

# Technical Documentation - Ship Pad (Aero)

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## Access Management

### Roles & Access

Role Code	Role Description	Explanation
ZBI_RCS_SD_A01	Application role for Global Sales project / SD data / Orderbook	Role for the application
ZR_RCS_CA_M49	SD - Sales and Distribution	Role menu for the application

### Authorization Objects

List of authorization objects mandatory for the application.

Authorization object	Explanation
CPFCTR1_2	GBU
C_COMPCDE	Legal company
C_SAL_OF	Sales office

WARNING: For the PO part the notion of sales offices doesn't exist. The restriction in sales offices will not be considered for the reports PO and PO+SO.

## Data flow

### Overview

The ship-pad report is based on "Order Book - To be Issued (SO + PO)", that includes Sales and Transfer orders.

The scope of the report are all open orders that haven't been issued (without Actual Goods Issue date).

Rejected Order lines and Order Lines with "rest to be delivered" below the Tolerance are EXCLUDED from the report.

In order to meet ship-pad requirements, several elements were incorporated into existing Order Book.

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The data flow is based on the LSA method. The data visualization is done on the CompositeProvider CPDAE03(Aero - Ship Pad (Multiple Deliveries)) and CPDSO41(MP: Sales order book (Global Sales)).

Global Sales data layers:

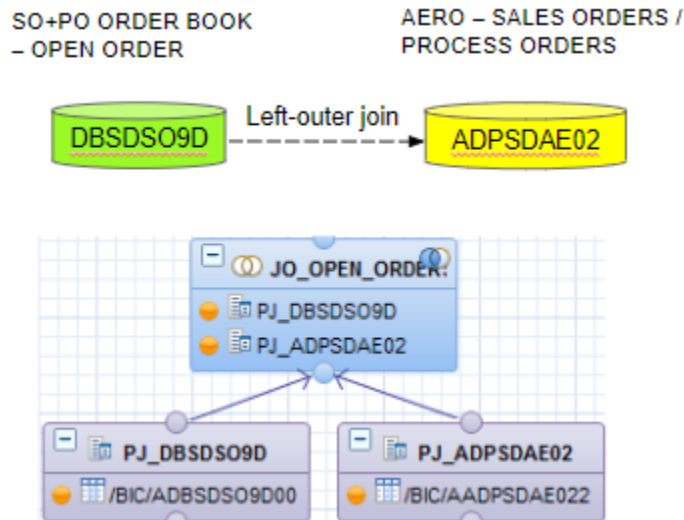
- Propagation Layer
- Business Layer
- Reporting Layer
- Virtual Layer

See the [data flow](#) of the Composite Provider CPSPDAE03(Aero - Ship Pad (Multiple Deliveries)) generated from Performer Suite.

See the [data flow](#) of the Composite Provider CPSSDO41(MP: Sales order book (Global Sales)) generated from Performer Suite.

New Composite Provider **CPSPDAE03** is based on HANA Calculation View **CV\_SD\_AE\_CPSPDAE03**

Initially joins DSOs below:

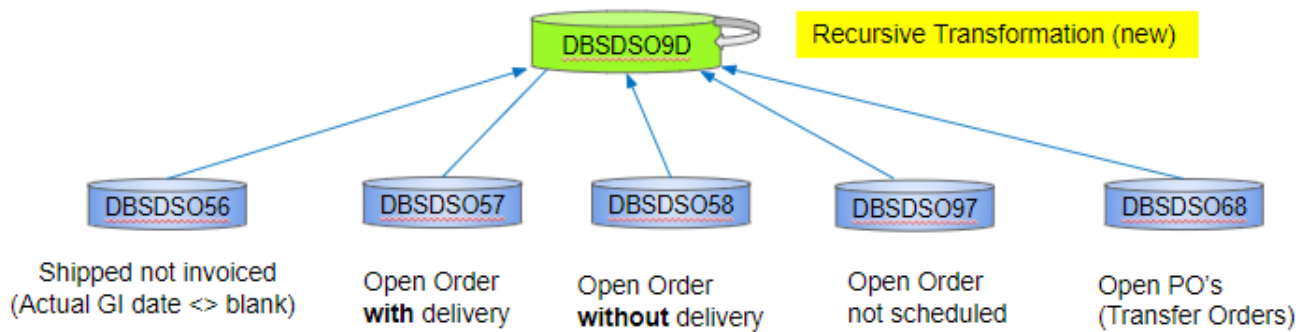


For Sales Order, the "rest to be delivered" (K\_NONDEL) is stored, at delivery line level, in DBSDSO9D.

