D0091 - Inbound interface from satellite Apps to create SO - SFA - API - SAP S/4

SAP Functional Specification Document

Interface

Object ID	D0091 D0092 D0093 D0104 D0105 D0106 D0035
Object Type	Interface
System	☑ SAP ☐ Satellite App: {Application Name}
Object Title	Description
Stream Area	☑ Sales & Promotion ☐ Distribution ☐ Warehouse ☐ Procurement ☐ Production Planning ☐ Quality Management ☐ Plant Maintenance ☐ Finance Accounting ☐ Finance Controlling ☐ Project System ☐ Success Factor ☐ Master Data Governance
Complexity	☑ Low ☐ Medium ☐ High ☐ Very High

Guidelines for Writing Form Functional Specification

1. The content in BLUE is the synopsis of what the section of FSD should contain. Please remove the content in blue before updating the respective sections.
2. Update “Table of contents” section before base lining/delivering/updating of the Functional Specification Design.
3. Section 1 – “Document History” is mandatory to log initial and further changes to the Functional Specification Design. Please highlight in different color if, critical content pertaining to a Change Request is being updated.
4. Enable Track changes if to modify Baseline Functional Specification Design.
5. Process flow diagram should be mentioned in detail.
6. Sections 6 should capture all possible business test cases. This will become the base for technical unit testing (TUT) and functional unit testing (FUT).
7. Please remove all sample texts and sample attachments after writing the FS. They are only indicative in nature.

1 Document Control Information

1.1 Document Edit History

Version	Date	Additions/Modifications	Prepared/Revised by
1.0	25-04-2025	Initial Draft	Afrizal Samsul Hidayat

1.2 Document Review and Sign Off

The individuals listed here will be required to review and approve this document.

Reviewed By:

The “Reviewed By” signature indicates the individual(s) who reviewed this document for content and clarity, and to the best of their knowledge, this document satisfactorily achieves the purpose and scope defined herein:

	Name	**Title/Role** <Designation, Department>
Reviewed By	Yoakima Erice Handayani	
Signature	@Yoakima Erice Handayani	Date: May 22, 2025
Reviewed By		
Signature		Date:

Approved By:

The “Approved By” signature indicates the individual(s) who approved this document for content and clarity, and to the best of their knowledge, this document complies with corporate policies and procedures:		
	Name	**Title/Role** <Designation, Department>
Approved By		
Signature		Date:
Approved By		
Signature		Date:

2 Functional Specification Details

This Functional Specification Document (FSD) is a consolidation of several objects combined into one, as the data structure for storing information from Kafka to SAP is designed using a single table only.

Below is the list of the FSD objects included in this implementation:

1. D0091 - Inbound interface from satellite Apps to create SO - SFA - API - SAP S/4
2. D0092 - Inbound interface from satellite Apps to create SO - WINGS Online - API - SAP S/4
3. D0093 - Inbound interface from satellite Apps to create SO - WINGS Kita - API - SAP S/4
4. D0104 - Inbound interface from satellite Apps (SFA) to create SO Consignment Issue - SAP S/4
5. D0105 - Inbound interface from satellite Apps (SFA) to create SO Consignment PickUp - SAP S/4
6. D0106 - Inbound interface from satellite Apps to create SO - Export MTS Advanced - SAP S/4
7. D0035 - Interfacing from SFA to SAP to create Return Order - SAP S/4

2.1 Impacted Sub-Process

N/A

2.2 Assumption

Presented below is the list of assumptions established before to the development of the system:

The creation of this temporary table is intended to store data received from Kafka before it is processed to create a sales order in SAP through the interface. This staging mechanism ensures that incoming data is properly captured, validated, and prepared before being passed into the SAP system for order creation.

2.3 Risks

1. If an error occurs, the system has no place to store or track the raw data.
2. There is no mechanism to mark the status of data from the interface—whether it was successful, failed, or still unprocessed.

3 Operational Considerations

The following sections outline the requirements for the interface object. The requirements, business rules and design specifications are combined in this document to provide a comprehensive view of the functional design.

