

Strategic SAP Finance & Inventory Report

This document serves as the official, static reference guide for the Mur-ERP Strategic SAP Finance & Inventory Report. It outlines the technical business logic, mathematical criteria, database structures, and operational remediation steps of our automated data analysis.

All actual client figures, counts, and financial values are dynamically computed and exported into your separate results package, which contains:

1. **00_Overview_[Client]_[Date].csv**: A consolidated summary table containing the high-level totals, counts, and currency-specific values for all fifteen analytical checks.
2. **00_Data_Quality_[Client]_[Date].txt**: The automated data verification, system parameters, and parsing log.
3. **15 Granular Detail CSV Files**: The record-by-record lists of flagged material-plant positions.

1. Strategic Audit Compass

The automated analytics suite executes 15 specialized SQL checks designed to maximize capital efficiency, streamline master data planning, and enforce general ledger balance sheet compliance.

Focus Cluster	Strategic Objective	ROI Lever
I. Inventory Liquidity	Release of tied-up capital	Cashflow Boost: Direct reduction of capital tie-up, minimization of holding costs, and optimization of replenishment parameters.
II. Balance Sheet Compliance	Ensure accurate valuation	Audit Security: Elimination of unvaluated inventory, prevention of margin distortions, and identification of valuation and balance-sheet exceptions for review.
III. Process Stability	Clean up ERP master data planning	Efficiency Gain: Reduction of manual planning overrides, cleanup of system data debris, and stabilization of material replenishment cycles.

2. SQL Data Analysis Priorities

I. Strategic Inventory and Liquidity Analysis (The Cash Lever)

- **Core Focus:** Identification of stagnant material assets, structural overstocks, and slow-moving safety allocations.
- **Management Impulse:** Inventory held in a warehouse without continuous, active demand acts as a zero-interest loan to operations. Depleting, selling, or liquidating these items releases trapped working capital directly back into the company's cash flow.

1. Dead Stock Identification

- **Business Logic:** Flags materials carrying physical stock balances that show a complete absence of consumption or transaction history.
- **Algorithmic Filter:** Unrestricted-use plant inventory is positive (**LABST > 0**) while historical consumption records (**MVER**) show a mean annual consumption of zero or less (**GSMMG <= 0**) across up to three completed fiscal years.
Materials created within the last 12 months, or whose creation date is missing/invalid, are excluded — a flag here is an accusation, and a material without a verifiable age should not drive a write-off.
- **File Name:** 01_Dead_Stock_[Client]_[Date].csv

2. Planning Efficiency Check (Safety Stock Shortage)

- **Business Logic:** Detects materials whose active stock has fallen below defined safety stock limits.
- **Algorithmic Filter:** Physical stock is less than safety stock (**LABST < EISBE**) on items where automated planning is active (**DISMM is not 'ND' or blank**).
- **File Name:** 02_Efficiency_Check_[Client]_[Date].csv

3. Excess Stock Optimization (Maximum Stock & Safety Buffer)

- **Business Logic:** Targets inventory over-allocated beyond standard operational thresholds.
- **Algorithmic Filter:** Checks two tiers:
 1. *Primary:* If a Maximum Stock Level is maintained (**MABST > 0**), any quantity where **LABST > MABST** is flagged.
 2. *Fallback:* If no maximum limit is maintained (**MABST = 0**), flags items where stock exceeds twice the safety stock parameter (**LABST > (EISBE * 2)**).
- **File Name:** 03_Excess_Stock_[Client]_[Date].csv

4. Dynamic Inventory Coverage Analysis

- **Business Logic:** Identifies materials with immense stock levels projected to last more than two years based on historic demand.
- **Algorithmic Filter:** Active inventory coverage exceeds 24 months (**LABST / (GSMMG / 12.0) > 24.0**). Materials created within 12 months are labeled **NEW_MATERIAL = 'Y'**.
- **File Name:** 04_Inventory_Coverage_[Client]_[Date].csv

5. On-Site Consignment Stock

- **Business Logic:** Audits vendor consignment inventory located on-site.
- **Algorithmic Filter:** Vendor consignment stock balances are active and positive (**SLABS > 0**).
- **File Name:** 05_Consignment_Stock_[Client]_[Date].csv

II. Financial Risk & Price Audit (The Compliance Lever)

- **Core Focus:** Identification of valuation anomalies, price discrepancies, negative inventories, and account determination outliers.
- **Management Impulse:** Systematic errors in SAP's material ledger create substantial corporate risk. Correcting unvaluated stock lines, negative balances, and extreme price drifts secures balance sheet integrity.

