C0338 - OUT I/F to provide detail stock in Storage Bin - SAP S/4

SAP Functional Specification Document

Interface

Object ID	C0338 S4VRICEFW-222: C0338 - OUT I/F to provide detail stock in Storage Bin - SAP S/4
Object Type	Interface
System	☑ SAP ☐ Satellite App: {Application Name}
Object Title	OUT I/F to provide detail stock in Storage Bin
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
Version 0.1	16-Apr-2025	Initial Creation	@Virnando Tan Wijaya
Version 1.0	21-Apr-2025	Initial Submission	@Virnando Tan Wijaya
Version 2.0	8-May-2025	Revision Need Additional Return Value	@Virnando Tan Wijaya
Version 2.1	15-May-2025	Add Link API Dev and Change parameter according with developed	@Virnando Tan Wijaya
Version 3.0	23-May-2025	Add read stock from HU that is open in storage bin	@Virnando Tan Wijaya
Version 4.0	04-June-2025	Added new API for stock in storage bin in case and pack unit	@Virnando Tan Wijaya
Version 4.1	16-June-2025	Add new export value Expiration Date	@Virnando Tan Wijaya
Version 4.2	16-June-2025	Add new export value TotalHU and If WM unit is blank then pack unit equal to Base Unit	@Virnando Tan Wijaya
Version 5.0	22-July-2025	Add new export value for prod hier level 1, return document ref	@Virnando Tan Wijaya

		no, new import parameter field (batch, ref doc, plant and storage location)	
Version 5.1	29-July-2025	New API for Stock IM Level	@Virnando Tan Wijaya
Version 5.2	05-Aug-2025	Revise Logic API for Stock IM Level	@Virnando Tan Wijaya

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	@Tjoe Susan	IT Lead
Signature		Date: May 15, 2025

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	@Fahrizal Desta Iryono	BP Lead
Signature		Date: May 15, 2025

2 Functional Specification Details

2.1 Impacted Sub-Process

C-020-080 Stocks Transfer within Warehouse (Bin to Bin)

- C-020-080-020 Perform bin to bin transfer

2.2 Assumption

This development object for providing stock inventory from SAP to satellite apps, hence providing visibility before performing stock movement without the need to open SAP.

2.3 Risks

If this development object is not created, there will be no data provided for available stock in a bin via the satellite apps.

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

SAP

3.2 Trigger

Trigger from Satellite Apps

3.3 Processing Options

<Specify the processing mode, type, and frequency>

Inbound/Outbound

- [ ] Inbound
- [x] Outbound

Processing Mode

- [ ] Batch
- [x] Real Time
- [ ] Near Real Time

Processing Type

- [x] Synchronous
- [ ] Asynchronous

Require Middleware

- [ ] Yes
- [x] No

Interface Type

- [ ] RFC
- [ ] IDOC
- [ ] Direct Database
- [x] API
- [ ] File
- [ ] CDC (Change Data Capture)
- [ ] Other (if other, describe here) _____

Frequency

- [ ] Annually
- [ ] Quarterly
- [ ] Monthly
- [ ] Weekly
- [ ] Daily
- [x] On Demand
- [ ] Other (If other, describe here)_____

3.4 Dependencies

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

Not applicable

3.4.3 Run / Execution Dependencies

Not applicable

3.5 Expected System Load

How often will the development object be executed?

Average Load (Daily)

4 Functional Design Considerations

<Provide details about the interface itself. This section should explain what the exact details of the interface>

4.1 Interface Details

API Overview

- **Base URL**: `(Insert By Developer)`
- **Authentication**: Bearer Token
- **Response Format**: JSON
- **Error Handling**: Standard HTTP status codes with descriptive error messages

	Function & API per Process	Overview Step by Step	Remark / Validation / Logic
1	GET List of stock in Storage Bin (API)	1. Get list of stock material a. Get stock b. Count material id in each storage bin 2. Get quantity in WM Unit (quantity in warehouse unit measurement) a. Get WM Unit of Measure b. Convert Quantity to WM Unit 3. Get Pack Unit (decimal quantity of	`// 0. Get Token` `Base URL: (https://vhpyadwsai01.sap.wingscorp.com:44300/sap/opu/odata4/sap/zwmapi_list_stock_ewm_o4/srvd_a2x/sap/zwm_list_stock_ewm/0001/ListStockEWM/com.sap.gateway.srvd_a2x.zwm_list_stock_ewm.v0001.getListStock(EWMWarehouse='FB01',EWMStorageType='',EWMStorageBin='',EWMStorageSection='')?sap-client=110)` `Authentication: Bearer Token` `Response Format: JSON` `Error Handling: Standard HTTP status codes with descriptive error messages`  `Function SAP Z_FM_EWM_GET_LIST_STOCK` `Notes*` `flag HU:` `'A' -> All (With & Without HU)` `'Y' -> With HU only` `'N' -> Without HU only`  Example Data:  `// Client SAP S/4 DWS 110`  `EWMWarehouse='FA01'` `EWMStorageType='9010'` `EWMStorageBin=''` `EWMStorageSection=''` **API Paramete**

warehouse unit measurement in base unit)

a. Convert WM Unit in point 2 to Base Unit
b. Calculate Pack unit

r's

Import Parameter

Field Name	Description	Type	Mandatory	Sample Data
EWMWarehouseNumber	Warehouse Number	CHAR(4)	Mandatory (If EWMPlant and EWMStorageLocation is Empty/Blank)	FA01
EWMPlant	Plant	CHAR(4)	Mandatory (If EWMWarehouseNumber is inputted, this is ignored)	1AA0
EWMStorageLocation	Storage Location	CHAR(4)	Mandatory (If EWMWarehouseNumber is inputted, this is ignored)	A001
EWMStorageType	Storage Type	CHAR(4)	Optional	SRP1
EWMStorageBin	Storage Bin	CHAR(18)	Optional	SLP5-0002

EWMStorageSection	Storage Section	CHAR(4)	Optional	0001
EWMProduct	Product	CHAR(40)	Optional	1700030
EWMBatch	Batch	CHAR(10)	Optional	20230502
EWMDocumentRefType	Document Reference Type	CHAR(3)	Mandatory (IF EWMDocumentNumber is inputted, this is ignored)	PJS
EWMDocumentNumber	Document Number	CHAR(35)	Optional	C/ASTA 2432

```
// 0. Determine Warehouse Number
    0.a. Get ERP Warehouse Number
      SELECT LGNUM
      FROM T320
        WHERE
          WERKS = [Import Parameter-EWMPlant]
          LGORT = [Import Parameter-
EWMStorageLocation]

    0.b. Get EWM Warehouse Number
      SELECT
        LGNUM
      FROM
        /SCWM/TMAPWHNUM
      WHERE
        WHNUMERP = [LGNUM Point 0.a]

    0.c Validation
      If 0.b Not Found Then Return Error Message
'Warehouse Number Not Found'
      Else
        Assign EWMWarehouseNumber = [Point 0.b]

