PPM CONTENT PACKAGE FOR SAP SD

ARIS Process Performance Manager 10

October 2026

This document applies to ARIS Process Performance Manager Version 10 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1. General

This manual describes the contents of PPM Content Package for SAP SD, a PPM customizing for extracting data from an SAP SD system with PPM Process Extractor SAP-2-PPM and for evaluating the data for use in ARIS Process Performance Manager (PPM).

Please note that this manual is not intended to replace user or customizing training. It is a source of reference containing information that supplements the information provided in the manuals and online help.

Content Packages are approved for use on Windows and Linux systems.

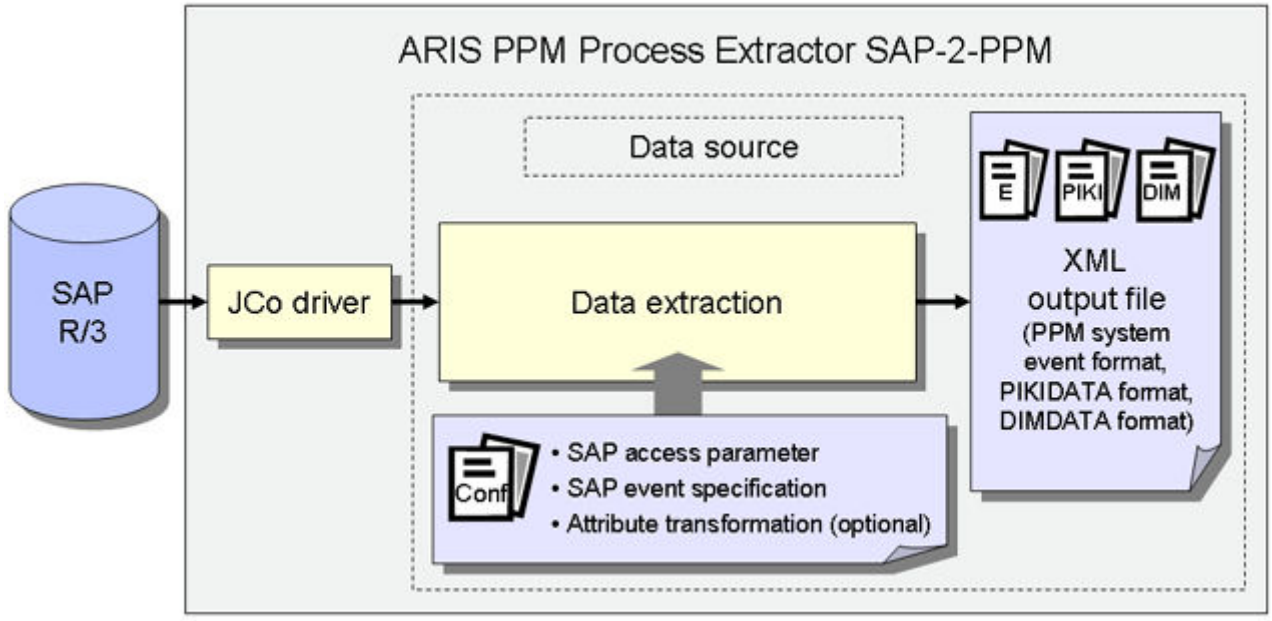
2. Overview

This chapter provides an overview of the extraction of data from application systems for use in ARIS Process Performance Manager. The Content Package contains configuration files for PPM Process Extractor SAP-2-PPM to extract the necessary sales process data from SAP systems. The files are saved as XML files in PPM system event format. The SAP-2-PPM process extractor is described in detail in the **PPM Process Extractors** manual.

Using the fragment and mapping definitions from the Content Package, the extracted data can be imported into ARIS Process Performance Manager with no changes via the PPM XML import interface and then processed. The XML import interface is described in detail in the **PPM Data import** manual.

2.1. Data extraction

The following representation illustrates the basic functioning of data extraction from R/3 source systems, the optional data transformation, and the output in PPM-compatible XML files.



SAP access parameters

The system configuration specifies the source system to be extracted and the access data for the source system, for example, the system account, the access mode, and the extraction period.

You need to ensure that the specified source system user has appropriate access authorization to extract the relevant data fields.

SAP event specification

The table configuration determines the data to be extracted from the source system.

Attribute transformation (optional)

If required, source system attributes can be modified before being imported into the PPM system and attribute types can be added and calculated. An appropriate transformation configuration needs to be created for the attribute transformation.

System drivers

The system drivers extract data from the source systems considering the settings specified in the system configuration (SAP access parameters).