6. Price Deviation Audit

- **Business Logic:** Flags materials showing extreme valuation discrepancies between standard price (**STPRS**) and moving average price (**VERPR**).
- **Algorithmic Filter:** Active Standard Pricing (**VPRSV = 'S'**) with a deviation exceeding 15%.
- **File Name:** 06_Price_Audit_[Client]_[Date].csv

7. Zero-Price Maintenance Audit (Unvaluated Assets)

- **Business Logic:** Identifies materials with positive warehouse stock but valued at zero price (\$0.00).
- **Algorithmic Filter:** Unrestricted stock > 0 and pricing field or price unit (**PEINH**) <= 0.
- **File Name:** 07_Zero_Price_Maintenance_[Client]_[Date].csv

8. Monitoring of Blocked Capital (Blocked Stock)

- **Business Logic:** Quantifies financial exposure of assets frozen in blocked or quality-inspection status.
- **Algorithmic Filter:** Positive balances under quality inspection or block flags (**SPEME > 0**).
- **File Name:** 08_Blocked_Stock_[Client]_[Date].csv

9. Valuation Class Consistency Review

- **Business Logic:** Lists materials whose G/L valuation class (**BKLAS**) differs from the class most commonly used for the same material type and valuation area. A deviation is a *candidate for review, not a confirmed error* — valuation class can legitimately vary within a material type for valid reasons (e.g. differing procurement type, or trading vs. in-house-produced goods). Each listed row should be checked against the material's intended account determination before any change.
- **Algorithmic Filter:** Materials are grouped by material type (**MTART**) and valuation area (**BWKEY**). The dominant class (mode) per group is treated as the expected value (**EXPECTED_BKLAS**); rows whose **BKLAS** differs are listed for review.
- **File Name:** 09_Valuation_Class_Audit_[Client]_[Date].csv

10. Negative Inventory Anomalies

- **Business Logic:** Identifies negative warehouse balances.
- **Algorithmic Filter:** Active logical stock balances < 0.
- **File Name:** 10_Negative_Inventory_[Client]_[Date].csv

III. Master Data Hygiene & Process Stability (The Efficiency Lever)

- **Core Focus:** Validation of material-to-plant extensions, automated planning rules, storage bin transparency, and deletion indicators.
- **Management Impulse:** Robust master data is the foundation of automated supply chain planning. Clearing "data debris" and ensuring logical process integrity minimizes manual planner interventions and secures the reliability of your automated replenishment cycles.

11. Orphaned Material Master Records

- **Business Logic:** Isolates global records (**MARA**) never extended to a plant segment (**MARC**).
- **File Name:** 11_Orphaned_Materials_[Client]_[Date].csv

12. Missing Planning Responsibility (Orphaned MRP)

- **Business Logic:** Flags planned material records lacking a designated MRP controller.
- **Algorithmic Filter:** Planning required (**DISMM != 'ND'**) but MRP controller (**DISPO**) is blank.
- **File Name:** 12_Missing_MRP_Controller_[Client]_[Date].csv

13. Inefficient Lot-Sizing Configuration

- **Business Logic:** Highlights materials with fixed lot-sizing missing base lot volume.
- **Algorithmic Filter:** Lot sizing set to fixed (**DISLS = 'FX'**) but volume (**BSTFE**) is 0.
- **File Name:** 13_Lot_Size_Check_[Client]_[Date].csv

14. Storage Bin Transparency Check

- **Business Logic:** Detects materials with active stock in Inventory-Management-controlled storage locations that have no storage-bin coordinate maintained.
- **Algorithmic Filter:** Unrestricted stock > 0 and storage bin (**LGPBE**) blank.
- **Scope note:** Storage locations managed under Warehouse Management (**WM/EWM**) hold bin data in the warehouse tables and leave **LGPBE** blank *by design*. A blank **LGPBE** there is not a defect; such locations should be excluded based on the client's WM configuration.
- **File Name:** 14_Bin_Location_Transparency_[Client]_[Date].csv

15. Master Data Deletion Conflict

- **Business Logic:** Cross-references active inventory against material records flagged for deletion.
- **Algorithmic Filter:** Master marked for archival (**LVORM = 'X'**) but holds positive stock.
- **File Name:** 15_Deletion_Conflicts_[Client]_[Date].csv

3. Operational Remediations & SAP Transactions

Analysis Result	Recommended Action	Operational SAP Transaction
Dead Stock	Scrap, liquidate, or clear	<i>MM06 / MI01</i>
Shortages	Re-evaluate safety stock boundaries	<i>MD04 / MM02</i>
Overstock	Adjust max stock levels	<i>MM02 / MD04</i>
High Coverage	Reduce inventory; adjust contracts	<i>MM02 / ME32K</i>
Consignment	Review on-site balances; return to vendor	<i>MIGO</i>
Price Anomalies	Correct purchase/standard prices	<i>MR21 / ME11</i>
Zero Val. Stock	Maintain correct price records	<i>MR21 / MM02</i>
Blocked Capital	Release to unrestricted or scrap	<i>QA32 / MIGO</i>
Valuation Anomalies	Review valuation class against intended account determination	<i>OMSK / MM02</i>
Negative Stock	Post missing goods receipts	<i>MI01 / MIGO</i>
Orphaned Data	Mark for archival	<i>MM06</i>
No Controller	Assign MRP controller	<i>MM02 / MM17</i>
Lot-Size Errors	Maintain fixed lot size quantities	<i>MM02 / MM17</i>
Missing Bins	Assign storage coordinates	<i>MM02 / LS01N</i>
Deletion Conflict	Scrap stock or lift deletion flag	<i>MIGO / MM02</i>