3.1 Data Source

<Specify the data source(s) used for this development. This applies only to outbound integrations (e.g., table, CDS view, API, function module).>

3.2 Trigger

<Specify the trigger for the development object.>

3.3 Processing Options

<Specify the processing mode, type, and frequency>

Inbound/Outbound

☑ Inbound

□ Outbound

Processing Mode

□ Batch

□ Real Time

☑ Near Real Time

Processing Type

☑ Synchronous

□ Asynchronous

Require Middleware

☑ Yes

□ No

Interface Type

□ RFC

□ IDOC

□ Direct Database

☑ API

□ File

□ CDC (Change Data Capture)

□ Other KAFKA

Frequency

□ Annually

□ Quarterly

□ Monthly

□ Weekly

□ Daily

☑ On Demand

□ Other

3.4 Dependencies

The development of the KAFKA API must be completed first before the API structure can be designed and implemented. This ensures that the data flow and technical specifications are well-established, providing a solid foundation for building a reliable and consistent API structure

3.4.1 Environment / Configuration

<List the configuration work that must be considered during the development of this object and that needs to be in place before this requirement can be tested. This section should answer the question “What are the configurations needed for this object?”>

3.4.2 Development Dependencies

<List the development, and other work that must be considered during the development of this development object. This section should answer the question “What other RICEFW object this development depends on?”>

3.4.3 Run / Execution Dependencies

<Once in production, this development object may need to be executed before or after another system event. List other system events that this development object should follow or precede.”>

3.5 Expected System Load

<Specify the required average and peak demand. To establish your estimate, use historical data. Also list the timing of the peak demand.>

How often will the development object be executed?

Average Load

Peak Load

4 Functional Design Considerations

4.1 Interface Details

This process is closely related to the structure of the Kafka API, as the data is triggered by the application controller through Kafka. The API structure must align with how the data is sent and managed by the controller to ensure smooth communication and accurate processing.

4.1.1 Data Structure

The following is the API structure used to store data transmitted from Kafka into the SAP system. This structure defines how the incoming data is received, processed, and mapped into the appropriate tables within SAP for further use.

Divided into three sections level:

- Header = ZSDT_T_HEADERSO
- Item = ZSDT_T_ITEMSO
- Condition Type = ZSDT_T_SOCONDTYPE

Header Level (ZSDT_T_HEADERSO)

Field	**Description**	**Data Type**	**Length**	**Sample Data**

SOURCE_APP	Source Apps	CHAR	20	SFA
EXTERNAL_ID	External ID	CHAR	50	SFA123
VBAK_AUART	Sales Doc. Type	CHAR	4	ZS02
VBAK_VKORG	Sales Organization	CHAR	4	STA1
VBAK_VTWEG	Distribution Channel	CHAR	2	11
VBAK_SPART	Division	CHAR	2	11
VBAK_VKBUR	Sales Office	CHAR	4	STA1
VBKD_BSTKD	Customer Reference	CHAR	35	SFA-01
VBKD_BSTDK	Customer Ref Date	DATS	8	01.05.2025
VKBD_PO_TYPE	PO Type	CHAR	4	WOL1
VBAK_AUDAT	Document Date	DATS	8	01.05.2025
VBKD_IHREZ	Your Reference	CHAR	12	Test123
VBAK_VDATU	Requested Delivery Date	DATS	8	01.05.2025
VBAK_VSBED	Shipping Conditions	CHAR	2	12
VBKD_PRSDT	Pricing Date	DATS	8	01.05.2025
VBAK_WAERK	Document Currency	CUKY	5	IDR
VBAK_AUGRU	Order Reason	CHAR	3	201
VBPA_PARVWSP	Partner Function Sold to	CHAR	10	100000003
VBPA_PARVWSH	Partner Function Ship to	CHAR	10	100000003

VBPA_PARVWZF	Partner Function Salesman	CHAR	10	100000200
VBPA_PARVWBP	Partner Function Bill to	CHAR	10	100000003
VBPA_PARVWPY	Partner Function Payer	CHAR	10	100000003
ZSDV_T_VOUCHERID	Voucher ID	CHAR	20	VCH240501154500A2B1
ZSDV_T_CUSTREWARD	Customer Reward ID	CHAR	30	CRW20250505T153045AB12X9QZL3TY78RW
PO_CUSTOMER	Customer No	CHAR	30	560000
PO_CUST_NAME	Customer Name	CHAR	65	Alfamart
TextID	Text ID	CHAR	4	ZT01
TextLine	Text Line	CHAR	100	Text satu, text dua
ENTRY_TIMESTAMP	Date stored data	DATS	15	YYYYMMDDhhmmss 20250505153045

PROCESS_STATUS	Process Status	CHAR	10	S = Success
				E = Error
				R = Retry
				Blank = Not yest processed

MESSAGE		CHAR	250	based on message Bapi creation
VBAK_VBELN	SO Number	CHAR	10	

Item Level (ZSDT_T_ITEMSO)

