Functional Specification Document

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# 1. Document Information

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| --- | --- |
| Field | Value |
| Document Title | Stock Report - Monthly by Material, Plant, Warehouse, and Storage Location |
| Project Name | SAP Stock Reporting |
| Client Name | PWC AI Asset |
| Prepared By (Author, Department) | PWC AI Asset |
| Document Version & Date | 1.0 / 01.05.2025 |

# 2. Introduction

This document outlines the functional requirements and design for generating a monthly stock report in SAP MM. The report aims to provide detailed stock quantity and value information per material, plant, warehouse, and storage location. The scope covers all materials maintained in SAP MM across various plants and storage locations, supporting inventory monitoring, reconciliation, and monthly closing activities. The intended audience includes SAP MM functional and technical consultants, inventory analysts, MM power users, and finance controllers involved in inventory and stock reporting processes.

# 3. Business Requirement Overview

The business requires a monthly stock report in SAP that displays stock quantity and value for each material, plant, warehouse, and storage location. The objective is to enable effective inventory monitoring, reconciliation, and support for monthly closing activities. The report must include key stock details such as unrestricted, blocked, and quality inspection quantities, as well as stock value and valuation type where applicable. Users should be able to filter the report by plant, material number range, storage location, material type, and month/year, and export the results to Excel or PDF. The solution addresses the need for accurate, timely, and comprehensive stock visibility across the organization.

# 4. Business Process Flow

Start

-> Monthly closing activities are completed

-> User accesses the SAP Stock Report

-> User selects filters (Plant, Material Number Range, Storage Location, Material Type, Month/Year)

-> System extracts data from relevant SAP tables (MARD, MARC, MBEW, MKPF/MSEG, T001L, T320, MCHB)

-> System generates ALV Grid report with stock quantity and value per material, plant, warehouse, and storage location

-> User reviews and exports report (Excel/PDF)

-> End

# 5. Functional Scope

1. In-Scope items

1.1. Generation of a monthly stock report in SAP MM, displaying stock quantity and value per material, plant, warehouse, and storage location.

1.2. Inclusion of the following columns in the report: Material Number, Material Description, Plant, Warehouse Number (if applicable), Storage Location, Unit of Measure, Stock Quantity (Unrestricted, Blocked, Quality Inspection), Valuated Stock, Stock Value, Valuation Type (if applicable), and Month/Year.

1.3. Provision of report filters for Plant, Material Number Range, Storage Location, Material Type, and Month and Year.

1.4. Extraction of data from SAP tables: MARD, MARC, MBEW, MKPF/MSEG, T001L, T320, and MCHB (if batch management is active).

1.5. Display of the report in ALV Grid format with export options to Excel and PDF.

1.6. Restriction of report access to users with appropriate roles such as Inventory Analyst, MM Power User, and Finance Controller.

1.7. Deployment of the report using ABAP in SAP GUI or Fiori.

1.8. Use of the report for inventory monitoring, reconciliation, and monthly closing activities.

2. Out-of-Scope items

2.1. Real-time or daily stock reporting; the report is strictly for monthly data.

2.2. Inclusion of materials or stock not maintained in SAP MM.

2.3. Data extraction from non-SAP sources or external systems.

2.4. Automation of monthly closing activities; the report assumes these are completed prior to execution.

2.5. Custom development for mobile or non-SAP platforms outside SAP GUI or Fiori.

2.6. User role or authorization management beyond restricting report access.

2.7. Handling of stock adjustments or corrections outside the scope of standard SAP MM processes.

# 6. Functional Solution Approach

The business requirement for generating a monthly stock report will be addressed by developing a custom ABAP report that extracts and consolidates stock data from core SAP MM tables. The report will allow users to filter data based on plant, material number range, storage location, material type, and month/year, ensuring relevant and targeted output. The solution will present the results in an ALV Grid format, providing users with interactive features and export options to Excel and PDF for further analysis and reporting. Data accuracy will be ensured by executing the report only after monthly closing activities are completed. Access to the report will be restricted to authorized users such as Inventory Analysts, MM Power Users, and Finance Controllers, aligning with security and compliance requirements.

# 7. Functional Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Requirement ID | Requirement Description | Business Rule | Priority | Comments |
| FR-001 | Report must display monthly stock quantity and value per material, plant, warehouse, and storage location | Only materials maintained in SAP MM should be included; data must be accurate post-monthly closing | High |  |
| FR-002 | Report output must include columns: Material Number, Description, Plant, Warehouse, Storage Location, UoM, Stock Quantities (Unrestricted, Blocked, QI), Valuated Stock, Stock Value, Valuation Type, Month/Year | All columns must be present in the output; Valuation Type and Warehouse only if applicable | High |  |
| FR-003 | Report must allow filtering by Plant, Material Number Range, Storage Location, Material Type, Month/Year | Filters must be available on selection screen; only authorized values should be selectable | High |  |
| FR-004 | Report must display results in ALV Grid format with export options to Excel and PDF | ALV Grid must support sorting, filtering, and exporting | Medium |  |
| FR-005 | Data must be extracted from SAP tables: MARD, MARC, MBEW, MKPF/MSEG, T001L, T320, MCHB | Data extraction logic must ensure consistency and accuracy; batch stocks included if batch management active | High |  |
| FR-006 | Report access must be restricted to authorized users (Inventory Analyst, MM Power User, Finance Controller) | Authorization checks must be implemented to prevent unauthorized access | High |  |
| FR-007 | Report must be developed in ABAP and deployed in SAP GUI or Fiori | Must comply with SAP development standards and deployment guidelines | Medium |  |
| FR-008 | Report should only be executed after monthly closing activities are completed | Users must be informed to run the report post-closing for data accuracy | Medium |  |

# 8. Interfaces & Integration

No interfaces are defined for this report based on the provided information.

