TOFFY MANUFACTURING

Functional Specification
Stock Snapshot Report (BTP ABAP)

Document ID	TFY-MM-FS-SS-001
Version	0.1 (Closed Beta)
Date	2026-01-17
Author	MM Consultant (Toffy Program)
Module	MM (Inventory Management / Warehouse Visibility)
Target Platform	SAP BTP ABAP Environment (Trial)

Table of Contents

1. Purpose and Background

This document describes the requirements for a Stock Snapshot Report to be developed in SAP BTP ABAP. The report enables Toffy Manufacturing users to review inventory status (quantities and value) and identify low-stock risks in a fast, guided flow suitable for a learning simulation.

The solution is intentionally designed to run without access to an on-premise S/4HANA system. All data will be stored in custom ZLI tables created in the BTP ABAP environment.

2. Business Scenario (Toffy Manufacturing)

Toffy is an FMCG manufacturer producing chocolate, biscuits, and confectionery. The pilot focuses on Plant 1000, where high volume makes small data mistakes become real incidents.

The business requests a "Stock Snapshot" screen for daily operations. It must show a header summary (snapshot metadata) and an item list (materials) with a simple chart for quick insights.

Operational goal: reduce time-to-decision during replenishment checks and prevent stock-outs on critical packaging.

Note: Some pilot stakeholders also mention Plant 1100 for future rollout; the report should be compatible.

3. Scope and Objectives

In scope:

- Create custom data model (header + item) to store snapshot results.
- Provide a Fiori app to display snapshot header, item list, and a chart.
- Enable a "Generate Snapshot" action that calculates data into ZLI tables.
- Support filtering by Plant and Snapshot Date.

Out of scope (Closed Beta):

- Integration to real S/4HANA inventory tables (e.g., MARD).
- Warehouse Management / EWM integration.
- Complex valuation and currency conversion.

4. Roles and Access

Role	Main Activities	Access
Inventory Analyst	View snapshots, filter items, download list.	Read
MM Key User	Generate snapshot, review exceptions, add comments.	Read + Generate
Developer (Simulation)	Build data model, implement generation logic, unit tests.	Full (BTP dev)

5. Process Overview

High-level flow:

14. User opens Stock Snapshot app.
15. User selects Plant and Snapshot Date (default: today).
16. User runs "Generate Snapshot" (creates header + items).
17. User reviews items sorted by risk (low stock first).
18. User checks chart for top 5 shortages and trend.

6. Functional Requirements

ID	Name	Description
FR-001	Snapshot Header	System stores one header record per Plant + Date containing totals and metadata.
FR-002	Snapshot Items	System stores item records for each material in scope with quantity, unit, and value.
FR-003	Risk Flagging	System flags items as LOW when quantity < reorder threshold.
FR-004	Chart	System displays a chart of "Top 5 LOW items" and a quantity trend.
FR-005	Export	User can export the item list to CSV.
FR-006	Comments	MM Key User can add one short comment to the snapshot header.

7. Data Model (ZLI Tables)

The solution uses three custom tables. Naming is illustrative and may be adjusted to align with package conventions.

7.1 Table: ZTF_STOCK_HDR (Snapshot Header)

Primary key: (snapshot_uuid).

Field	Key	ABAP Type	Example	Notes
SNAPSHOT_UUID	X	RAW16	16-byte UUID	Generated on create.
PLANT		CHAR4	1000	Toffy plant.
SNAPSHOT_DATE		DATS	2026-01-17	Date of snapshot.
TOTAL_ITEMS		INT4	120	Number of item rows.
TOTAL_VALUE		DEC(15,2)	125000.00	Inventory value (currency below).
CURRENCY		CUKY	EUR	Currency code.

COMMENT		STRING(200)	"Packaging risk"	Optional, MM key user.

7.2 Table: ZTF_STOCK_ITM (Snapshot Items)

Primary key: (snapshot_uuid, item_no).

Field	Key	ABAP Type	Example	Notes
SNAPSHOT_UUID	X	RAW16	(ref)	Foreign key to header.
ITEM_NO	X	NUMC6	000010	Sequential number.
MATERIAL_ID		CHAR18	RM-CHOC-001	Custom material id (not MATNR).
MATERIAL_DESC		CHAR40	Cocoa Powder	Short text.
STORAGE_LOC		CHAR4	RM01	Storage location.
QTY_ON_HAND		DEC(13,3)	125.500	Quantity on hand.
UOM		UNIT3	KG	Unit of measure.
REORDER_POINT		DEC(13,3)	150.000	Threshold.
RISK_FLAG		CHAR3	LOW	LOW/OK.
ITEM_VALUE		DEC(15,2)	5600.00	Value in TRY.

7.3 Derived View: ZV_STOCK_RISK (for Chart)

A CDS view is used to serve chart-ready data. It aggregates items flagged as LOW and provides a trend by day.

Trend window: last 7 days (rolling).

8. UI Specification (Fiori App)

App Type: Fiori Elements List Report + Object Page.

8.1 Selection / Filters

Mandatory filters:

- Plant (default 1000)
- Snapshot Date (default today)

Optional filters:

- Material Type
- Storage Location

Note: To keep the flow minimal, the app can also load directly with no selection screen and show the latest snapshot.

8.2 List Report (Header List)

Columns: Plant, Snapshot Date, Total Items, Total Value, Risk Count, Comment.

Default sort: Snapshot Date descending.

8.3 Object Page (Snapshot Details)

Sections:

- Overview: KPIs (Total Items, Total Value, LOW count).
- Item List: Table with low stock highlighted.
- Chart: Top 5 LOW items + 30-day quantity trend (if available).

8.4 Actions

Generate Snapshot (button): creates/overwrites snapshot for given Plant + Date.

Export CSV (button): exports item list.

9. Validations and Error Handling

Validations:

- Plant must be provided when generating snapshot.
- Snapshot Date must not be in the future.
- Quantity and reorder point must be >= 0.
- Max items per snapshot: 200 (hard limit).

Error handling principles:

- Show a single user-friendly message, log technical details to application log.
- If snapshot generation fails, do not create partial data (no header without items).

10. Non-Functional Requirements

Performance: Generate Snapshot in < 2 seconds for up to 500 items.

Security: Read access for Analysts, generate access for MM Key Users.

Audit: Store created_by and created_at in header (optional).

11. Acceptance Criteria

19. AC-01: User can generate a snapshot and see header + items.
20. AC-02: LOW items are flagged when QTY_ON_HAND < REORDER_POINT.
21. AC-03: Chart displays Top 5 LOW items and trend.
22. AC-04: Export CSV downloads correctly.
23. AC-05: Snapshot supports Plant 1000 only in Closed Beta.

12. Open Points and Assumptions

- Data seeding approach for ZLI tables in BTP trial (manual upload vs generator class).

- Whether the snapshot should read from simulated MARA/MARD data sources in later phases.
- Confirm currency standard (EUR vs TRY) for Total Value.

Appendix A: Field Catalogue

A.1 Header key format

SNAPSHOT_UUID is stored as CHAR32 (hex string) for easier display in UI.

A.2 Units

UOM is restricted to EA only in Closed Beta.