For Purchase Orders, it is calculated dynamically in the view accessing tables below:

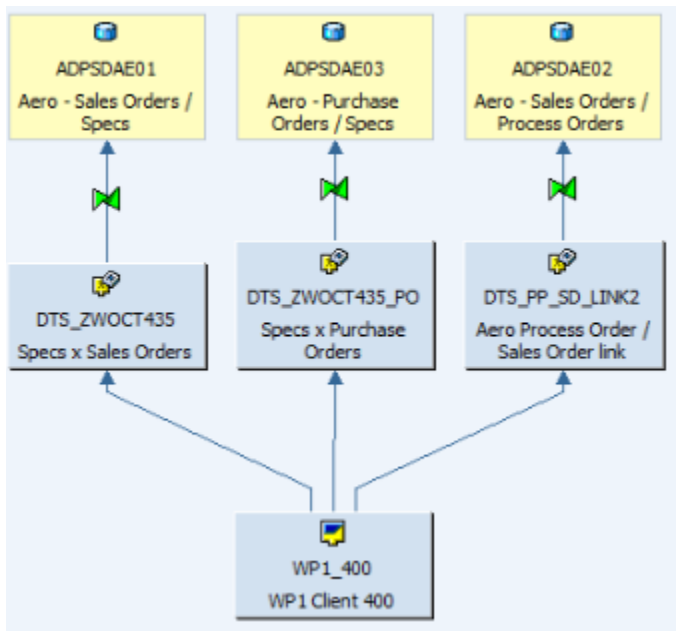
- DBSDSO66 - to get PO quantity / Confirmed quantity (by schedule line)
- DBSDSO69 - to get Delivery quantity

New fields were added to DBSDSO9D and populated in Transformations below



- Orders already shipped (DBSDSO56) are not relevant for Ship-pad. They are excluded in the query using filter "Actual GI date = blank".
- New recursive Transformation was created to populate "Passed Specs flag".

## New Advanced DSOs::



## Core rules

### New fields Aero - Sales Order

In WP1, new fields specific for Aero were added in VBAP (tab "Additional data B")

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They are then loaded as attributes in **C\_ITM\_SD** master data.

In the case of specs, which can be multiple for one order line (table ZWOCT435), they are first loaded into DSO ADPSDAE01 and then concatenated as attribute C\_SPECLIS in C\_ITM\_SD.

### New fields Aero - Purchase Order

In WP1, new fields specific for Aero were added in EKPO (tab "Aero Specific information")

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They are then loaded as attributes in **C\_ITM\_GS** master data.