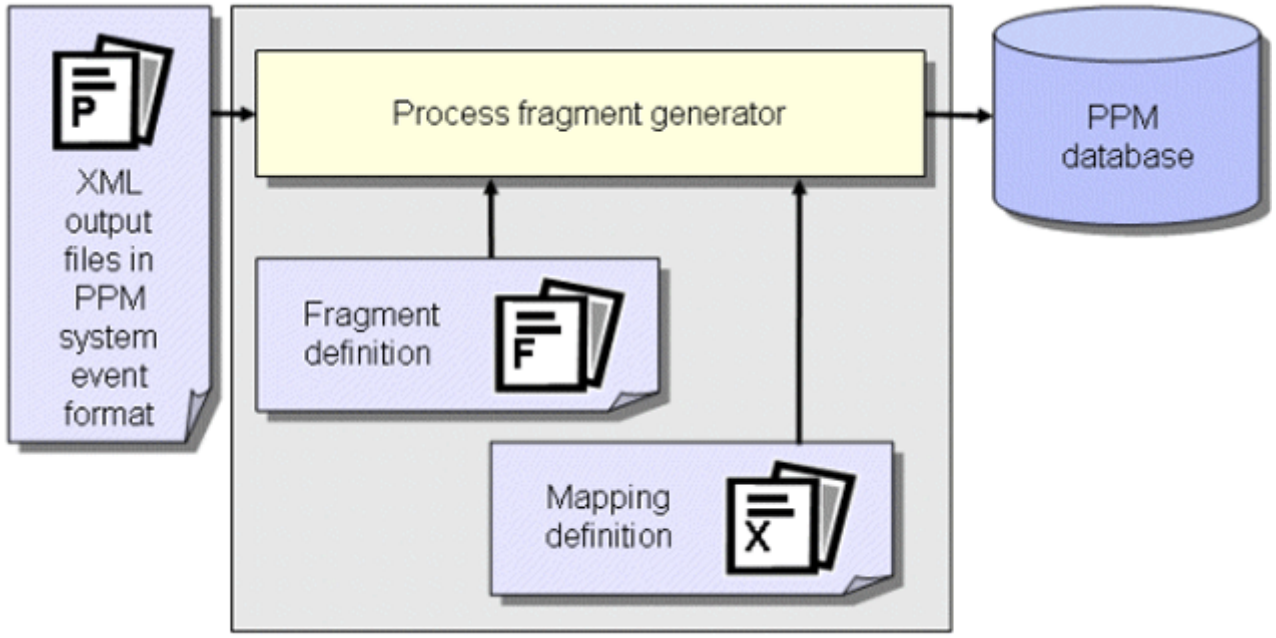
XML output

The XML Generator converts the extracted data into the data structure of a PPM-compliant XML format.

2.2. Data import (Example: XML import in PPM system event format)

In addition to the XML output files in PPM system event format, the XML Generator can also output files in process instance-independent measure or dimension data format for import into a PPM system. The process of importing XML output files in PPM system event format is described here as an example.

During the import, a fragment definition is assigned to each source system event in the generated XML output files and then instantiated in the PPM database. The source system attributes specified in the mapping are copied to the objects in this fragment instance. The fragment instances are then saved in the PPM database.



Tip
For further information about the configuration of the XML import please refer to the **PPM Data Import** manual.

In a further work step, the fragment instances imported into the database are compiled into process instances using the **runppmimport** PPM command and assigned to process types. After measure calculation, the process instances are available for detailed analyses.

Tip
The configuration of all files relevant for **runppmimport** is described in detail in the **PPM Customizing** manual.

3. Installation

This chapter provides an overview of the installation of PPM Content Package for SAP SD.

3.1. Install PPM Content Package for SAP SD

PPM Content Package for SAP SD is automatically installed with the PPM installation.

3.2. Install PPM clients

To use PPM Content Package for SAP SD, you must first use the PPM client setup in the client overview of PPM Customizing Toolkit to create a client. To do so, the client template **ppm4sd_en** is available in client setup.

For information on how to use PPM Customizing Toolkit to create a client with one of the templates from PPM Content Package for SAP SD, how to extract data, and how to import it into the PPM system, please refer to the description of PPM Customizing Toolkit (PPM CTK User Guide)

3.3. Create table indices

The following **non-unique** indices should be created in the database in the SAP system because they considerably speed up the extraction process or, depending on the amount of data, they facilitate extraction within an acceptable time frame. The names of the data sources benefitting from the corresponding index are specified in parentheses.

You may need to create further indices depending on how you want to modify or extend the configurations contained in the Content Package.

BKPF table

- Index for **MANDT**, **CPUDT** (ACCOUNTING, BILLING_ACCOUNTING_HIER)
- Index for **MANDT**, **AEDAT** (ACCOUNTING, BILLING_ACCOUNTING_HIER)
- Index for **MANDT**, **UPDDT** (ACCOUNTING, BILLING_ACCOUNTING_HIER)
- Index for **MANDT**, **AWTYP** (ACCOUNTING, BILLING_ACCOUNTING_HIER)

BSAD table

- Index for **MANDT**, **CPUDT** (CLEARING)

CDHDR table

- Index on **MANDT**, **UDATE** (SALES_ITEM_DELETED)

LIPS table

- Index for **MANDT**, **ERDAT** (DELIVERY, PURCHASE_ORDER_DELIVERY)
- Index for **MANDT**, **AEDAT** (DELIVERY, PURCHASE_ORDER_DELIVERY)
- Index for **MANDT**, **VGBEL** (PURCHASE_ORDER_DELIVERY)

LTAK table

- Index for **MANDT**, **BDATU** (WM_TRANSFER_ORDER)

MKPF table

- Index for **MANDT**, **CPUDT** (GOODS_RECEIPT_PO)

VBAP table

- Index for **MANDT**, **ERDAT** (SALES)
- Index for **MANDT**, **AEDAT** (SALES)

VBAK table

- Index for **MANDT**, **AEDAT** (SALES_HEADER, SALES_ITEM_HEADER_CHANGES)

VBFA table

- Index for **MANDT**, **ERDAT** (MATERIAL_DOCUMENT, PICK_ORDER, SERVICE_CONFIRMATION)
- Index for **MANDT**, **AEDAT** (MATERIAL_DOCUMENT, PICK_ORDER, SERVICE_CONFIRMATION)
- Index for **MANDT**, **VBTYP_N** (MATERIAL_DOCUMENT, PICK_ORDER, SERVICE_CONFIRMATION)
- Index for **MANDT**, **VBELN** (MATERIAL_DOCUMENT)

VBRK table

- Index for **MANDT**, **ERDAT** (BILLING)
- Index for **MANDT**, **AEDAT** (BILLING)

VTTP table

- Index for **MANDT**, **ERDAT** (DELIVERY_SHIPMENT_HIER, SHIPMENT)

VTTK table

- Index for **MANDT**, **AEDAT** (SHIPMENT_HEADER_CHANGES)

3.4. Data extraction and import

The batch files supplied and described below are only intended as examples that you can use to create your own batch files for automatic data extraction and import.