```

```
// 1. Get list of stock material
    1.a. Get stock (Non HU)
          SELECT
            IP.PRODUCT,
            IPD.PRODUCTNAME,
            IP.PRODUCTOLDID,
            IPH.PRODUCTHIERARCHYTEXT,
            IEA.EWMSTORAGETYPE,
            IEA.EWMSTORAGEBIN,
            IES.EWMSTORAGESECTION,
            IES.EWMSTORAGEBINTYPE,
            IEA.BATCH,
            IEP.STOCKDOCUMENTCATEGORY,
            IEP.EXTERNALSTOCKDOCUMENTNUMBER,
            IEA.EWMSTOCKTYPE
            IEA.AVAILABLEEWMSTOCKQTY,
            IEA.EWMSTOCKQUANTITYBASEUNIT,
            IEP.EWMSTOCKQUANTITYINBASEUNIT,
            IEP.EWMSTOCKQUANTITYBASEUNIT,
            IEA.HANDLINGUNITNUMBER
            IEA.SHELFLIFEEXPIRATIONDATE
          FROM
            I_EWM_AVAILABLESTOCK IEA JOIN
            I_EWM_STORAGEBINCUBE IES ON
IEA.EWMWAREHOUSE = IES.EWMWAREHOUSE
              AND IEA.EWMSTORAGEBIN ON
IES.EMWSTORAGEBIN JOIN
            I_EWM_PHYSSTOCKPROD IEP ON
IEP.PARENTHANDLINGUNITUUID =
IEA.PARENTHANDLINGUNITUUID
              AND IEP.STOCKITEMUUID =
IEA.STOCKITEMUUID JOIN
            I_PRODUCT IP ON IP.PRODUCT =
IEP.PRODUCT JOIN
            I_PRODUCTDESCRIPTION IPD ON
IPD.PRODUCT = IP.PRODUCT JOIN
            I_PRODUCTHIERARCHYTEXT IPH ON
LEFT(1,IP.PRODUCTHIERARCHY) =
IPH.PRODUCTHIERARCHY
          WHERE
            IEA.EWMWAREHOUSE = [Import
Parameter-EWMWarehouseNumber]
            IEA.EWMSTORAGETYPE = [Import
Parameter-EWMStorageType]
            IEA.EWMSTORAGEBIN = [Import
Parameter-EWMStorageBin]
            IES.EWMSTORAGESECTION = [Import
Parameter-EWMStorageSection]
            IP.PRODUCT = [Import Parameter-
EWMProduct]
            IEA.BATCH = [Import Parameter-
EWMBatch]
            IEP.STOCKDOCUMENTCATEGORY = [Import
Parameter-EWMDocumentRefType]
            IEP.EXTERNALSTOCKDOCUMENTNUMBER =
[Import Parameter-EWMDocumentNumber]
            IPD.LANGUAGE = [System Language]

          1.a.i. If IEP.STOCKDOCUMENTCATEGORY =
'PJS' Then
```

```
                  Convert with
CONVERSION_EXIT_PSPNR_OUTPUT
                  INPUT:
[IEP.EXTERNALSTOCKDOCUMENTNUMBER]

   1.b. Get stock (HU Open WT) // this will be
consided as physical stock
          1.b.ii. Get physical stock HU
                  SELECT
                    OO.LGNUM
                    OO.VLTYP
                    OO.VLPLA
                    OO.VLBER
                    OO.NLENR
                    LAGP.LPTYP
                    OO.SGUID_HU
                  FROM /LIME/NQUAN LN JOIN
                    /SCWM/ORDIM_O OO ON
LN.GUID_PARENT = OO.SGUID_HU JOIN
                    /SCWM/LAGP LAGP ON
LAGP.LGPLA = OO.VLPLA AND LAGP.LGNUM = OO.LGNUM
                  WHERE
                    OO.VLPLA = [Import
Parameter-EWMStorageBin] AND
                    OO.MATID = 'BLANK' / NULL
AND
                    OO.LGNUM = [Import
Parameter-EWMWarehouseNumber]

          1.b.iii.Get list of material for the
HU
                  CALL FUNCTION
/SCWM/HU_READ_MULT
                    IMPORT PARAMETER:
                      IT_GUID_HU = [Point
1.b.ii-SGUID_HU]
                    EXPORT PARAMETER:
                      ET_HUITM =
                        MATID
                        QUAN
                        MEINS
                        BATCHID
                        CAT
                  If BATCHID IS NOT EMPTY THEN
                    SELECT CHARG
                    FROM I_BATCH
                    WHERE
BATCHEXTWHSEMGMTINTERNALID = [Export Parameter-
BATCHID]

          1.b.iv. Get the material information
                  SELECT
                    IP.PRODUCT,
                    IPD.PRODUCTNAME,
                    IP.PRODUCTOLDID,
                  FROM I_PRODUCT IP JOIN
                    I_PRODUCTDESCRIPTION IPD ON
IPD.PRODUCT = IP.PRODUCT
                  WHERE
```

```
                    IP.PRODUCT = [Export Parameter-MATID]
                    IPD.LANGUAGE = [System Language]

    1.c. Count material id in each storage bin (Only Available Stock for Warehouse Task Creation)
          SELECT
            IEA.EWMSTORAGEBIN,
            COUNT DISTINCT (Material, Batch)
          FROM
            I_EWM_AvailableStock IEA JOIN
            I_EWM_STORAGEBINCUBE IES ON IEA.EWMWAREHOUSE = IES.EWMWAREHOUSE
              AND IEA.EWMSTORAGEBIN ON IES.EMWSTORAGEBIN
          WHERE
            IEA.EWMWAREHOUSE = [Import Parameter-EWMWarehouseNumber]
            IEA.EWMSTORAGETYPE = [Import Parameter-EWMStorageType]
            IEA.EWMSTORAGEBIN = [Import Parameter-EWMStorageBin]
            IES.EWMSTORAGESECTION = [Import Parameter-EWMStorageSection]

// 2. Get quantity in WM Unit (quantity in warehouse unit measurement)
    2.a. Get WM Unit of Measure
          2.a.i. Convert Material ID GUID16 to GUID22 with FM /SCMB/MDL_GUID_CONVERT
                    Import IV_GUID16 = [IEA.PRODUCTUUID]
                    Export EV_GUID22
          2.a.ii. Get SCU GUID (This is equal to warehouse number in ERP / MLGT-LGNUM) as EWM is encrypted
                    SELECT SCUGUID
                    FROM /SCWM/T300_MD
                    WHERE LGNUM = [Import Parameter-EWMWarehouseNumber]
          2.a.iii. Get WM Unit of Measure
                    SELECT PUOM_WH
                    FROM /SAPAPO/MATLWH
                    WHERE MATID = [Product/Material ID/GUID22] AND SCUGUID = [SCUGUID]
                    -----
                    IF PUOM_WH NOT FOUND
                      THEN WM Unit set as Blank
                    ELSE
                      Go to next step
    2.b. Convert Quantity to WM Unit for Available Stock
          Call Function MD_CONVERT_MATERIAL_UNIT
            I_MATNR = IP.PRODICT
            I_IN_ME = IEA.EWMSTOCKQUANTITYBASEUNIT
            I_OUT_ME = [Point 2.a.iii-WM Unit]
```

```
            I_MENGE = IEA.AVAILABLEEWMSTOCKQTY
    2.c. Convert Quantity to WM Unit for Physical Stock
          Call Function MD_CONVERT_MATERIAL_UNIT
            I_MATNR = IP.PRODICT
            I_IN_ME = IEP.EWMSTOCKQUANTITYBASEUNIT
            I_OUT_ME = [Point 2.a.iii-WM Unit]
            I_MENGE = IEP.EWMSTOCKQUANTITYINBASEUNIT

// 3. Get Pack Unit (remaining quantity of warehouse unit measurement in base unit)
    3.a. Convert WM Unit in point 2 to Base Unit for Available Stock
          Call Function MD_CONVERT_MATERIAL_UNIT
          I_MATNR = IP.PRODUCT
          I_IN_ME = [Point 2.a.iii-WM Unit]
          I_OUT_ME = IEA.EWMSTOCKQUANTITYBASEUNIT
          I_MENGE = [Point 2.b-E_MENGE (Remove decimal)]
    3.b. Calculate Pack unit for Available Stock
          Pack Quantity = IEA.AVAILABLEEWMSTOCKQTY - [Point 3.a-E_MENGE]
          Pack Unit = IEA.EWMSTOCKQUANTITYBASEUNIT

    3.c. Convert WM Unit in point 2 to Base Unit for Physical Stock
          Call Function MD_CONVERT_MATERIAL_UNIT
          I_MATNR = IP.PRODUCT
          I_IN_ME = [Point 2.a.iii-WM Unit]
          I_OUT_ME = IEP.EWMSTOCKQUANTITYBASEUNIT
          I_MENGE = [Point 2.c-E_MENGE (Remove decimal)]
    3.d. Calculate Pack unit for Physical Stock
          Pack Quantity = IEP.EWMSTOCKQUANTITYBASEUNIT- [Point 3.c-E_MENGE]
          Pack Unit = IEP.EWMSTOCKQUANTITYBASEUNIT

// NOTES: IF WM Unit is not maintain then Pack Unit is equal to Base Unit
```