4. Detailed Lists - Column Glossary

I. Standard SAP Source Columns

Field	Name	Description
MATNR	Material Number	Unique identifier in the ERP database.
WERKS	Plant	Operational organizational unit.
LGORT	Storage Location	Logical/physical area within a plant.
LABST	Valuated Stock	Unrestricted-use physical quantity.
BKLAS	Valuation Class	Maps material to G/L inventory account.
MTART	Material Type	Groups identical attributes.
DISPO	MRP Controller	Assigned planner for material planning.
DISMM	MRP Type	Planning strategy.
LGPBE	Storage Bin	Warehouse coordinate.
STPRS	Standard Price	Constant period valuation price.
VERPR	Moving Average Price	Floating unit cost.
PEINH	Price Unit	Base quantity for price.
EISBE	Safety Stock	Minimum buffer.

MABST	Max Stock	Physical limit for replenishment.
LVORM	Deletion Flag	System archival marker.
SPEME	Blocked Stock	Restricted usage stock.
SLABS	Consignment Stock	Vendor-owned site stock.
BWKEY	Valuation Area	Valuation level (Plant).
DISLS	Lot Sizing	Order proposal rule.
BSTFE	Fixed Lot Size	Fixed base order quantity.
GJAHR	Fiscal Year	Historical record year.
ERSDA	Creation Date	Material record creation date.
VPRSV	Price Control Indicator	SAP code determining which price field is authoritative for valuation: 'S' = Standard Price (STPRS), 'V' = Moving Average Price (VERPR).
WAERS	Currency Key	ISO currency code of the valuation area (e.g. USD, EUR). Sourced from T001W and attached to every detail row so financial figures are never blended across currencies.

II. Calculated Output Columns:

Column Name	Logic / Formula	Meaning
CAPITAL_TIE_UP	$LABST \times PRICE$	Total cash locked in physical inventory.
PRICE	Price / PEINH	Normalized unit price.
SHORTAGE	$EISBE - LABST$	Physical quantity deficit.
OVERSTOCK_QTY	$LABST - MABST$	Stock above limits.
LOSS_VALUE	$OVERSTOCK_QTY \times PRICE$	Opportunity cost of excess inventory.
DIFFERENCE	$ABS(STPRS - VERPR)$	Absolute unit price drift.
DEVIATION_PERCENT	$(Diff / STPRS) \times 100$	% drift, flagging anomalies >15%.
COVERAGE_MONTHS	$LABST / Consumption$	Forecasted months of stock.
BLOCKED_CAPITAL	$SPEME \times PRICE$	Financial value of non-productive assets.
BALANCE_ERROR_VALUE	$ABS(LABST) \times PRICE$	Valuation error from negative stocks.
AT_RISK_VALUE	$LABST \times PRICE$	Value of stock flagged for deletion.
MOVEMENT_BASIS	Static label	Human-readable indicator of why a material was flagged as Dead Stock (e.g. "Zero consumption in historical MVER record"). Appears in Check 01.

AVG_ANNUAL_CONSUMPTION	AVG(SUM(MG01... MG12))	Mean annual usage quantity averaged over up to three completed fiscal years in MVER. Drives the coverage calculation in Check 04.
CONSUMPTION_YEARS_USED	COUNT(DISTINCT GJAHR)	Number of historical fiscal years that contributed to AVG_ANNUAL_CONSUMPTION. Values below 2 indicate a less statistically reliable forecast. Appears in Check 04.
COVERAGE_NOTE	Categorical text	Forecast-reliability tag for Check 04: "NO CONSUMPTION IN ANALYZED YEARS" (no historical usage), "NEW MATERIAL (<12 months)" (insufficient history), "CREATION DATE MISSING/INVALID – reliability unverified" (used when consumption exists but the creation date can't be validated), or "forecast from averaged historical consumption" (standard case).
NEW_MATERIAL	Y' if the material was created within the last 12 months OR has a missing/invalid creation date (ERSDA); otherwise 'N'.	Flags materials created within the trailing twelve-month window. A 'Y' value means COVERAGE_MONTHS for that row is not statistically reliable because the material lacks a full year of demand history.
EXPECTED_BKLAS	Statistical mode of BKLAS per (MTART, BWKEY)	The valuation class that occurs most frequently for the material's combination of material type and valuation area. A row appears in Check 09 only where the material's actual BKLAS deviates from this expected value.

5. System Integrity Disclaimer

This forensic analysis is an automated data computation based strictly on raw data provided by the client's infrastructure. The report functions exclusively as a directional analytical resource for internal specialist departments. All findings must be operationally validated prior to the execution of any inventory, procurement, or accounting modifications.