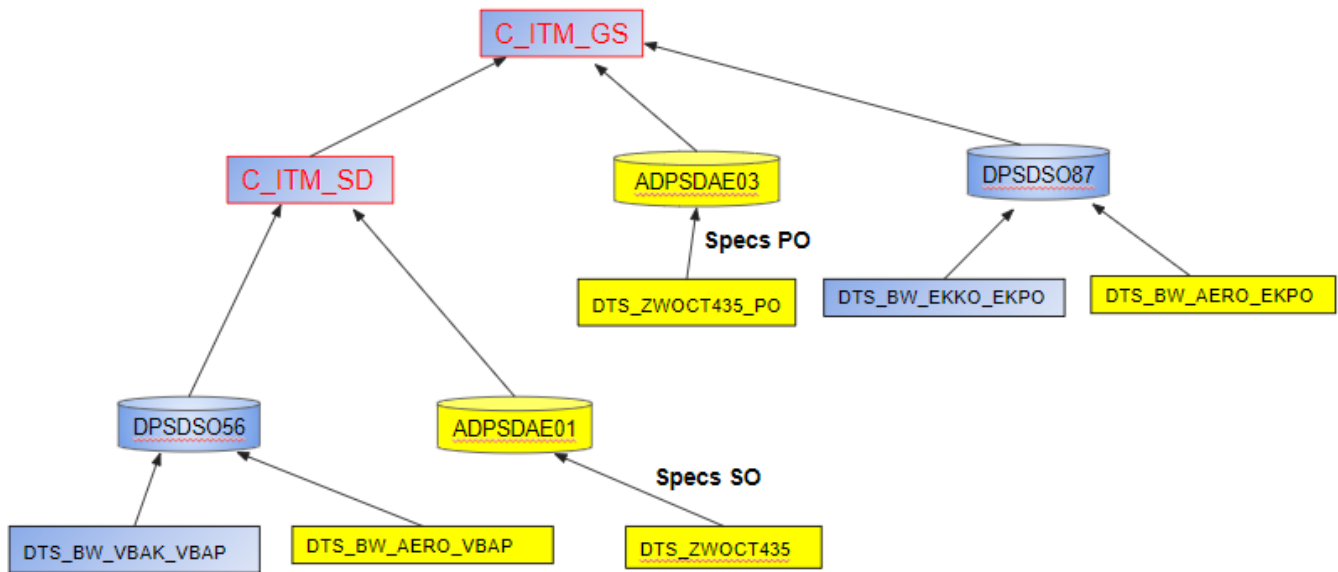
In the case of specs, which can be multiple for PO item, they are first loaded into DSO ADPSDAE03 and then concatenated as attribute C\_SPECLIS in C\_ITM\_GS.

**C\_ITM\_GS is the master data used in ship-pad report because it contains both Sales Order and Purchase Orders.**

Data that comes from Sales Order item (VBAP) goes first to C\_ITM\_SD and then to C\_ITM\_GS.

Data that comes from Purchase Order item (EKPO) goes directly to C\_ITM\_GS.

New loads into order line master data (C\_ITM\_SD / C\_ITM\_GS)



(Objects in yellow were created during Solstice project)

### Sales Orders x Process Orders

Some columns from ship-pad report bring production planning information (like workcenter, parent batch).

The link between Sales Orders and Process Orders comes from table **Z1C\_PP\_SD\_LINK** in WP1 and is stored in DSO **ADPSDAE02**.

One sales order can be linked with multiple process orders .

In ship-pad report, this will generate additional lines, but the key figures from the order line are then repeated in each line of the report.

### Passed Specs

New attribute **C\_PASSPEC** was added to **C\_BATCH2** master data and stores the passed specs (concatenated) from the batch.

Then the spec list from order line is compared against this batch attribute to generate **“Passed specs flag (Y/N)”** in ship-pad report.

**Passed Specs (batch)** is calculated at batch level comparing the spec list from order line with the passed specs from batch.

So you can have different values (Y or N) by batch, for the same order line, as in example below

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This is calculated in Transformation **DBSDSO57 -> DBSDSO9D**.

**Passed Specs (order)** is an overall flag by order line.

If any of “passed specs (batch) is “N”, then “passed specs (order) = ‘N’.

This is calculated in Recursive Transformation into **DBSDSO9D**.

### One-time customer

For one-time customers (VBPA-XCPDK = ‘X’), same customer code can have different names, stored at sales order level.

New DSO **AASDAE03R** was created to store one-time customer name at order level. It’s used as a lookup when loading data into **DBSDSO9D**.

If customer is found in this DSO, get its name from here, else get it from customer master data.

### GTS data (ECCN numbers & ITAR category)

It’s populated in **DBSDSO9D** via lookup in **DP\_GTS92** with material + following filters:

**EU ECCN**

Legal Regulation : DUALE

Numbering Scheme: EUECCN

### US ECCN

Legal Regulation : EAR

Numbering Scheme: USECCN

### ITAR Category

Legal Regulation : ITAR

Numbering Scheme: USITAR

### Wave 2 and 3 - Enhancements

#### Batch

In the first Ship Pad Version, the batch data was retrieved from Delivery level, but users want to see the Batches before the delivery creation and its possible according to the data from SAP transaction , ZWIM023 which was loaded in BW as C\_BATCH2 attributes.