3.4.1. Data extraction

The procedure for extracting data from an SAP/SD system is as follows:

1. In the file **ppm4sd_en_SAPSystem.xml**, set the access data for the R/3 system from which you want to extract data. For more information about these settings, refer to the technical reference document **PPM Process Extractors** in the chapter on **R/3 System Configuration**.
2. Use PPM CTK to set start and end date of the extraction period whose data you want to extract in the parameter **PPM_CONF_MYSAP_PARAMS**.
3. Start a DOS command prompt, switch to the directory **<installation directory>\ppm\server\bin\work\data_ppm\custom\ppm4sd_en\bat**, and execute the file **sapexport_all.bat**.

Under **<installation directory>\ppm\server\bin\work\data_ppm\custom\ppm4sd_en\data** you will then find the ZIP files with the extracted data in PPM system event format.

3.4.2. Data import

The procedure for initializing the PPM client, importing the ZIP files, and performing the PPM import is as follows:

1. Open a DOS command prompt, switch to the directory **<installation directory>\ppm\server\bin\work\data_ppm\custom\ppm4sd_en\bat**, and execute the file **initdb.bat**. The batch file initializes the database for the client.

2. Start the **xmlimport_all.bat** file in the same directory. The batch file performs the XML import for the client.
3. Then start the **ppmimport.bat** file in the same directory to perform the PPM import for the client.

Under **<installation directory>\ppm\server\bin\work\data_ppm\custom\ppm4sd_en\data\archive** you will then find the imported ZIP files with the extracted data in PPM system event format.

4. Individual adjustments

There is no option of an automatic upgrade with a transfer of individual adjustments to a subsequent version of the Content Package.

Therefore, mark or remember the changes you make in the configuration to be able to specify them in a newer version of the Content Package.

5. Appendix

5.1. Data sources included

The following applies to all data sources included:

- All data sources are configured in such a way that new attributes from a source system event are automatically mapped to a PPM attribute with the prefix **AT_** if such an attribute exists in the PPM client.
- All process fragments consist of a start event, a function, and an end event.
- Each data source contains a specific configuration for retrieving the documents to be extracted from the source system for the extraction period specified. With many data sources data is extracted from additional tables. Changes to data in these additional tables in the source system do not necessarily result in the affected documents being extracted again. Sometimes, however, measures are defined based on this data in PPM. If a particular measure must be up-to-date you need to check if a change to the source system data on which the measure is based leads to the relevant document to be extracted again. If this is not the case, you must change or extend the configuration of the data source accordingly.

  The documents to be extracted are listed in the configuration of a data source or in the subsequent descriptions of the individual data sources under Data extraction.

Merger

- The **AT_HIERARCHY_KEY** attribute is used to map hierarchical connections. A corresponding hierarchy key rule is defined for the **create_customer_order_item**, **create_accounting_document**, and **create_shipment_item** functions.
- The **AT_PROCESS_KEY_PREDECESSOR** attribute is used to merge the current process fragment with the preceding process fragment, that is, a process key based on this attribute is defined for all functions.
- The **AT_PROCESS_KEY_OWN** attribute is used as a key for the current process fragment. It is used, on the one hand, to reimport the same data and, on the other hand, to later add subsequent process fragments by using the merge function.
- The **AT_MERGE_KEY_PREDECESSOR** attribute can be used to merge the start event of one fragment with the end event of a preceding fragment.
- The **AT_MERGE_KEY_OWN** attribute can be used to merge identical events and to merge the start event of a subsequent fragment with the end event of the current fragment.

In the attribute transformations, the following source system attributes are calculated for almost all fragments. These source system attributes are used for the **AT_ID** attribute of the functions and events or for the corresponding process, merge or hierarchy keys:

- **PROCESS_KEY_OWN**

  In the case of an XML import for the functions, this source system attribute is mapped to **AT_PROCESS_KEY_OWN**.

  For end events, this value is mapped to **AT_MERGE_KEY_OWN**, which can be used to merge end events with start events.

  However, it is also used to create the **AT_ID** attributes of the functions and events, which generally comprise the internal object name of the respective object and the source system attribute **PROCESS_KEY_OWN**.

- **PROCESS_KEY_PREDECESSOR**
  In the case of an XML import for the functions, this source system attribute is mapped to **AT_PROCESS_KEY_PREDECESSOR**.
- **MERGE_KEY_PREDECESSOR**
  In the case of an XML import for the start event, this source system attribute is mapped to
  AT_ MERGE_KEY_PREDECESSOR, which is used to merge the start event with the end event of the preceding fragment.
- **HIERARCHY_KEY**
  In the case of an XML import for the functions, this source system attribute is mapped to
  AT_ HIERARCHY_KEY and it is used to save the key for hierarchy relationships in hierarchical processes.

5.1.1. ACCOUNTING

This data source is used to extract the line items in the accounting documents (sales document category: **+**) from the **BSEG** table.

Data extraction

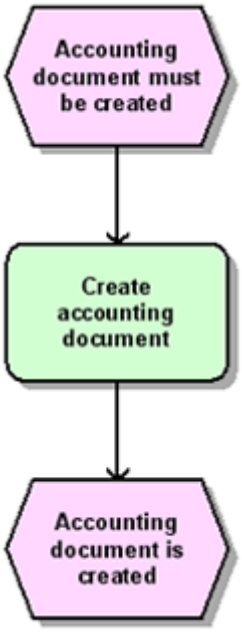
Only those accounting documents that refer to an invoice (reference procedure in BKPF-AWTYP=VBRK) and, of these, only the customer line items (cost type in BSEG-KOART=D) are read.

Only those accounting documents are considered for which the creation timestamp (BKPF-CPUDT, BKPF-CPUTM), the change date (BKPF-AEDAT), or the date of the last document update (BKPF-UPDDT) lies within the period to be extracted.

