or assignment (allocation).
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4. Future Business Process

List of Future Business Processes

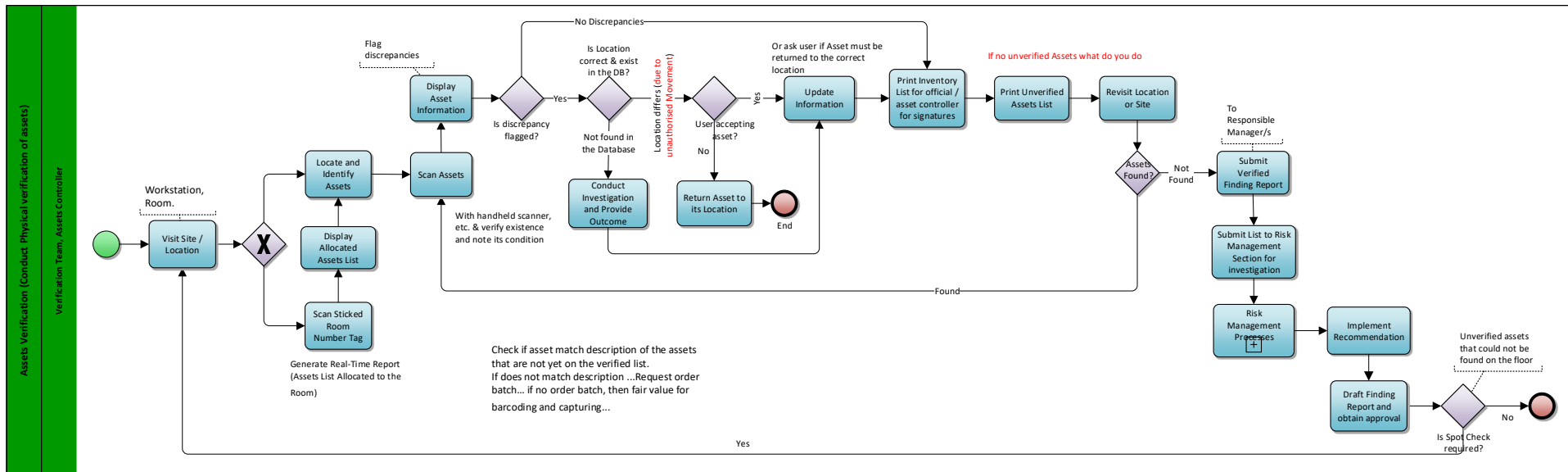
4.1. Register Assets Process:



Process Narration

flow	Form completed by the Mine 1. The Logistical and Asset Management registers the procured asset in the system only after verifying its acceptance. Once confirmed, the team affixes a barcode to the asset. 2. The team then captures the asset details in the system, assigns the asset to the designated user, and prints the inventory form. 3. They compile the acceptance documentation and determine whether the asset requires configuration by the IT section. 4. If configuration is needed, IT will set up the asset and notify the user to collect it after signing the necessary documents. 5. The user must also return the signed Acceptance Form and Inventory List to IT. 6. If no configuration is required, the team delivers the asset directly to the user, obtains immediate sign-off, and files all signed documents for future reference.
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4.2. Assets Verification Process:



Process Narration:

flow	Form completed by the Mine - The Logistical and Asset Management conducts a scheduled verification at the user's location or site by performing one of the following scanning procedures or steps: - The room in which the user is situated, and which is associated with the assets assigned to them and the system displays the information relating to the scanned asset. - Scanning the asset and checks if any discrepancy exists or not and the system displays the information relating to the scanned asset. - If discrepancy exists proceed to Step 2. - If there is no discrepancy, then proceed to Step 6.
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	2. The Logistical and Asset Management team verifies if the scanned asset is at its assigned location and does the asset exists in the database. - If location differs with the existing record, proceed to Step 3. - If asset not found in the database, then proceed to Step 6. - For matching location, proceed to Step 7. 3. The team inquires whether the asset must be allocated to the user. - If the user accepts an asset, proceed to Step 5. - If the user rejects an asset, go to Step 4. 4. The team returns the assets to its original location then the process ends. 5. The Logistical and Asset Management team updates information by assigning asset to the user. 6. If an asset is not found in the database, the team initiates an investigation, document the outcome and update asset information. 7. The team prints Inventory List per official and obtain their signatures. 8. The team then generates the list of unverified assets, revisit (conducts follow-up visits) to the locations or sites and confirms the presence of an asset. - If asset is found, proceed (loops back) to Step 1(b). - If the asset is not found, proceed to Step 6. 9. The team prepares and submits verified findings report to the Responsible Manager/s for sign off and approval and submit the list to Risk Management Section for further investigation. 10. The Logistical and Asset Management implements the recommendation made by the Risk Management section. 11. The team prepares finding report for management approval and periodically conducts spot checks on unverified assets not located on the site or floor.
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5. Non-Functional Requirements

5.1. Interface Requirements

Below is the description of interface requirements:

5.1.1. Hardware Interfaces

ID	Requirement	Preference
FR19	The system must be compatible with the departmental hardware and network infrastructure.	M

5.1.2. Software Interfaces

ID	Requirement	Preference
FR20	The system must be compatible with the departmental operating and database management systems.	M

5.1.3. Look and Feel (Usage)

ID	Requirement	Preference
FR21	The system's look and feel must be aligned to that of the Departmental Website (the watermarks, branding, colours, icons, etc.).	M
FR22	The system must comply with the government corporate identity specifications and guidelines as well as the international best practices.	M

5.1.4. Security and Privacy

ID	Requirement	Preference
FR23	The system must be password protected.	M

ID	Requirement	Preference
FR24	The system must provide access based on user defined roles according to user groups for create, update, delete, retrieve and read purposes.	M
FR25	The system must have back-up and data recovery procedures.	M
FR26	The system must adhere to DMPR application security policies	M
FR27	The system must provide a detailed record of activity (audit trails) performed within the system e.g. who accessed the system and for what actions were performed and the levels of security as defined below: • Read Only: Can only view data on the system. • Read and Write: can view data and add data on the system • Update, Create, Delete: Can create, update, and delete data on the system. • System Administrator Access: Have full access and can also change user passwords.	M

5.1.5. Transition Requirements

ID	Requirement	Preference
FR28	All relevant users will be trained on how to use the system.	High
FR29	Interactive guiding material/ functionality must be made available to administrative users and on the system for other users.	High

5.1.6. Audit Trail

- The system must record all activities on an audit trail log file and/or user activity report, The information to be recorded includes but not limited to:
 - All users who added information

- All users who amended information
- All users who deleted information
- The date and time the information was (added, read, amended, deleted)

5.1.7. Reliability

The system must be accessible anytime of the day to users and all downtimes must be communicated to the users beforehand.

5.1.8. System Availability

The system must be available on a 24/7 basis as it will be a web-enabled solution to allow the holder of prospecting right to make submissions anytime at any place through the web.

5.1.9. Error Handling

The system must create exception reports detailing the type of errors and reason for the errors.

6. Glossary of Terms

Acronym or Term	Definition
DMPR	Department of Mineral & Petroleum Resources
BRS	Business Requirements Specification
FRS	Functional Requirements Specification