# 9. Output

|  |  |  |  |
| --- | --- | --- | --- |
| Report/Output Name | Format/Layout | Destination | Purpose/Description |
| Monthly Stock Report by Material, Plant, Warehouse, and Storage Location | ALV Grid (with columns: Material Number, Material Description, Plant, Warehouse Number, Storage Location, Unit of Measure, Stock Quantity (Unrestricted, Blocked, Quality Inspection), Valuated Stock, Stock Value, Valuation Type, Month/Year) | SAP GUI (ALV Grid display) | To provide monthly stock details for all materials across plants and storage locations for inventory monitoring, reconciliation, and monthly closing activities. |
| Monthly Stock Report Export | Excel, PDF | User local download | Exported version of the ALV Grid report for offline analysis, sharing, and documentation purposes. |

# 10. UI Requirement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Screen/Field Name | Field Type | Default Value | Mandatory (Y/N) | Business Purpose/Validation |
| Plant | Input | None | N | Filter report data by plant. |
| Material Number Range | Input | None | N | Filter report data by a range of material numbers. |
| Storage Location | Input | None | N | Filter report data by storage location. |
| Material Type | Input | None | N | Filter report data by material type. |
| Month | Input | None | Y | Filter report data for the selected month. Should be validated for correct month format (e.g., MM). |
| Year | Input | None | Y | Filter report data for the selected year. Should be validated for correct year format (e.g., YYYY). |

# 11. Authorization & Security

|  |  |  |  |
| --- | --- | --- | --- |
| Role/Profile | Authorization Object | Access Level | Description |
| Inventory Analyst | [To Be Filled] | [To Be Filled] | Access to monthly stock report for inventory monitoring and reconciliation. |
| MM Power User | [To Be Filled] | [To Be Filled] | Access to monthly stock report for advanced MM operations. |
| Finance Controller | [To Be Filled] | [To Be Filled] | Access to monthly stock report for financial closing and stock valuation. |

# 12. Error Handling & Notifications

1. The report should notify the user if monthly closing activities are not completed before execution, as this may impact data accuracy.

2. If the user does not have the appropriate role (Inventory Analyst, MM Power User, Finance Controller), access to the report should be denied with a relevant error message.

3. If no data is found for the selected filters (Plant, Material Number Range, Storage Location, Material Type, Month and Year), the user should be informed with a message indicating that no records match the criteria.

# 13. Assumptions & Dependencies

1. The report will be developed using ABAP and deployed in SAP GUI or Fiori.

2. Monthly closing activities are completed before report execution to ensure data accuracy.

# 14. Test Scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | Objective | Input Data | Expected Output | Actual Result/Status | Sign-off/Comments |
| TC01 | Verify report displays correct stock data for selected month/year | Plant: 1000, Month: 04, Year: 2025 | ALV Grid showing stock quantity and value per material, plant, warehouse, and storage location for April 2025 |  |  |
| TC02 | Validate filter by Material Number range | Material Number Range: 100000-100050, Month: 04, Year: 2025 | Report displays only materials within the specified number range |  |  |
| TC03 | Check filter by Storage Location | Storage Location: 0001, Month: 04, Year: 2025 | Report displays stock details only for storage location 0001 |  |  |
| TC04 | Ensure Material Type filter works | Material Type: ROH, Month: 04, Year: 2025 | Report displays only materials of type ROH |  |  |
| TC05 | Validate report includes all required columns | Any valid input | Columns: Material Number, Description, Plant, Warehouse, Storage Location, UoM, Qty (Unrestricted, Blocked, QI), Stock Value, Valuation Type (if applicable), Month/Year |  |  |
| TC06 | Test export to Excel functionality | Any valid input | Report data exported successfully to Excel format |  |  |
| TC07 | Test export to PDF functionality | Any valid input | Report data exported successfully to PDF format |  |  |
| TC08 | Verify authorization restrictions | User without Inventory Analyst/MM Power User/Finance Controller role | Access to report is denied |  |  |
| TC09 | Verify batch stock data is included if batch management is active | Material with batch management active, Month: 04, Year: 2025 | Batch stock quantities are displayed using MCHB table data |  |  |
| TC10 | Validate report accuracy after monthly closing | Any valid input after monthly closing activities | Report reflects accurate and finalized stock data for the selected month |  |  |
| TC11 | Check report for multiple plants and storage locations | Plant: 1000, 1100; Storage Location: 0001, 0002; Month: 04, Year: 2025 | Report displays stock data for all selected plants and storage locations |  |  |
| TC12 | Ensure correct calculation of stock value and quantities | Any valid input | Stock Value and Stock Quantities (Unrestricted, Blocked, QI) are calculated as per data from MARD, MBEW, and related tables |  |  |

# 15. Sign-Off

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Name | Signature | Date |
| Prepared By | SAP MM Functional Consultant |  | 01.05.2025 |
| Approved By |  |  |  |
| Client Sign-Off |  |  |  |

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