A source system event is generated for each accounting line item extracted.

Data import

A process fragment of the following type is imported for each source system event:



5.1.2. BILLING

This data source is used to extract items of the following document categories from the **VBRP** table (the respective sales document categories are specified in parentheses):

- Invoices (M)
- Cancelation invoices (N)
- Credit memos (O)
- Invoice cancelations (S)
- Debit memos (P)
- Pro forma invoices (U)
- Internal allocations (invoice) (5)
- Internal allocations (credit memo) (6)

Data extraction

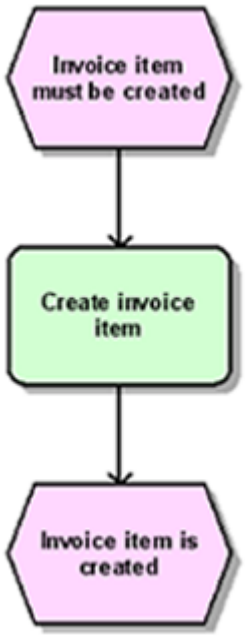
All document items in the aforementioned sales document categories (VBRK-VBTYP) whose creation time (VBRK-ERDAT, VBRK-ERZET) or change date (VBRK-AEDAT) lies within the specified extraction period are extracted from the VBRP table.

A source system event is generated for each extracted document item.

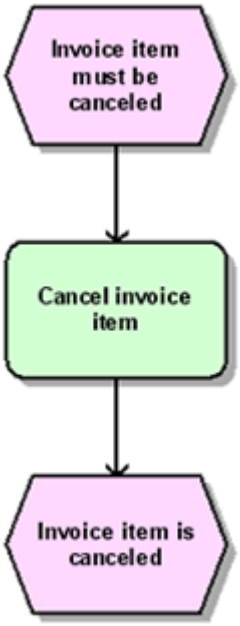
Data import

For each extracted source system event, a process fragment that corresponds to its sales document category (VBRK-VBTYP) is imported:

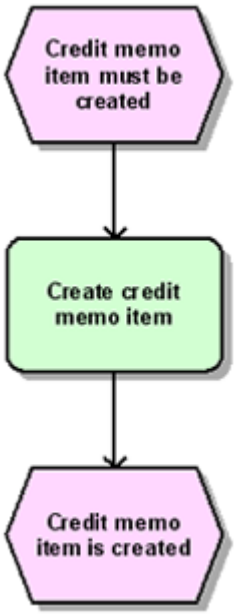
Invoice (M)



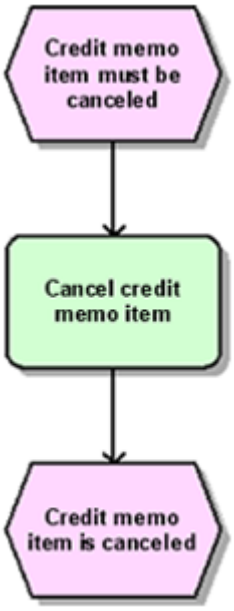
Cancelation invoice (N)



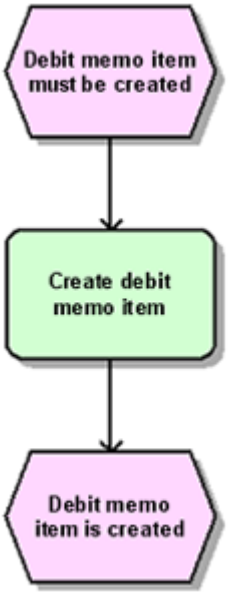
Credit memo (O)



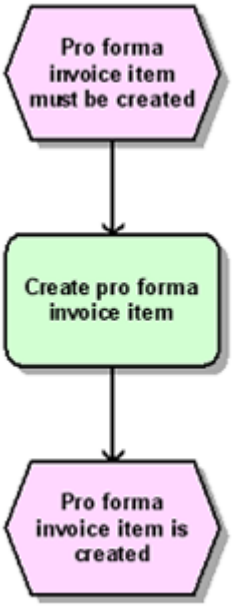
Invoice cancelation (S)



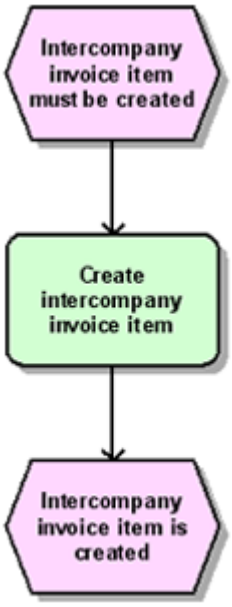
Debit memo (P)



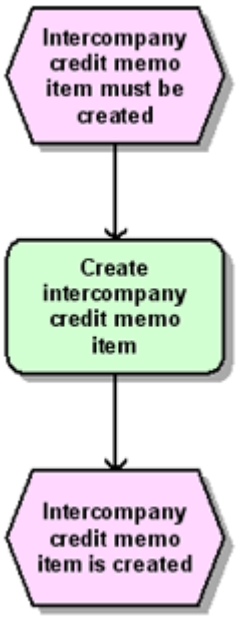
Pro forma invoice (U)



Internal allocation (invoice) (5)



Internal allocation (credit memo) (6)



5.1.3. BILLING_ACCOUNTING_HIER

This data source is used to determine those items in the invoice documents (M, N, O, S, P, U, 5, 6) from the VBRP table for which a subsequent accounting document exists.

Accounting documents with the associated clearing documents are stored in a separate process instance. In process instances in which the associated invoices are present, a representation object with reference to the corresponding accounting process is generated from this data source.

Data extraction

Only those invoice items for which a customer accounting line item (BSEG-KOART=D) exists in an accounting document that refers to this invoice item (reference procedure in BKPF-AWTYP=VBRK, invoice document number in BKPF-AWKEY) are read.