Transformation: DTS\_C\_BATCH -> C\_BATCH2

Source: Material Batch (DTS\_C\_BATCH)

Target: Batch number (C\_BATCH2)

Version: Active

Active Version: Executable

Source Attribute	Target Attribute	Target Description	Target Data Type	Target Length
Z_IM_001	C_BATCH2	Batch	CHAR	000010
Z_IM_002	C_BATCH2	Batch	CHAR	000010
Z_IM_048	C_BATCH2	Batch	DEC	000013
Z_IM_052	C_BATCH2	Batch	CHAR	000003
Z_IM_031	C_BATCH2	Batch	CHAR	000008
Z_IM_049	C_BATCH2	Batch	DEC	000015
Z_IM_012	C_BATCH2	Batch	CHAR	000012
Z_IM_045	C_BATCH2	Batch	DATS	000008
Z_IM_046	C_BATCH2	Batch	TIMS	000006
Z_IM_029	C_BATCH2	Batch	CHAR	000008
Z_IM_028	C_BATCH2	Batch	CHAR	000011
Z_IM_047	C_BATCH2	Batch	CHAR	000008
Z_IM_030	C_BATCH2	Batch	CHAR	000008
Z_IM_036	C_BATCH2	Batch	CHAR	000011
Z_IM_004	C_BATCH2	Batch	CHAR	000010
Z_IM_005	C_BATCH2	Batch	NUMC	000006
CJOB_BM	C_BATCH2	Batch	NUMC	000018
CLABS	C_BATCH2	Batch	QUAN	000013
Z_IM_006	C_BATCH2	Batch	QUAN	000013
Z_IM_007	C_BATCH2	Batch	UNIT	000003
C_BATCH2	C_BATCH2	Batch	CHAR	000030
C_SALEPOT	C_SALEPOT	Sales POT	CHAR	000004
C_POTEDAT	C_POTEDAT	Sales Potential Date	DATS	000008
C_QM_TEXT	C_QM_TEXT	Text	CHAR	000030
C_QRB_ACT	C_QRB_ACT	Action	CHAR	000030
C_BMGR	C_BMGR	BMGR Input	CHAR	000030
C_PRINPUT	C_PRINPUT	Prod Input	CHAR	000030
C_TEINPUT	C_TEINPUT	Tech Input	CHAR	000030
C_FLGCROS	C_FLGCROS	Flag Cross System	CHAR	000001
C_CROSSYS	C_CROSSYS	Cross Source System	CHAR	000010
C_ZUSTD	C_ZUSTD	Batch in Restricted-Use Stock	CHAR	000001
C_B_SDOC	C_B_SDOC	Batch Attr - Sales Document	CHAR	000010
C_B_SITM	C_B_SITM	Batch Attr - Sales Item	CHAR	000006
OQUANTITY	OQUANTITY	Quantity	QUAN	000017
OUNIT	OUNIT	Unit of measure	UNIT	000003
C_PRCSORD	C_PRCSORD	Process Order Number	CHAR	000012

#### Linked Quantity

Quantity available in the SAP transaction ZWIM023.

#### % Linked

Formula at query level: ( Linked quantity / Document Item Quantity) \* 100

#### Estimate GI Date

New field available in order to provide always a GI date for the Order Line, because when data comes from Open Order Not Scheduled DSO (DBSDSO97) the To Be Invoiced date has a constant value 01.01.1900.

This field is based in a formula at Calculation View level where it checks if the C\_FLAG is Marked, if YES then considers the Goods Issue Date (GI\_DATE), otherwise keep the To Be Invoiced Date (C\_TBIDAT2).

Note: C\_FLAG is marked only when the data comes from Open Order Not Scheduled DSO (DBSDSO97) .