Export Parameter			
Type	Status Indicator		S / E
Message	Message for the error		Success / Error

ListTotalMaterialBin			
Field Name	**Description**	**Remark**	**Sample Data**
EWMWarehouse	Warehouse Number	I_EWM_AVAILABLESTOCK-EWMWarehouse	FA01
EWMStorageType	Storage Type	I_EWM_AVAILABLESTOCK-EWMStorageType	SRR1
EWMStorageBin	Storage Bin	I_EWM_AVAILABLESTOCK-EWMSTORAGEBIN	Example: Storage bin food, non food, cosmetic
TotalMaterial	Total Material ID in storage bin	COUNT DISTINCT (Material)	3
ListTotalStock			
Field Name	**Description**	**Remark**	**Sample Data**
EWMWarehouse	Warehouse Number	I_EWM_AVAILABLESTOCK-EWMWarehouse	FA01
EWMStorageType	Storage Type	I_EWM_AVAILABLESTOCK-	SRP1

		EWMSTORAGETYPE	
EWMStorageBin	Storage Bin	I_EWM_AVAILABLESTOCK-EWMSTORAGEBIN	SLP5-0002
EWMStorageSection	Storage Section	I_EWM_STORAGEBINCUBE-EWMSTORAGESECTION	0001
EWMStorageBinType	Storage Bin Type	I_EWM_STORAGEBINCUBE-EWMSTORAGEBINTYPE	IP
Product	Material Number	I_PRODUCT-PRODUCT	140001
ProductName	Material Description	I_PRODUCTDESCRIPTION - PRODUCTNAME	FG Bar Soap
ProductOldID	Old Material Number	I_PRODUCT-PRODUCTOLDID	FGBDS01
Batch	Batch	I_EWM_AVAILABLES	202501010

		TOCK-BATCH	
Expiration	Expiration Date	I_EWM_AVAILABLESTOCK-SHELFLIFEEXPIRATIONDATE	202701010
HandlingUnitNumber	Handling Unit	IEA.HANDLINGUNITNUMBER	10000000011233
AvailQtyInWMUnit	Available Total Quantity	I_EWM_AVAILABLESTOCK-AVAILABLEEWMSTOCKQTY	
AvailQtyInWMUnit	Available Quantity in WM Unit	Logic Point 2.b	
AvailQtyInPackUnit	Available Quantity in Pack Unit	Logic Point 3.b	
PhysQtyInBaseUnit	Physical Total Quantity	I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYINBASEUNIT	
PhysQtyInWMUnit	Physical Quantity in WM Unit	Logic Point 2.c	

PhysQtyIn PackUnit	Physical Quantity in Pack Unit	Logic Point 3.d	
BaseUnit	Base Unit	I_EWM_AVAILABLESTOCK-EWMSTOCKQUANTITYBASEUNIT I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYBASEUNIT	
WMUnit	WM Unit / Case Unit	Logic Point 2.a.iii	
PackUnit	Pack Unit	I_EWM_AVAILABLESTOCK-EWMSTOCKQUANTITYBASEUNIT I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYBASEUNIT	

Example Export Parameter

Example Export Parameter:


```
{
   "@odata.context":
"../$metadata#com.sap.gateway.srvd_a2x.zwm_list_stock_ewm.v0001.ZWM_AE_LIST_STOCK_EWM_RSLT",
   "@odata.metadataEtag":
"W/\"20250515082351\"",
   "Message": "Success get data",
   "Status": "0",
   "Type": "S",
   "ListTotalMaterialBin": [
      {
         "EWMWarehouse": "FA01",
         "EWMStorageType": "9010",
         "EWMStorageBin": "GR-ZONE",
         "TotalMaterial": 7
      }
   ],
   "ListTotalStock": [
      {
         "EWMWarehouse": "FA01",
         "EWMStorageType": "9010",
         "EWMStorageBin": "GR-ZONE",
         "EWMStorageSection": "",
         "EWMStorageBinType": "",
         "Product": "1000004",
         "ProductName": "FG Body Bar Soap 1",
         "ProductOldID": "FGBDS01",
         "Batch": "BATCH-02",
         "HandlingUnitNumber": "10001",
         "AvailQtyInBaseUnit": 2,
         "BaseUnitAvailQty": "PC",
         "AvailQtyInWMUnit":
0.00000000000000,
```

```
            "WMUnitAvailQty": "",
            "AvailQtyInPackUnit":
0.00000000000000,
            "PackUnitAvailQty": "",
            "PhysQtyInBaseUnit": 2,
            "BaseUnitPhysQty": "PC",
            "PhysQtyInWMUnit":
0.00000000000000,
            "WMUnitPhysQty": "",
            "PhysQtyInPackUnit":
0.00000000000000,
            "PackUnitPhysQty": ""
        },
        {
            "EWMWarehouse": "FA01",
            "EWMStorageType": "9010",
            "EWMStorageBin": "GR-ZONE",
            "EWMStorageSection": "",
            "EWMStorageBinType": "",
            "Product": "1000004",
            "ProductName": "FG Body Bar Soap 1",
            "ProductOldID": "FGBDS01",
            "Batch": "0000000503",
            "HandlingUnitNumber": "",
            "AvailQtyInBaseUnit": 2400,
            "BaseUnitAvailQty": "PC",
            "AvailQtyInWMUnit":
0.00000000000000,
            "WMUnitAvailQty": "",
            "AvailQtyInPackUnit":
0.00000000000000,
            "PackUnitAvailQty": "",
            "PhysQtyInBaseUnit": 2400,
            "BaseUnitPhysQty": "PC",
            "PhysQtyInWMUnit":
0.00000000000000,
```