Only those accounting documents whose creation timestamp (BKPF-CPUDT, BKPF-CPUTM), change date (BKPF-AEDAT) or date of the last document update (BKPF-UPDDT) lie within the period to be extracted are considered.

A source system event is generated for each extracted invoice item.

Data import

For each source system event that corresponds to one of the sales document categories M, N, O, S, P, U, 5 or 6 (VBRK-VBTYP), a process fragment of the following type is imported:

5.1.4. CLEARING

This data source is used to extract the line items in the clearing documents for customer documents from the BSE_CLR table.

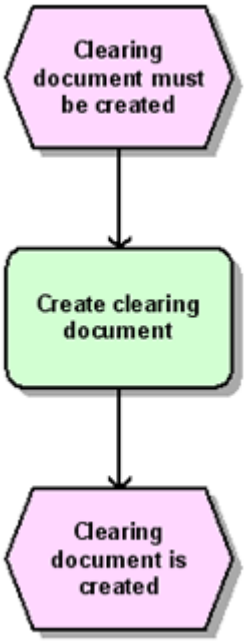
Data extraction

Only those clearing document line items that belong to a customer clearing document and whose creation date (BSAD-CPUDT) lies within the period to be extracted are read.

A source system event is generated for each extracted clearing document line item.

Data import

A process fragment of the following type is imported for each source system event:



5.1.5. DELIVERY

This data source is used to extract the line items in the following delivery documents from the LIPS table (the sales document category is in parentheses):

- Delivery item (J)
- Batch line item (J, T)
- Returns delivery item (T)

Data extraction

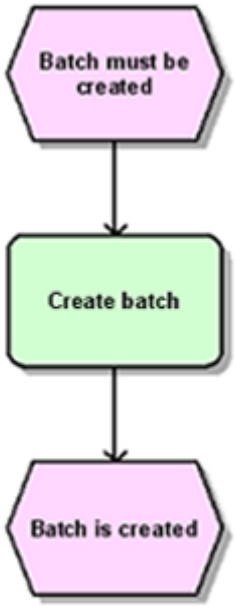
Only those document items that belong to a document with the sales document category J or T (LIKP-VBTYP) and whose creation time (LIPS-ERDAT, LIPS-ERZET) or change date (LIPS-AEDAT) lies within the period to be extracted are read.

A source system event is generated for each extracted document item.

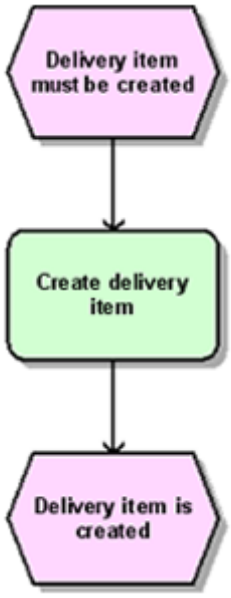
Data import

For each source system event, one of the following process fragments is imported, depending on which condition is fulfilled for the source system event:

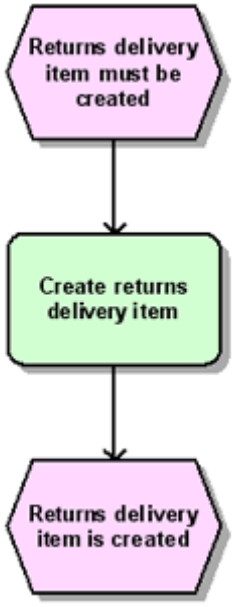
1. LIPS-UECHA is not equal to **000000**



2. LIPS-UECHA is equal to **000000** and LIKP-VBTYP is equal to **J**



3. LIPS-UECHA is equal to **000000** and LIKP-VBTYP is equal to **T**



5.1.6. DELIVERY_HEADER_CHANGES

With this data source, the rows of the following delivery documents from the **LIPS** table are extracted if the document itself was not changed during the extraction period, but the data of the document header was changed. The sales document category is indicated in parentheses.

- Delivery item (J)
- Batch line item (J, T)
- Returns delivery item (T)

Data extraction

Only document items are extracted that belong to a document with the sales document category **J** or **T** (LIKP-VBTYP), whose data was changed in the document header (LIKP, VBUK) within the extraction period (LIKP-AEDAT), but whose creation time (LIPS-ERDAT, LIPS-ERZET) and change date (LIPS-AEDAT) do not lie within the period to be extracted.

A source system event is generated for each extracted document item.

Data import

For each source system event, one of the process fragments listed for the **DELIVERY [21]** data source [21] is imported depending on the condition being fulfilled for the source system event.

5.1.7. DELIVERY_SHIPMENT_HIER

This data source is used to extract those items in delivery documents for which a shipment document exists from the **LIPS** table.

Since shipment items may affect several delivery items, the shipment items are imported in a separate process instance. In process instances in which the associated delivery items are present, this data source generates a representation object with reference to the corresponding shipment item process.

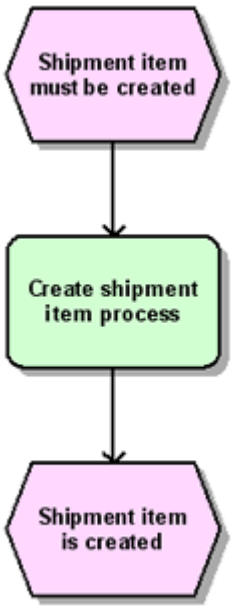
Data extraction

By means of the **VTTP** table, those shipment items are retrieved that have a reference to a sales document (VTTP-VBELN not empty) and whose creation time (VTTP-ERDAT, VTTP-ERZET) lies within the extraction period. By means of these document numbers, those document items that belong to a document with the sales document category **J** or **T** (LIKP-VBTYP) are extracted from the **LIPS** table.

