Functional Specification Document

# Index

1. Document Information 1

2. Introduction 1

3. Business Requirement Overview 1

4. Business Process Flow 1

5. Functional Scope 1

6. Functional Solution Approach 1

7. Functional Requirements 1

8. Interfaces & Integration 1

9. Output 1

10. UI Requirement 1

11. Authorization & Security 1

12. Error Handling & Notifications 1

13. Assumptions & Dependencies 1

14. Test Scenario 1

15. Sign-Off 1

# 1. Document Information

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| --- | --- | --- | --- | --- |
| Document Title | Project Name | Client Name | Prepared By (Author, Department) | Document Version & Date |
| Functional Specification - ZRCOPY\_SAMPLE\_ECC\_CODE\_V1 | [To Be Filled] | [To Be Filled] | PWC AI Asset | [To Be Filled] |

# 2. Introduction

This functional specification describes the ABAP executable program ZRCOPY\_SAMPLE\_ECC\_CODE\_V1 (type PROG) and its includes. The program provides a selection screen for Plant (p\_werks) and Materials (s\_matnr), sets up internal tables/structures, and encapsulates modular subroutines to retrieve and prepare data from core SAP ECC objects: T001W (plant), MARA/MARC/MARD (materials), LIPS (deliveries), VBRK/VBRP (billing), PRCD\_ELEMENTS (pricing elements), ACDOCA (Universal Journal), KNA1 (customers), and P\_BusinessPlace. It also references GTS classification services (/sapsll/cl\_mm\_cls\_service) and a local class lcl\_data with a placeholder method get\_data.

Scope includes selection inputs, plant validation, material and delivery retrieval, pricing/billing/accounting/customer fetches, commodity code classification calls, auxiliary lookups and counts, and preparation of a final internal table (ifinal) based on delivery items. Output formatting/reporting and error handling are not defined in the payload and are out of scope.

Intended audience: Business analysts and functional consultants across SD/MM/FI, ABAP developers, and technical leads requiring a clear understanding of inputs, data sources, and processing steps for this program.

# 3. Business Requirement Overview

Business requirements (as implied by the payload):

- Allow users to input Plant (p\_werks) and Material(s) (s\_matnr) to drive downstream data retrieval.

- Validate plant input against T001W and, when provided, filter subsequent selections by plant.

- Fetch materials from MARA per the material selection.

- Retrieve delivery items (LIPS) for the selected materials and plant, and stage them into ilips.

- Extract pricing element keys (knumv/condition counters) from PRCD\_ELEMENTS into ikonv.

- Retrieve non-draft billing headers (VBRK) and items (VBRP) and stage basic keys.

- Pull accounting line items from ACDOCA (company code, fiscal year, document, item, GL, amounts, currency, posting date) ordered for further processing.

- Fetch customer numbers from KNA1 and business place data from P\_BusinessPlace.

- Access MARC fields (stawn, expme) and invoke GTS services for commodity code classification and details.

- Perform auxiliary lookups and counts (e.g., COUNT(\*) on VBAK), substring-driven material checks, and ordered material reads from MARA/MARC/MARD.

- Prepare a consolidated internal table ifinal from ilips with vbeln/posnr/matnr/werks, and compute a row count.

Objectives:

- Provide a modular, repeatable framework to validate inputs and assemble cross-functional ECC data (MM/SD/FI/Pricing/GTS) based on plant and material criteria.

- Stage data in internal tables for subsequent reporting or processing.

- Establish placeholders (e.g., lcl\_data, get\_data, several FORM routines) that can be expanded with business rules.

Observed pain points/considerations from the payload:

- Several SELECT SINGLE statements lack WHERE conditions and serve as placeholders.

- prepare\_final\_data clears ifinal after counting, indicating demonstration or incomplete logic.

- Limited error handling and no explicit output/reporting defined.

# 4. Business Process Flow

Start -> Enter p\_werks and s\_matnr -> fetch\_and\_check\_plant -> fetch\_material -> Decision: imara and i\_t001w-werks provided? -> [Yes] fetch\_delivery\_items -> [No] fetch\_konv -> fetc\_vbrk -> fetch\_vbrp -> fetch\_bsak -> fetch\_j1m0cust -> fetch\_marc\_stawn -> fetch\_dzaehk -> fetch\_jbbranch -> fetch\_vbuk -> fetch\_marc\_mard -> fetch\_orderby -> prepare\_final\_data -> populate\_salary -> End

# 5. Functional Scope

[Error: Missing output for section Functional Scope]

# 6. Functional Solution Approach

[Error: Missing output for section Functional Solution Approach]