<table>
<tr>
<td></td>
<td></td>
<td></td>
<td>
<pre>
"WMUnitPhysQty": "",
"PhysQtyInPackUnit":
0.00000000000000,
"PackUnitPhysQty": ""
}
]
}
</pre>
</td>
</tr>
<tr>
<td>2</td>
<td>GET Material Master Information (API)</td>
<td>

Search from the data imported either EAN / Material ID
Get Material ID Information
Get the Alternate Unit Measurement for the Material / Product
Get the WM unit for the material / product
Get Pallet (Packaging Specification) Picture URL

</td>
<td>
<pre>
// 0. Get Token
Base URL:
(https://vhpyadwsai01.sap.wingscorp.com:44300/sap/opu/odata4/sap/zwmapi_get_ean_mat_uom_o4/srvd_a2x/sap/zwm_get_ean_mat_uom/0001/EANMatUnit/com.sap.gateway.srvd_a2x.zwm_get_ean_mat_uom.v0001.getEanMatUnit(ProductEAN='1000012',EWMWarehouse='')?sap-client=110)
Authentication: Bearer Token
Response Format: JSON
Error Handling: Standard HTTP status codes with descriptive error messages
</pre>
Example Data:
<pre>
// Client SAP S4 DWS 110

ProductEAN = '1000012'
EWMWarehouse = ''
</pre>
<table>
<tr><th colspan="5">API Parameter’s</th></tr>
<tr><th colspan="5">Import Parameter</th></tr>
<tr><th>Field Name</th><th>Description</th><th>Type</th><th>Mandatory</th><th>Sample Data</th></tr>
<tr><td>ProductEAN</td><td>Product / Material / EAN</td><td>CHAR(40)</td><td>Mandatory</td><td>1400001 / 2050000000119</td></tr>
<tr><td>EWMWarehouse</td><td>Warehouse Number</td><td>CHAR(4)</td><td>Optional</td><td>FA01</td></tr>
</table>
</td>
</tr>
</table>

```
// 1. Search from the data imported either EAN / Material ID
      Check if it is Material ID / Product
        SELECT PRODUCT
        FROM I_PRODUCT
        WHERE PRODUCTEXTERNALID = [Import Parameter-ProductEAN]
      IF Exist THEN
        SAVE Variable AS Product
        Go to step 2
      ELSE
        Check if it is EAN
          SELECT PRODUCT
          FROM I_PRODUCT
          WHERE PRODUCTSTANDARDID = [Import Parameter-ProductEAN]
        IF Exist THEN
          SAVE Variable AS EAN
          Go to step 2
        ELSE
          Return
            E_ISERROR = X
            E_MSG = 'Product / EAN Not Found'

// 2. Get Material ID Information
      SELECT
        IP.PRODUCT
        IP.PRODUCTEXTERNALID,
        IPD.PRODUCTNAME,
        IP.PRODUCTOLDID,
        IP.BASEUNIT
      FROM
        I_PRODUCT IP JOIN
        I_PRODUCTDESCRIPTION IPD ON IPD.PRODUCT = IP.PRODUCT JOIN
        I_PRODUCTUNITSOFMEASURE IPUOM ON IPUOM.PRODUCT = IP.PRODUCT
      WHERE
        IP.PRODUCTSTANDARDID = [Point 1-EAN] OR
        IP.PRODUCTEXTERNALID = [Point 1-Product]

// 3. Get the Alternate Unit Measurement for the Material / Product
      SELECT
        IPUOM.ALTERNATIVEUNIT,
        IPUOM.QUANTITYNUMERATOR,
        IPUOM.QUANTITYDENOMINATOR,
        IPUOM.MATERIALVOLUME,
        IPUOM.VOLUMEUNIT,
        IPUOM.GROSSWEIGHT,
        IPUOM.WEIGHTUNIT,
        IPUOM.GLOBALTRADEITEMNUMBER,
        IPUOM.UNITSPECIFICPRODUCTLENGTH,
        IPUOM.UNITSPECIFICPRODUCTWIDTH,
        IPUOM.UNITSPECIFICPRODUCTHEIGHT,
        IPUOM.PRODUCTMEASUREMENTUNIT
      FROM
        I_PRODUCT IP ON JOIN
```

```
        I_PRODUCTUNITSOFMEASURE IPUOM ON
IPUOM.PRODUCT = IP.PRODUCT
      WHERE
        IP.PRODUCTSTANDARDID = [Point 1-EAN] OR
        IP.PRODUCTEXTERNALID = [Point 1-Product]

// 4. Get the WM unit for the Material / Product
      IF Import Parameter-EWMWarehouse = [BLANK]
THEN
        RETURN
          Set Export Parameter-WarehouseUnit =
[BLANK]
      ELSE
        4.a Convert Material ID GUID16 to GUID22
with FM /SCMB/MDL_GUID_CONVERT
              Import IV_GUID16 = [IP.PRODUCTUUID]
              Export EV_GUID22
        4.b Get SCU GUID (This is equal to
warehouse number in ERP / MLGT-LGNUM) as EWM is
encrypted
              SELECT SCUGUID
                FROM /SCWM/T300_MD
              WHERE LGNUM = [Import Parameter-
EWMWarehouse]
        4.c Get WM Unit of Measure
              SELECT PUOM_WH
                FROM /SAPAPO/MATLWH
              WHERE MATID = [Product/Material
ID/GUID22] AND SCUGUID = [SCUGUID]
              -----
              IF PUOM_WH NOT FOUND
                THEN Set Export Parameter-
WarehouseUnit = [BLANK]
              ELSE
                Set Export Parameter-
WarehouseUnit = PUOM_WH

// 5. Get Pallet (Packaging Specification)
Picture URL
      CALL FUNCTION READ TEXT
        IMPORT PARAMETER
          ID = 'IVER'
          LANGUAGE = [System Language]
          NAME = [Point 2-PRODUCT]
          OBJECT = 'MATERIAL'
        EXPORT
          TDLINE
      -----
      SET PalletizationPicturePath = TDLINE