A source system event is generated for each extracted document item.

Data import

The following process fragment is imported for each source system event:



5.1.8. GOODS_RECEIPT_PO

This data source is used to extract from the MSEG table those items in the goods receipt documents and goods receipt document cancelation that belong to purchase order documents, that is, those items that do not appear as a sales document in the VBFA SD document flow table.

Data extraction

Only those document items with the GR document type (MKPF-BLART) whose creation time (MKPF-CPUDT, MKPF-CPUTM) lies within the extraction period and whose movement type is one of the following movement types are extracted from the MSEG table:

101, 102, 103, 104, 121, 122, 123, 124, 125, 131, 132, 141, 142, 161, 162

In the standard SAP system, these are the movement types for goods receipt items or goods receipt cancelation items. If other customer-specific movement types are used in the SAP system to be extracted, these must be configured in the system event specification.

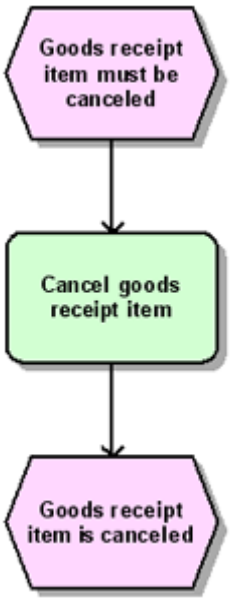
A source system event is generated for each extracted document item.

Data import

For each source system event, one of the following process fragments is imported, depending on which condition is fulfilled for the source system event:

1. No entry was found in the document flow table (VBFA-VBTYP_N is not present), there is an entry in order processing (EKBE-BELNR is present), and the debit/credit indicator (MSEG-SHKZG) is equal to D:

2. No entry was found in the document flow table (VBFA-VBTYP_N is not present) and the debit/credit indicator (MSEG-SHKZG) is equal to C:



5.1.9. MATERIAL_DOCUMENT

This data source is used to extract the items in the following goods movements from the VBFA and MSEG tables (the sales document category is specified in parentheses):

- Goods receipt (i)
- Goods issue (R)
- Goods issue cancelation (h)
- Service confirmation
- Service confirmation cancellation

Data extraction

Only those document items that have the document category (VBFA-VBTYP_N) i, R or h and whose creation time (VBFA-ERDAT, VBFA-ERZET) lies within the extraction period are extracted from the VBFA SD document flow table.

A source system event is generated for each extracted document item.

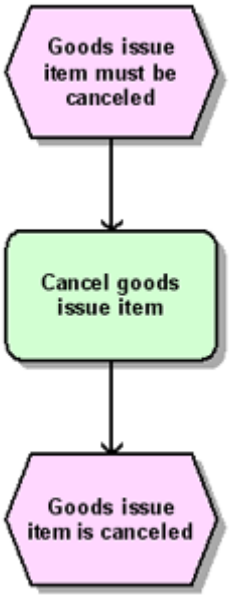
Data import

One of the following process fragments is imported for each source system event:

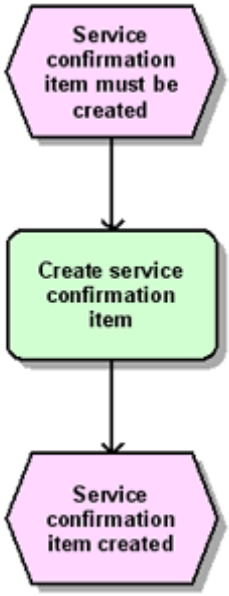
1. The MSEG-MBLNR field is present and the document category (VBFA-VBTYP_N) is i.

2. The MSEG-MBLNR field is present and the document category (VBFA-VBTYP_N) is R.

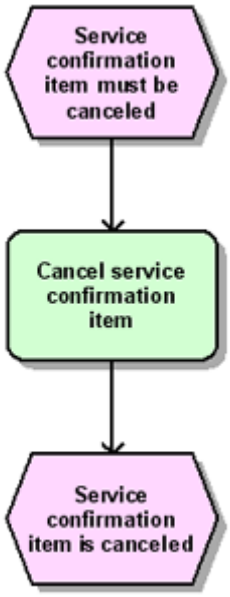
3. The MSEG-MBLNR field is present and the document category (VBFA-VBTYP_N) is h.



4. The MSEG-MBLNR field is not present and the document category (VBFA-VBTYP_N) is R.



5. The MSEG-MBLNR field is not present and the document category (VBFA-VBTYP_N) is h.



5.1.10. PICK_ORDER

This data source is used to extract the items in the pick orders from the VBFA table.

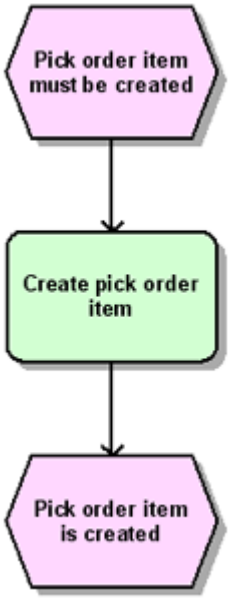
Data extraction

Only those document items that have the sales document category (VBFA-VBTYP_N) Q, whose warehouse number is blank, whose predecessor item (VBFA-POSNV) is not equal to 000000, and whose creation time (VBFA-ERDAT, VBFA-ERZET) or change date (VBFA-AEDAT) lies within the extraction period are extracted from the VBFA SD document flow table.

A source system event is generated for each extracted document item.

Data import

The following process fragment is imported for each of these source system events:



5.1.11. PURCHASE_ORDER_DELIVERY

This data source is used to extract from the **EKPO** table those items in the purchase orders for which a delivery item being referenced is not a batch line item.