*Note: The next fields have been defined in the DBSDSO9D self loop transformation (Rec DBSDSO9D -> ODSO DBSDSO9D)*

**Usage Decision Complete (Concatenated)**

Check the batch attribute (C\_LOBMUD), Y if all batches linked do the Sales Order/Transfer Order Item have 'R04 A' , if one of them is N, then N.

**Unrestricted (Concatenated)**

Check the batch attribute (C\_ZUSTD), Y if all batches linked do the Sales Order/Transfer Order Item have Y, if one of them is N, then N.

**Process Order WPX (Concatenated)**

Concatenates all the Process Order documents available to the Sales Order/Transfer Order Item.

**Sched Prod End (Concatenated)**

Concatenates all the Schedule Production End dates available to the Sales Order/Transfer Order Item.

**Sched Prod Start (Concatenated)**

Concatenates all the Schedule Production Start dates available to the Sales Order/Transfer Order Item.

**Parent Batch WPX (Concatenated)**

Concatenates all the Parent Batches available to the Sales Order/Transfer Order Item.

**Backlog**

Y - Last Requested Goods Issue date (C\_LSTRQGI) is less then Current day

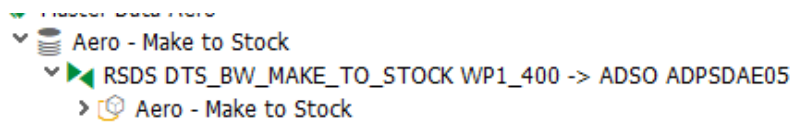
Credit block (C\_CRDBLK) is empty, A or D

Delivery blockings (C\_DELBLK and C\_DELBLK2) are empty

N - Other conditions

**Make to Stock**

New extractor created to load data from SAP tables KOTH911 and KONDH.



```

ADPSDAE05
0C0YZ6LH71QSJNM3K0301PZ61UV59UK2
DTS_BW_MAKE_TO_STOCK
    
```

Definition:

KONDH-CHMVS	Make to Stock
913	MTO+SPEC
914	MTS
915	MTS+SPEC

## Reporting

Workbook		Query	
Order Book: To be Invoiced + Aero Program & Market	BW_WBK_CPSDSO41_SD011	BW - Order book: To be invoiced Full (Core query)	BW_QRY_CPSDSO41_SD011
Ship Pad report	BW_WBK_CPSDAE03_0001	BW Aero - Ship Pad	BW_QRY_CPSDAE03_0001
Open Orders report - External	BW_QRY_CPSDAE03_0002	Open Order Report -External	BW_QRY_CPSDAE03_0002
Open Orders report - Internal	BW_WBK_CPSDAE03_0003	Open Order report - Internal	BW_QRY_CPSDAE03_0003

## Data loading

Main Process Chain	Final Info Provider	Frequency	Start Time	Duration
PC_GLOBAL_SALES_MAIN	CRSDSO41, 42...	Daily	~1:30am CET	~3.5h
PC_SD_MAIN	CRSDSO01, 02...	Daily	~2:00am CET	~1h
PC_GL_SALES_MAIN_PO	CRSDSO51, 52...	Daily	~6:00am CET	~1h
PC_OBAS_TRANSFERS_MAIN	CRSDSO11, 12...	Daily	~6:00am CET	~0.5h

## Data Quality Controls

Data comes from SAP system. To compare data between BW and sources systems, check propagation layers.

## Operational Documentation

### Procedures

<Describe the recurring procedures needed to operate the application (eg. start/pause/terminate/restart the app processes, data preparation, data ingestion, ETL, data visualization, data export, other manual activities)>

### Scheduling

<Describe the scheduling in place for the application (eg. existing jobs, trigger time/event based, dependencies)>

### Monitoring

<Describe the monitoring checks to confirm the application is performing well (eg. check the overall status, check performance metrics like runtime /data volume/memory/disk/CPU, maintain and react to alerts/notifications)>

### Error Handling

<Describe how to handle errors (eg. error codes, description and respective resolution, alert users)>

### Known Bugs

<List the existing bugs, its criticality, workarounds and resolution plan.>

### Roadmap

<List past & future evolutions for the application (including links to MED/FSD/TSD)>