```

Export Parameter			
Type	Status Indicator		S / E

Message	Message for the error		Success / Error
T_HEADER			
Field Name	**Description**	**Remark**	**Sample Data**
Product	Material Number	I_PRODUCT-PRODUCT	1400001
ProductName	Material Description	I_PRODUCTDESCRIPTION - PRODUCTNAME	FG Bar Soap
ProductOldID	Old Material Number	I_PRODUCT-PRODUCTOLDID	FGBDS01
BaseUnit	Base Unit (Pack Unit)	I_PRODUCT-BASEUNIT	PCS
WarehouseUnit	Warehouse Unit (Case Unit)	Logic Point 4.c	BOX
ProductStandardID	EAN	I_PRODUCT-PRODUCTSTANDARDID	2050000000119

PalletizationPictur ePath	Path file for palletization picture	Logic Point 5	
T_DETAIL			
Field Name	**Description**	**Remark**	**Sample Data**
AlternateUnit	Alternate Unit Measure	I_PRODUCTUNITSOFMEASURE-ALTERNATIVEUNIT	PAL
QuantityDenominator	Quantity Numerator	I_PRODUCTUNITSOFMEASURE-QUANTITYNUMERATOR	120
QuantityDenominator	Quantity Denumerator	I_PRODUCTUNITSOFMEASURE-QUANTITYDENOMINATOR	1
MaterialVolume	Volume of material	I_PRODUCTUNITSOFMEASURE-MATERIALVOLUME	89
VolumeUnit	Volume Measurement	I_PRODUCTUNITSOFMEASURE-	M3

		VOLUMEUNIT	
GrossWeight	Gross Weight	I_PRODUCTUNITSOFMEASURE-GROSSWEIGHT	120
WeightUnit	Weight Unit	I_PRODUCTUNITSOFMEASURE-WEIGHTUNIT	KG
GlobalTradeItemNumber	EAN	I_PRODUCTUNITSOFMEASURE-GLOBALTRADEITEMNUMBER	2050000000119
UnitSpecificProductLength	Length	I_PRODUCTUNITSOFMEASURE-UNITSPECIFICPRODUCTLENGTH	36
UnitSpecificProductWidth	Width	I_PRODUCTUNITSOFMEASURE-UNITSPECIFICPRODUCTWIDTH	46
UnitSpecificProductHeight	Height	I_PRODUCTUNITSOFMEASURE-UNITSPECI	56

		FICPRODUCTHEIGHT	
ProductMeasurementUnit	Dimension Unit	I_PRODUCTUNITSOFMEASURE-PRODUCTMEASUREMENTUNIT	DM

Example Export Parameter

Example Export Parameter:


```
{
   "@odata.context":
"../$metadata#com.sap.gateway.srvd_a2x.zwm_get_ean_mat_uom.v0001.ZWM_AE_GET_EAN_MAT_UOM_RSLT",
   "@odata.metadataEtag":
"W/\"20250515005648\"",
   "Message": "Success get data",
   "Status": "200",
   "Type": "S",
   "MaterialData": {
      "Product": "1000012",
      "ProductName": "Post Material 01",
      "ProductOldID": "OLD_MAT 001",
      "ProductStandardID": "",
      "BaseUnit": "PC",
      "WarehouseUnit": "",
      "PalletizationPicturePath":
"/PATH_URL_PALLETIZATION_PICTURE",
      "ListUnitData": [
         {
            "AlternateUnit": "BOX",
            "QuantityNumerator": 2,
            "QuantityDenominator": 1,
```

```
            "MaterialVolume": 0.000,
            "VolumeUnit": "",
            "GrossWeight": 0.000,
            "WeightUnit": "",
            "GlobalTradeItemNumber":
"978020137962",
            "UnitSpecificProductLength": 0.000,
            "UnitSpecificProductWidth": 0.000,
            "UnitSpecificProductHeight": 0.000,
            "ProductMeasurementUnit": ""
        },
        {
            "AlternateUnit": "CTN",
            "QuantityNumerator": 12,
            "QuantityDenominator": 1,
            "MaterialVolume": 4.320,
            "VolumeUnit": "M3",
            "GrossWeight": 24.000,
            "WeightUnit": "KG",
            "GlobalTradeItemNumber":
"978020137962",
            "UnitSpecificProductLength": 12.000,
            "UnitSpecificProductWidth": 36.000,
            "UnitSpecificProductHeight": 10.000,
            "ProductMeasurementUnit": "DM"
        },
        {
            "AlternateUnit": "G",
            "QuantityNumerator": 1,
            "QuantityDenominator": 1,
            "MaterialVolume": 0.024,
            "VolumeUnit": "M3",
            "GrossWeight": 2000.000,
            "WeightUnit": "G",
            "GlobalTradeItemNumber":
"978020137962",
```

```
            "UnitSpecificProductLength": 2.000,
            "UnitSpecificProductWidth": 3.000,
            "UnitSpecificProductHeight": 4.000,
            "ProductMeasurementUnit": "DM"
        },
        {
            "AlternateUnit": "PAL",
            "QuantityNumerator": 120,
            "QuantityDenominator": 1,
            "MaterialVolume": 89.424,
            "VolumeUnit": "M3",
            "GrossWeight": 240.000,
            "WeightUnit": "KG",
            "GlobalTradeItemNumber":
"978020137962",
            "UnitSpecificProductLength":
36.000,
            "UnitSpecificProductWidth": 46.000,
            "UnitSpecificProductHeight": 54.000,
            "ProductMeasurementUnit": "DM"
        },
        {
            "AlternateUnit": "PC",
            "QuantityNumerator": 1,
            "QuantityDenominator": 1,
            "MaterialVolume": 0.000,
            "VolumeUnit": "",
            "GrossWeight": 0.000,
            "WeightUnit": "G",
            "GlobalTradeItemNumber": "",
            "UnitSpecificProductLength": 0.000,
            "UnitSpecificProductWidth": 0.000,
            "UnitSpecificProductHeight": 0.000,
            "ProductMeasurementUnit": ""
        }
    ]
```

```
    }
  }
```

3

Get List Storage Type and Storage Bin for Putaway

STVARV NAME = ‘ZWM_PUTAWAY_STORAGE_BIN’

Separator '-' and Format is [Type]-[Storage Type]-[Storage Bin]

Example:

- Case-9010-GRCASE
- Pack-9010-GRPACK

4

GET Total Count of Material in Storage Bin Putaway (API)

1. Get list of stock material
   a. Get list of stock material
   b. Count material id in each storage bin group by material, batch, HU

```
// 0. Get Token
      Base URL: ()
      Authentication: Bearer Token
      Response Format: JSON
      Error Handling: Standard HTTP status codes
with descriptive error messages
```