Field	Description	Data Type	Length	Sample Data

EXTERNAL_ID	External ID	CHAR	50	SFA123
VBAP_POSNR	Item	NUMC	5	10
VBAP_POSEX	Item Reference	NUMC	5	1
VBAP_UEPOS	Higher Level Item	NUMC	6	10
VBAP_MATNR	Material Number	CHAR	18	1000004
VBAP_VGBEL	Reference Document	CHAR	18	1000000001
VBAP_KWMENG	Quantity	QUAN	15	2
VBAP_VRKME	Sales Unit	UNIT	3	PC
PO_PRICE_ALL	Gross Price (Net + PPN)	DEC	24	20000
PO_PRICE_PPN	PPN	DEC	24	20000
PO_PRICE_NET	(Gross - Discount -PPN)	DEC	24	20000
VBAP_LPRIO	Delivery Priority	NUMC	2	11
ZSDV_T_VOUCHERID	Voucher ID / Flash Sales	CHAR	20	VCH240501154500A2B1
ZSDV_T_CUSTREWARD	Customer Reward ID	CHAR	30	CRW20250505T153045AB12X9QZL3TY78RW
VBAP_PROMODINAMIC	Dynamic Dist drive	CHAR	1	X
VBAP_FOC	Flag FOC (WO & Sampling)	CHAR	1	X
VBAP_MSR_RET_REASON	Return Reason	CHAR	3	101
MSR_D_EXECUTED_REFUND_TYPE	Refund Type	CHAR	1	X
MSR_D_EXECUTED_REPLACE_MATNR	Repl Material	CHAR	10	1000004

MSR_D_EXECUTED_REPLACE_QTY	Repl Quantity	QUAN	15	1
MSR_D_EXECUTED_REPLACE_UNIT	Replacement Material Unit of Measure	UNIT	3	PC
VBAP_GIFT	Flag GIFT	CHAR	1	X
WBS_CODE	WBS No	NUMC	24	WBS00000000001

Condition Level (ZSDT_T_SOCONDTYPE)

Field	Description	Data Type	Length	Sample Data
EXTERNAL_ID	External ID	CHAR	50	SFA123
VBKD_BSTKD	Customer PO	CHAR	100	SFA-01
PRCD_ELEMENTS_KSCHL	Condition type	CHAR	4	ZD01
PRCD_ELEMENTS_KBETR	Value	DEC	24	20000
VBAP_MATNR	Material	CHAR	10	1000004
VBKD_POSEX	Item Ref	NUMC	5	1

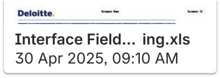
1. Add new tcode to cover open this table
2. Add user update and time stamp

4.1.2 Mapping and Transformation

*

< For outbound interfaces only, please specify the interface fields and their corresponding mappings>

<for ex:



Interface Field... ing.xls
30 Apr 2025, 09:10 AM

5 Security and Controls

5.1 Security Requirements

<Describe any security requirements that need to be put in place as a result of using this development object. This could include security access to affected transactions or new transactions that may result from this development. For example - this section should answer the question “Are there SOX compliance requirements?>

<Complete the table below to reflect the security requirements outlined above.>

Authorization Object	Authorization Field

6 Functional Unit Test Scenarios

6.1 Test Scenario / Data

{Provide test scenario for developer better understanding of the functional requirements}

Step #	Test Type	Scenario Title	Steps Performed	Expected Results	Actual Results
1	Positive	Successful Data Receipt Test	1. Prepare Test Data in Kafka 2. Send Data from Kafka 3. Check Temporary Table in SAP		
2	Negative	Invalid Data Format Test	1. Prepare Test Data in		

			Kafka 2. Send Data from Kafka 3. Check Temporary Table in SAP		
3	Negative	Duplicate Data Test	1. Prepare Test Data in Kafka 2. Send Data from Kafka 3. Check Temporary Table in SAP		
4	Positive	Test Timestamp & Tracking	1. Prepare Test Data in Kafka 2. Send Data from Kafka 3. Check Temporary Table in SAP		

6.2 Error Handling, Validation, Correction and Recovery

*

<Enter any additional information that could be helpful in developing this form.>

{Describe what types of error messages or logs are needed to alert the user}.

Indicator :-

Message Type – E – Error, W – Warning, I – Information.

Language – E – English, C – Chinese.

No.	Exception Desc.	Mess. Type	Language	Message Text (50 Characters only)
1.				

7 Attachments and Documentation

<Attach any additional information in the form of documentation / Appendix / attachments.>