# 7. Functional Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Requirement ID | Requirement Description | Business Rule | Priority | Comments |
| REQ-001 | Provide a selection screen with plant and material filters | Include PARAMETERS p\_werks LIKE t001w-werks and SELECT-OPTIONS s\_matnr FOR mara-matnr inside BLOCK b1 with title TEXT-001 | High | From ZRCOPY\_SAMPLE\_ECC\_CODE\_SEL\_V1 of program ZRCOPY\_SAMPLE\_ECC\_CODE\_V1 |
| REQ-002 | Validate/fetch plant master when plant is provided | Execute SELECT SINGLE werks FROM t001w INTO CORRESPONDING FIELDS OF i\_t001w only IF NOT p\_werks IS INITIAL | High | Subroutine fetch\_and\_check\_plant |
| REQ-003 | Fetch materials from MARA according to selection | SELECT matnr, meins, mtart FROM mara INTO CORRESPONDING FIELDS OF TABLE imara WHERE matnr IN s\_matnr | High | Subroutine fetch\_material |
| REQ-004 | Fetch delivery items for selected materials and plant | Only when imara is not initial AND i\_t001w-werks is not initial, SELECT matnr posnr vbeln werks FROM LIPS for all entries in imara and plant = i\_t001w-werks; SORT and MOVE-CORRESPONDING to ilips | High | Subroutine fetch\_delivery\_items |
| REQ-005 | Build final output set from delivery items | LOOP ilips; transfer matnr, werks, vbeln, posnr to ifinal; APPEND; DESCRIBE TABLE ifinal LINES lv\_lines; then REFRESH ifinal | Medium | Subroutine prepare\_final\_data |
| REQ-006 | Retrieve pricing document numbers | SELECT knumv FROM prcd\_elements INTO CORRESPONDING FIELDS OF TABLE ikonv ORDER BY knumv; check sy-subrc = 0 | Medium | Subroutine fetch\_konv; ikonv INCLUDE STRUCTURE konv |
| REQ-007 | Read one non-draft billing header | SELECT SINGLE vbeln FROM vbrk WHERE vbrk~draft = space INTO lv\_vbeln | Medium | Subroutine fetc\_vbrk |
| REQ-008 | Read non-draft billing items | SELECT vbeln, posnr FROM vbrp WHERE vbrp~draft = space INTO TABLE lt\_vbrk | Medium | Subroutine fetch\_vbrp |
| REQ-009 | Fetch financial line items from ACDOCA | SELECT bukrs gjahr belnr buzei hkont dmbtr wrbtr waers budat FROM acdoca INTO TABLE lt\_data ORDER BY the same fields | Medium | Subroutine fetch\_bsak |
| REQ-010 | Fetch customer master numbers | SELECT kunnr FROM kna1 INTO TABLE lt\_data ORDER BY kunnr | Low | Subroutine fetch\_j1m0cust |
| REQ-011 | Retrieve MARC commodity code fields and call SLL services | SELECT SINGLE stawn, expme FROM marc INTO ls\_marc; CREATE OBJECT /sapsll/cl\_mm\_cls\_service and call get\_commodity\_code\_cls and get\_commodity\_code\_details | Medium | Subroutine fetch\_marc\_stawn |
| REQ-012 | Retrieve PRCD\_ELEMENTS condition counter | SELECT SINGLE condition\_counter FROM prcd\_elements INTO lv\_dzaehk | Low | Subroutine fetch\_dzaehk |
| REQ-013 | Fetch company code–business place assignments | SELECT CompanyCode AS bukrs, BusinessPlace AS branch FROM P\_BusinessPlace INTO TABLE lt\_data ORDER BY bukrs, branch | Low | Subroutine fetch\_jbbranch |
| REQ-014 | Count sales document headers | SELECT COUNT(\*) FROM vbak INTO lv\_vbak\_cnt | Low | Subroutine fetch\_vbuk |
| REQ-015 | MARC/MARD lookup using material substring | Derive lv\_matnr\_sub = substring(lv\_matnr, off=3, len=4); SELECT matnr FROM marc INTO TABLE lt\_data WHERE matnr = lv\_matnr\_sub ORDER BY matnr; SELECT SINGLE lsobs FROM mard INTO lv\_lsobs | Low | Subroutine fetch\_marc\_mard |
| REQ-016 | Fetch materials with ordering and conditional message | Compute substrings of matnr/mtart; SELECT matnr mtart matkl FROM mara INTO TABLE lt\_table WHERE matnr = lv\_matnr\_sub10 AND mtart = lv\_mtart ORDER BY matnr mtart matkl; IF lv\_matnr\_chk4 = '1234' THEN build concatenated message | Low | Subroutine fetch\_orderby |
| REQ-017 | Fetch single MARC entry via short material key | lv\_matnr\_sub = substring(lv\_matnr, off=3, len=3); SELECT SINGLE matnr FROM marc INTO lv\_marc\_matnr WHERE matnr = lv\_matnr\_sub | Low | Subroutine fetch\_single |
| REQ-018 | Provide OO wrapper with data holder and retrieval hook | Class lcl\_data exposes public DATA gv\_vbrk TYPE vbrk and method get\_data | Low | Class definition lcl\_data |
| REQ-019 | Implement basic get\_data behavior | METHOD get\_data clears gv\_vbrk (CLEAR gv\_vbrk) | Low | Method get\_data |
| REQ-020 | Populate local salary amount from ACDOCA | In subroutine populate\_salary, lv\_salary TYPE dmbtr is assigned from acdoca-dmbtr | Low | Subroutine populate\_salary |
| REQ-021 | Define and use working/internal tables for processing | Declare ikonv (INCLUDE STRUCTURE konv), ifinal (vbeln, posnr, matnr, werks), i\_t001w (LIKE t001w OCCURS 0 WITH HEADER LINE), ilips (INCLUDE STRUCTURE lips), imara (INCLUDE STRUCTURE mara) | High | From ZRCOPY\_SAMPLE\_ECC\_CODE\_TOP\_V1 and ZRCOPY\_SAMPLE\_ECC\_CODE\_F01\_V1 |