Example Data:

```
// Client SAP S/4 DWS 110

EWMWarehouse='FA01'
EWMStorageType=''
EWMStorageBin=''
EWMStorageSection=''
```

API Parameter’s				
Import Parameter				
Field Name	**Description**	**Type**	**Mandatory**	**Sample Data**
EWMWarehouseNumber	Warehouse Number	CHAR(4)	Mandatory	FA01
EWMStorageType	Storage Type	CHAR(4)	Optional	SRP1

EWMStorageBin	Storage Bin	CHAR(18)	Optional	SLP5-0002

```
For each storage bin inputted
// 1. Get list of stock material
    1.a. Get stock (Non HU)
          SELECT
            IP.PRODUCT,
            IPD.PRODUCTNAME,
            IP.PRODUCTOLDID,
            IEA.EWMSTORAGETYPE,
            IEA.EWMSTORAGEBIN,
            IES.EWMSTORAGESECTION,
            IES.EWMSTORAGEBINTYPE,
            IEA.BATCH,
            IEA.AVAILABLEEWMSTOCKQTY,
            IEA.EWMSTOCKQUANTITYBASEUNIT,
            IEP.EWMSTOCKQUANTITYINBASEUNIT,
            IEP.EWMSTOCKQUANTITYBASEUNIT,
            IEA.HANDLINGUNITNUMBER
          FROM
            I_EWM_AVAILABLESTOCK IEA JOIN
            I_EWM_STORAGEBINCUBE IES ON
IEA.EWMWAREHOUSE = IES.EWMWAREHOUSE
              AND IEA.EWMSTORAGEBIN ON
IES.EMWSTORAGEBIN JOIN
            I_EWM_PHYSSTOCKPROD IEP ON
IEP.PARENTHANDLINGUNITUUID =
IEA.PARENTHANDLINGUNITUUID
              AND IEP.STOCKITEMUUID =
IEA.STOCKITEMUUID JOIN
            I_PRODUCT IP ON IP.PRODUCT =
IEP.PRODUCT JOIN
            I_PRODUCTDESCRIPTION IPD ON
IPD.PRODUCT = IP.PRODUCT
          WHERE
            IEA.EWMWAREHOUSE = [Import Parameter-
EWMWarehouseNumber]
            IEA.EWMSTORAGETYPE = [Import
Parameter-EWMStorageType]
            IEA.EWMSTORAGEBIN = [Import
Parameter-EWMStorageBin]
            IES.EWMSTORAGESECTION = [Import
Parameter-EWMStorageSection]
            IPD.LANGUAGE = [System Language]

    1.b. Get stock (HU Open WT) // this will be
consided as physical stock
          1.b.ii. Get physical stock HU
                  SELECT
                    OO.LGNUM
                    OO.VLTYP
                    OO.VLPLA
                    OO.VLBER
                    OO.NLENR
                    LAGP.LPTYP
                    OO.SGUID_HU
```

```
                  FROM /LIME/NQUAN LN JOIN
                    /SCWM/ORDIM_O OO ON
LN.GUID_PARENT = OO.SGUID_HU JOIN
                    /SCWM/LAGP LAGP ON LAGP.LGPLA
= OO.VLPLA AND LAGP.LGNUM = OO.LGNUM
                  WHERE
                    OO.VLPLA = [Import Parameter-
EWMStorageBin] AND
                    OO.MATID = 'BLANK' / NULL AND
                    OO.LGNUM = [Import Parameter-
EWMWarehouseNumber]

          1.b.iii.Get list of material for the HU
                  CALL FUNCTION
/SCWM/HU_READ_MULT
                    IMPORT PARAMETER:
                      IT_GUID_HU = [Point 1.b.ii-
SGUID_HU]
                    EXPORT PARAMETER:
                      ET_HUITM =
                        MATID
                        QUAN
                        MEINS
                        BATCHID
                  If BATCHID IS NOT EMPTY THEN
                    SELECT CHARG
                    FROM I_BATCH
                    WHERE
BATCHEXTWHSEMGMTINTERNALID = [Export Parameter-
BATCHID]

          1.b.iv. Get the material information
                  SELECT
                    IP.PRODUCT,
                    IPD.PRODUCTNAME,
                    IP.PRODUCTOLDID,
                  FROM I_PRODUCT IP JOIN
                    I_PRODUCTDESCRIPTION IPD ON
IPD.PRODUCT = IP.PRODUCT
                  WHERE
                    IP.PRODUCT = [Export
Parameter-MATID]
                    IPD.LANGUAGE = [System
Language]

    1.c. Count material id in each storage bin
(Only Available Stock for Warehouse Task
Creation) for each with HU and Non HU
          SELECT
            IEA.EWMSTORAGEBIN,
            COUNT DISTINCT (Material)
            COUNT DISTINCT (HU)
          FROM
            I_EWM_AvailableStock IEA JOIN
            I_EWM_STORAGEBINCUBE IES ON
IEA.EWMWAREHOUSE = IES.EWMWAREHOUSE
              AND IEA.EWMSTORAGEBIN ON
IES.EMWSTORAGEBIN
          WHERE
```

```
            IEA.EWMWAREHOUSE = [Import Parameter-EWMWarehouseNumber]
            IEA.EWMSTORAGETYPE = [Import Parameter-EWMStorageType]
            IEA.EWMSTORAGEBIN = [Import Parameter-EWMStorageBin]
            IES.EWMSTORAGESECTION = [Import Parameter-EWMStorageSection]

```

Export Parameter			
Type	Status Indicator		S / E
Message	Message for the error		Success / Error
ListTotalMaterialHU			
Field Name	**Description**	**Remark**	**Sample Data**
EWMWarehouse			FA01
EWMStorageType			9010
EWMStorageBin			GR-ZONE
UnitType			Case
TotalHU			10
TotalMaterial			5
ListTotalMaterialNonHU			
Field Name	**Description**	**Remark**	**Sample Data**

EWMWarehouse			FA01
EWMStorageType			9010
EWMStorageBin			GR-ZONE
UnitType			Case
TotalMaterial			5

Example Export Parameter

Example Export Parameter:

5

GET List of Detail Stock in Storage Bin Putaway

1. Get list of stock material
   a. Get stock
   b. Count material id in each storage bin
2. Get quantity in WM Unit (quantity in warehouse unit measurement)
   a. Get WM Unit of Measure
   b. Convert Quantity to WM Unit
3. Get Pack Unit (decimal

```
// 0. Get Token
      Base URL: ()
      Authentication: Bearer Token
      Response Format: JSON
      Error Handling: Standard HTTP status codes with descriptive error messages
```