Data extraction

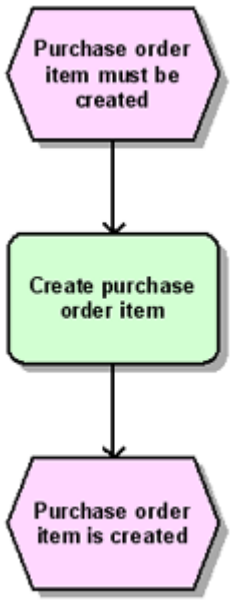
Only those purchase order items for which there is a delivery item with LIPS-UECHA=000000 in the **LIPS** table that has this purchase order item as a predecessor (LIPS-VGBEL, LIPS-VGPOS, LIPS-VGTYP=V) are extracted from the **EKPO** table. The creation time (LIPS-ERDAT, LIPS-ERZET) or the change date (LIPS-AEDAT) of the delivery item must lie within the extraction period.

This means that the data of the document is extracted only if the associated delivery item is created or changed. If all changes to the purchase order items and possibly the current changes at the document header level are to be extracted, this must be executed via other data sources, for example, the data sources **PURCHASE_ORDER** or **PURCHASE_ORDER_HEADER_CHANGES** from the Content Package for SAP/MM.

A source system event is generated for each extracted document item.

Data import

The following process fragment is imported for each source system event that is a purchase order item (EKKO-BSTYP is equal to F):



5.1.12. SALES

This data source is used to extract items in the following document categories from the VBAP table (the respective sales document category is specified in parentheses):

- Order (C)
- Delivery schedule (E)
- Contract (G)
- Return (H)
- Free order (free delivery) (I)
- Credit memo request (K)
- Debit memo request (L)

Data extraction

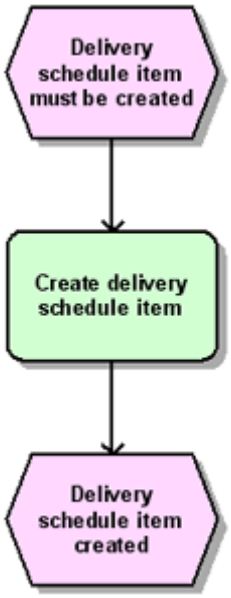
All of the document items that belong to one of the document categories listed above (VBAK-VBTYP) and whose creation time (VBAP-ERDAT, VBAP-ERZET) or change date (VBAP-AEDAT) lies within the extraction period are extracted from the VBAP table.

A source system event is generated for each extracted document item.

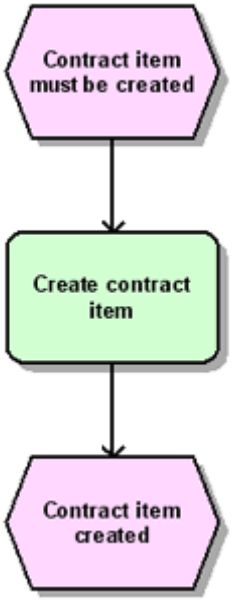
Data import

One of the following process fragments is imported for each source system event, depending on which sales document category (VBAK-VBTYP) the source system event has:

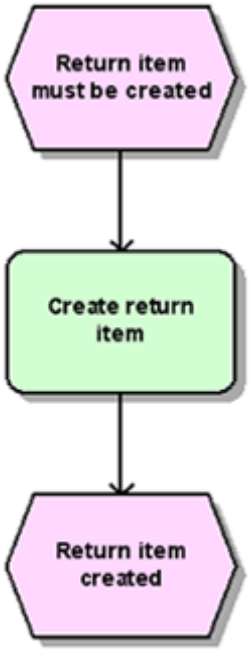
1. Order (C)
2. Delivery schedule (E)



3. Contract (G)

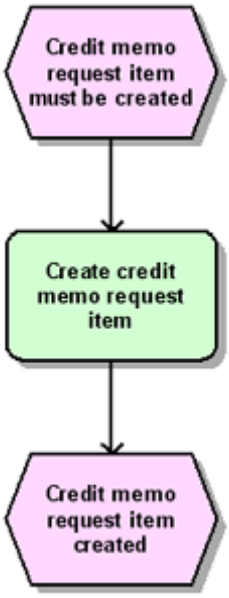


4. Return (H)

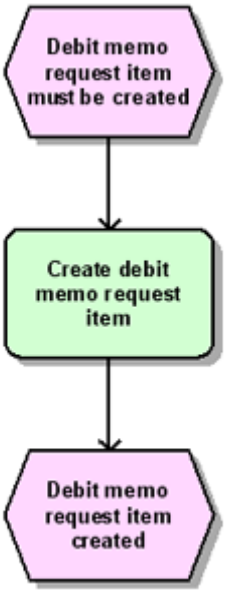


5. Free order (free delivery) (I)

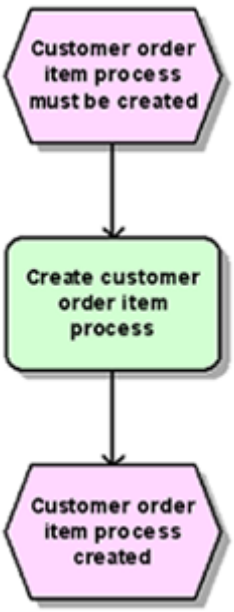
6. Credit memo request (K)



7. Debit memo request (L)



8. To implement a hierarchy of order headers and order items, the following representation object with reference to the corresponding item process is also imported for each order item (C):



5.1.13. SALES_ITEM_HEADER_CHANGES

With this data source, the items of the following document categories from the **VBAP** table are extracted if the document itself was not changed during the extraction period, but the data of the document header was changed. The sales document category is indicated in parentheses.