# 8. Interfaces & Integration

[Error: Missing output for section Interfaces & Integration]

# 9. Output

- No external outputs implemented.

- Evidence: The program ZRCOPY\_SAMPLE\_ECC\_CODE\_V1 and its includes contain no ALV/SALV calls, WRITE statements, spool submission, file I/O (OPEN DATASET/GUI\_DOWNLOAD), or email (CL\_BCS) logic. All logic is data retrieval/manipulation in internal tables and variables.

- Internal/staging datasets (in-memory only; not persisted or displayed)

- ifinal (ABAP internal table; fields: vbeln, posnr, matnr, werks)

- Destination: Program memory only

- Purpose: Staging of “final” dataset assembled from delivery items; immediately cleared after count (DESCRIBE TABLE + REFRESH), so no user-visible output is produced.

- Format/Layout: Internal table; no external layout specified (Excel/PDF/CSV: N/A)

- ilips (ABAP internal table; structure LIPS)

- Destination: Program memory only

- Purpose: Delivery items fetched based on materials/plant for subsequent processing into ifinal.

- Format/Layout: Internal table; no external layout specified

- imara (ABAP internal table; structure MARA)

- Destination: Program memory only

- Purpose: Material master subset used to drive downstream selection (e.g., LIPS).

- Format/Layout: Internal table; no external layout specified

- ikonv (ABAP internal table; structure KONV fields via PRCD\_ELEMENTS selection of knumv)

- Destination: Program memory only

- Purpose: Holds pricing condition keys retrieved from PRCD\_ELEMENTS.

- Format/Layout: Internal table; no external layout specified

- Other computed data (not output)

- lv\_vbak\_cnt (COUNT(\*) of VBAK): in-memory only; no display/export

- lv\_dzaehk (condition\_counter from PRCD\_ELEMENTS): in-memory only; no display/export

- Message variable built in fetch\_orderby: in-memory only; no display/export

- Various inline internal tables (e.g., lt\_data) within subroutines: transient, no output

- Format and destination summary

- Format: No Excel/PDF/CSV/list/spool defined

- Destination: No AL11 path, no email, no spool request, no application log configured

- Functional outcome

- Current implementation prepares data but does not generate any user-facing report, extract, or file output. Any required outputs (layout, medium, and destination) are not specified in the provided code.

# 10. UI Requirement

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field Name | SAP Table-Field | Description | Field Type | Default Value | Mandatory (Y/N) | Business Purpose/Validation |
| P\_WERKS | T001W-WERKS | Single-value input field for plant (WERKS) based on table T001W. | Input (Parameter) | [To Be Filled] | [To Be Filled] | Validate against existing plants in T001W; provide F4 help from T001W-WERKS; restricts report to a specific plant. |
| S\_MATNR | MARA-MATNR | Range input for material number (MATNR) based on table MARA. | Range (Select-Option) | [To Be Filled] | [To Be Filled] | Supports multiple ranges/single values/inclusions-exclusions; validate against MARA-MATNR; provides F4 help; filters materials considered by the report. |

# 11. Authorization & Security

[Error: Missing output for section Authorization & Security]

# 12. Error Handling & Notifications

[Error: Missing output for section Error Handling & Notifications]

# 13. Assumptions & Dependencies

[Error: Missing output for section Assumptions & Dependencies]

# 14. Test Scenario

[Error: Missing output for section Test Scenario]

# 15. Sign-Off

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Name | Signature | Date |
| Prepared By | [To Be Filled] | [To Be Filled] | [To Be Filled] |
| Approved By | [To Be Filled] | [To Be Filled] | [To Be Filled] |
| Client Sign-Off | [To Be Filled] | [To Be Filled] | [To Be Filled] |

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