Example Data:

```
// Client SAP S/4 DWS 110

```

API Parameter's				
Import Parameter				
Field Name	**Description**	**Type**	**Mandatory**	**Sample Data**
EWMWarehouseNumber	Warehouse Number	CHAR(4)	Mandatory	FA01

quantity of warehouse unit measurement in base unit)

a. Convert WM Unit in point 2 to Base Unit
b. Calculate Pack unit

EWMStorageType	Storage Type	CHAR(4)	Mandatory	SRP1
EWMStorageBin	Storage Bin	CHAR(18)	Mandatory	SLP5-0002
FlagHU	HU or Non HU	CHAR(1)	Mandatory	X

```
CALL LOGIC SAME AS POINT 'GET List of stock in Storage Bin' -> Z_FM_EWM_GET_LIST_STOCK
Add filter based on and grouping based on Material, Batch, HU
  IF FlagHU = X THEN
    Return WHERE HU != Blank
  ELSE FlagHU = '' THEN
    Return WHERE HU = Blank
```

Export Parameter			
Type	Status Indicator		S / E
Message	Message for the error		Success / Error
Field Name	**Description**	**Remark**	**Sample Data**
EWMWarehouse	Warehouse Number	I_EWM_AVAILABLESTOCK-EWMWarehouse	FA01
EWMStorageType	Storage Type	I_EWM_AVAILABLESTOCK-EWMSTORAGETYPE	SRP1
EWMStorageBin	Storage Bin	I_EWM_AVAILABLES	SLP5-0002

		TOCK-EWMSTORAGEBIN	
EWMStorageSection	Storage Section	I_EWM_STORAGEBINCUBE-EWMSTORAGESECTION	0001
EWMStorageBinType	Storage Bin Type	I_EWM_STORAGEBINCUBE-EWMSTORAGEBINTYPE	IP
Product	Material Number	I_PRODUCT-PRODUCT	140001
ProductName	Material Description	I_PRODUCTDESCRIPTION - PRODUCTNAME	FG Bar Soap
ProductOldID	Old Material Number	I_PRODUCT-PRODUCTOLDID	FGBDS01
Batch	Batch	I_EWM_AVAILABLESTOCK-BATCH	202501010
Expiration	Expiration Date	I_EWM_AVAILABLESTOCK-	202701010

		SHELFLIFEEXPIRATIONDATE	
HandlingUnitNumber	Handling Unit	IEA.HANDLINGUNITNUMBER	10000000011233
AvailQtyInWMUnit	Available Total Quantity	I_EWM_AVAILABLESTOCK-AVAILABLEEWMSTOCKQTY	
AvailQtyInWMUnit	Available Quantity in WM Unit	Logic Point 2.b	
AvailQtyInPackUnit	Available Quantity in Pack Unit	Logic Point 3.b	
PhysQtyInBaseUnit	Physical Total Quantity	I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYINBASEUNIT	
PhysQtyInWMUnit	Physical Quantity in WM Unit	Logic Point 2.c	
PhysQtyInPackUnit	Physical Quantity in Pack Unit	Logic Point 3.d	
BaseUnit	Base Unit	I_EWM_AVAILABLES	

					TOCK-EWMSTOCKQUANTITYBASEUNIT I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYBASEUNIT	
			WMUnit	WM Unit / Case Unit	Logic Point 2.a.iii	
			PackUnit	Pack Unit	I_EWM_AVAILABLESTOCK-EWMSTOCKQUANTITYBASEUNIT I_EWM_PHYSSTOCKPROD-EWMSTOCKQUANTITYBASEUNIT	

Example Export Parameter

Example Export Parameter:

6	Get Detail Stock IM Level (API &	1. Get overall stock in plant	`// 0. Get Token` `Base URL: ({{sap-host}}/sap/opu/odata4/sap/zwmapi_list_stock_im_o4/`

Function)

dan storage location from MMBE_MARD_V based on
- Plant*
- Storage Location*
- Material
- Batch
- Doc Ref Type
- Doc No

2. Get stock with batch for the material in that plant and storage location
3. Get project stock for the material in that plant and storage location
4. Get list of HU and it's stock for that plant and storage location and material (if inputted)
   - Join from VEPO, VEKP
5. Deduct Based on stock category

```
srvd_a2x/sap/zwm_list_stock_im/0001/StockIM/com.sap.gateway.srvd_a2x.zwm_list_stock_im.v0001.getListStock(Plant='5AW0',StorageLocation='T001',Product='1000688',Batch='',WBSElement='',SalesOrder='',SalesOrderItem='')?sap-client={{sap-client}})
      Authentication: Bearer Token
      Response Format: JSON
      Error Handling: Standard HTTP status codes with descriptive error messages
```

Example Data:

```
// Client SAP S/4 DWS 110

```

API Parameter's				
Import Parameter				
Field Name	**Description**	**Type**	**Mandatory**	**Sample Data**
I_PLANT		CHAR(4)	Mandatory	
I_STORAGELOCATION		CHAR(4)	Mandatory	
I_PRODUCT		CHAR(40)	Optional	
I_BATCH		CHAR(10)	Optional	
I_REF_DOC_TYPE		CHAR(3)	Optional	
I_DOC_NO		CHAR(35)	Optional	

```
// 1. Get the stock overall for the plant and storage location
SELECT MATNR, MAKTX, MEINS, WERKS, LGORT, LABST, UMLME, INSME, SPEME
FROM
```

```
  MMBE_MARD_V MARD JOIN
  MMBE_MARA_V MARA ON MARD.MATNR = MARA.MATNR
WHERE
  WERKS = [Import Parameter-I_PLANT]
  LGORT = [Import Parameter-I_STORAGELOCATION]
  MATNR = [Import Parameter-I_PRODUCT]
  LVORM != X (No Deletion Flag)

// 2. Get stock with batch for the material in that plant and storage location
SELECT MATNR, WERKS, LGORT, CHARG, CLABS, CUMLM, CINSM, CSPEM
FROM MCHB
WHERE
  WERKS = [Import Parameter-I_PLANT]
  LGORT = [Import Parameter-I_STORAGELOCATION]
  MATNR = [Import Parameter-I_PRODUCT]
  CHARG = [Import Parameter-I_BATCH]


// 3. Get project stock for the material in that plant and storage location
SELECT MATNR, WERKS, LGORT, CHARG, SOBKZ, PSPNR, PRLAB, PRINS, PRSPE
FROM MSPR
WHERE
  WERKS = [Import Parameter-I_PLANT]
  LGORT = [Import Parameter-I_STORAGELOCATION]
  MATNR = [Import Parameter-I_PRODUCT]
  CHARG = [Import Parameter-I_BATCH]
  SOBKZ = [Import Parameter-I_REF_DOC_TYPE]
  PSPNR = [
            CONVERSION_EXIT_ABPSP_INPUT
            IMPORT PARAMETER:
              INPUT: Import Parameter-I_DOC_NO
            EXPORT PARAMETER:
              OUTPUT
          ]

// 4. Get list of HU for the material in that plant dan storage location
SELECT EXIDV, MATNR, VEMNG, CHARG, WERKS, LGORT, BESTQ, SOBKZ, SONUM
FROM VEKP JOIN VEPO ON VEKP.VENUM = VEPO.VENUM
WHERE
  WERKS = [Import Parameter-I_PLANT]
  LGORT = [Import Parameter-I_STORAGELOCATION]
  MATNR = [Import Parameter-I_PRODUCT]
  CHARG = [Import Parameter-I_BATCH]
  SONUM = [Point 3]

// 5. Deduct the quantity in point 1 based on point 2 and 3
See simulation in spreadsheet: https://docs.google.com/spreadsheets/d/1Y-ppeq208fva7uHANIonc7aip5uDpAqe5i_hJLNWPY8/edit?gid=0#gid=0

// Get the material information
SELECT
```

```
  MATNR,
  MAKTX,
  PRODUCTOLDID,
  PRODUCTHIERARCHY,
  PRODUCTHIERARCHYTEXT
FROM
  MMBE_MARA_V MARA JOIN
  I_PRODUCT IP ON IP.PRODUCT = MARA.MATNR JOIN
  I_PRODUCTHIERARCHYTEXT IPH ON
LEFT(1,IP.PRODUCTHIERARCHY) =
IPH.PRODUCTHIERARCHY
WHERE
  I_PRODUCT IP ON IP.PRODUCT = IEP.PRODUCT JOIN
  I_PRODUCTDESCRIPTION IPD ON IPD.PRODUCT =
IP.PRODUCT JOIN
  I_PRODUCTHIERARCHYTEXT IPH ON
LEFT(1,IP.PRODUCTHIERARCHY) =
IPH.PRODUCTHIERARCHY
```

Revision Logic for step 1 to 3 (Change getting stock with CDS I_MATERIALSTOCK)

```
// 1. Get stock from I_MATERIALSTOCK group by
Batch, WBS
      SELECT
      FROM I_MATERIALSTOCK
      WHERE
        PLANT = [Import Parameter-I_PLANT]
        STORAGELOCATION = [Import Parameter-
I_STORAGELOCATION]
        MATERIAL = [Import Parameter-I_PRODUCT]
        BATCH = [Import Parameter-I_BATCH]
        WBSELEMENTINTERNALID = [Import Parameter-
I_DOCNO]

// 2. Get stock for HU group by HU, Batch, WBS
      SELECT EXIDV, MATNR, VEMNG, CHARG, WERKS,
LGORT, BESTQ, SOBKZ, SONUM
      FROM VEKP JOIN VEPO ON VEKP.VENUM =
VEPO.VENUM
      WHERE
        WERKS = [Import Parameter-I_PLANT]
        LGORT = [Import Parameter-
I_STORAGELOCATION]
        MATNR = [Import Parameter-I_PRODUCT]
        CHARG = [Import Parameter-I_BATCH]
        SONUM = [Import Parameter-I_DOCNO]

// 3. Deduct stock from point 1 based on point 2

// 4. UNION the stock that has been filtered
      Point 1
      UNION
      Point 3
```

Simulation: https://docs.google.com/spreadsheets/d/1Y-ppeq208fva7uHANIonc7aip5uDpAqe5i_hJLNWPY

8/edit?gid=0#gid=0 Connect your Google account

Export Parameter			
Type	Status Indicator		S / E
Message	Message for the error		Success / Error
Field Name	**Description**	**Remark**	**Sample Data**
Plant	Plant		1AA0
StorageLocation	Storage Location		A001
Product	Product		20030
ProductName	Product Description		SEDAAP GORENG
ProductOldID	Old MID		SM03
Batch	Batch		250401R001
Hu	Handling Unit		190000000323103
RefDocType	Document Category		Q
RefDocNo	Document Number		C/SDCAS01
UnrestrictedStock	Unrestricted Stock		10
StockInTransferSloc	Stock In Transfer Sloc Level		35

BlockStock	Block Stock		23
QualityInspectionStock	Quality Inspection Stock		50
UnitOfMeasure	Unit of Measure		PCS

Example Export Parameter

Example Export Parameter:


```
{
    "@odata.context": "../$metadata#com.sap.gateway.srvd_a2x.zwm_list_stock_im.v0001.ZWM_AE_LIST_STOCK_IM_RSLT",
    "@odata.metadataEtag": "W/\"20250804110045\"",
    "Message": "Success get data",
    "Status": "200",
    "Type": "S",
    "ListStock": [
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "0000001291",
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit": "",
            "StockUnrestricted": 1,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "0000001806",
```

```
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit": "",
            "StockUnrestricted": 10,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit": "190000001000010127",
            "StockUnrestricted": 100,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit": "190000001000010158",
            "StockUnrestricted": 100,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
```

```
            "ReferenceDocumentType": "",
            "HandlingUnit":
"190000001000010189",
            "StockUnrestricted": 100,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin
Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit":
"190000001000010448",
            "StockUnrestricted": 100,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin
Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
            "ReferenceDocumentType": "",
            "HandlingUnit":
"190000001000010530",
            "StockUnrestricted": 100,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        },
        {
            "Plant": "5AW0",
            "StorageLocation": "T001",
            "Product": "1000688",
            "ProductName": "Soklin
Bergamot 1500mL",
            "ProductOldID": "FGBS110V4",
            "ProductHierarchy": "",
            "ProductHierarchyName": "",
            "Batch": "INTERCO017",
            "ReferenceDocument": "",
```

```
            "ReferenceDocumentType": "",
            "HandlingUnit":
"191000000000005109",
            "StockUnrestricted": 21,
            "StockInTransfer": 0,
            "StockInQI": 0,
            "StockBlocked": 0,
            "StockUnit": "PC"
        }
    ]
}
```


4.1.1 Data Structure

4.1.2 Mapping and Transformation

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	Success return list of	1. Select Available Stock from	Provide List stock available	TBA

		available stock	Import Parameter 2. Return list of available stock		
2.	Negative	Fail to return list of available stock	1. Select Available Stock from Import Parameter 2. Return list of available stock	None of list available stock is return and return error message	TBA

6.2 Error Handling, Validation, Correction and Recovery

No.	Exception Desc.	Mess. Type	Language	Message Text (50 Characters only)
1.	Warehouse Number is not found	E	EN	Warehouse Number is not found!
2.	Warehouse Number is not found	E	ID	Nomor gudang tidak ditemukan
3.	Data not found	E	EN	Data is not found!
4.	Data not found	E	ID	Data tidak ditemukan!

Error Responses

API Endpoint	Error Code	Message

GET	400	`"Missing required parameters"`
	404	`"No records found matching the criteria"`
	500	`"Database connection failed"`
POST	400	`"Missing required fields"` `"Invalid data format"`
	409	`"Transaction already exists"`
	500	`"Database connection failed"`
PATCH	400	`"Invalid update fields"`
	404	`"No records found matching the criteria"`
	500	`"Database connection failed"`

7 Attachments and Documentation

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