- Order (C)
- Delivery schedule (E)
- Contract (G)
- Return (H)
- Free order (free delivery) (I)
- Credit memo request (K)
- Debit memo request (L)

Data extraction

All document items are extracted from the **VBAP** table which belong to one of the document categories (VBAK-VBTYP) listed above, whose document header data was changed within the extraction period (VBAK-AEDAT), and whose creation time (VBAP-ERDAT, VBAP-ERZET) and change date (VBAP-AEDAT) do not lie within the extraction period.

A source system event is generated for each extracted document item.

Data import

For each source system event, one of the process fragments listed for the **SALES [31]** data source [31] is imported depending on the condition being fulfilled for the source system event.

5.1.14. SALES_HEADER

This data source is used to extract the order headers from the VBAK table in order to implement an order header process that contains a representation object with a hierarchical reference to the item process for each item within the order.

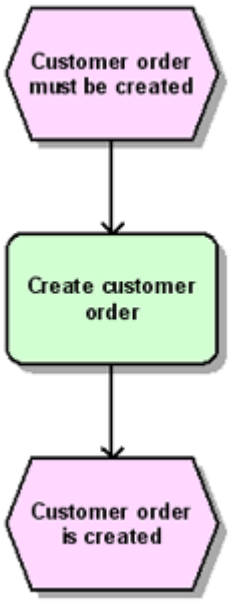
Data extraction

All order headers (VBAK-VBTYP = C) whose creation time (VBAK-ERDAT, VBAK-ERZET) or change date (VBAK-AEDAT) lies within the extraction period are extracted from the VBAK table.

A source system event is generated for each extracted document header.

Data import

The following fragment is imported for each source system event with the sales document category C (VBAK-VBTYP):



5.1.15. SALES_ITEM_DELETED

This data source is used to extract the deleted items in the documents in the VBAP table from the change document tables (the sales document category is specified in parentheses): These include:

- Order (C)
- Delivery schedule (E)
- Contract (G)
- Return (H)
- Free order (free delivery) (I)
- Credit memo request (K)
- Debit memo request (L)

For example, if an order item is imported into PPM and then deleted from the SAP system, it still exists in PPM. Due to the fact that this data source imports a fragment for each deleted document, which is added to the fragments that already exist in PPM, you can select documents that have been imported into PPM but already deleted, so that they can be ignored during measure calculation.

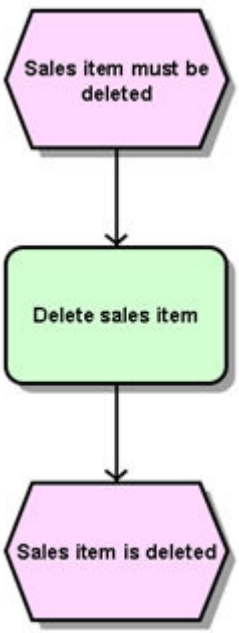
Data extraction

All entries that belong to the VBAP table (CDPOS-TABNAME), include a deletion of the complete line item (CDPOS-FNAME is equal to KEY, CDPOS-CHNGIND is equal to D), and whose creation time (CDHDR-UDATE, CDHDR-UTIME) lies within the extraction period are extracted from the CDPOS table.

A source system event is generated for each extracted document item.

Data import

Each source system event with the source system attribute VBAP-POSNR is ignored. The following process fragment is imported for each source system event with the source system attribute VBAP-POSNR:



5.1.16. SALES_ITEM_CHANGES

This data source is taken as an example of how to extract changes to a table field. In this example, the changes (CDHDR-CHANGE_IND=U) of the field in the **VBAP** table (CDPOS-TABNAME=VBAP) in the data source are extracted, containing the net value of the order item in the document currency (CDPOS-FNAME=NETPR).

Subsequently, various values from other tables (for example, VBAP and VBAK) are extracted in addition to the change documents determined.

The data source mainly serves as a template for custom data sources, for which data is to be determined based on change documents.

Data extraction

All entries that are included in the **VBAP** table (CDPOS-TABNAME), contain an update of the net value (CDPOS-FNAME is equal to NETPR, CDPOS-CHNGIND is equal to U), and whose creation time (CDHDR-UDATE, CDHDR-UTIME) lies within the extraction period are extracted from the **CDPOS** table.

A source system event is generated for each extracted change.

Data import

One process fragment is imported for each source system event.

5.1.17. SHIPMENT

This data source is used to extract all shipment items from the VTTP table.

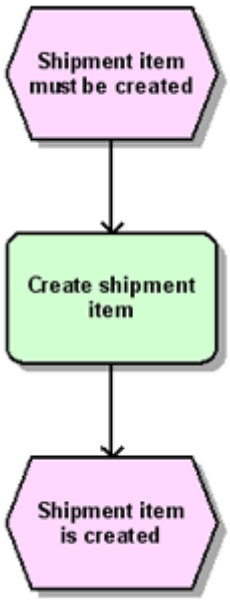
Data extraction

Only those shipment items that have a reference to a sales document (VTTP-VBELN is not blank) and whose creation time (VTTP-ERDAT, VTTP-ERZET) lies within the extraction period are extracted from the VTTP table.

A source system event is generated for each extracted document item.

Data import

The following process fragment is imported for each source system event:



5.1.18. SHIPMENT_HEADER_CHANGES

With this data source, all shipment items from the **VTTP** table are extracted if the document itself was not changed during the extraction period, but the data of the document header was changed.

Data extraction

Only those shipment items are extracted from the **VTTP** table, that have a reference to a sales document (VTTP-VBELN not empty), whose document header data was changed during the extraction period (VTTK-AEDAT, VTTK-AEZET), and whose creation time (VTTP-ERDAT, VTTP-ERZET) does not lie within the extraction period.

A source system event is generated for each extracted document item.

Data import

For each source system event, the same process fragment as listed in the SHIPMENT data source [38] is imported.

5.1.19. WM_TRANSFER_ORDER

This data source is used to extract all WMS shipment items from the LTAP table.

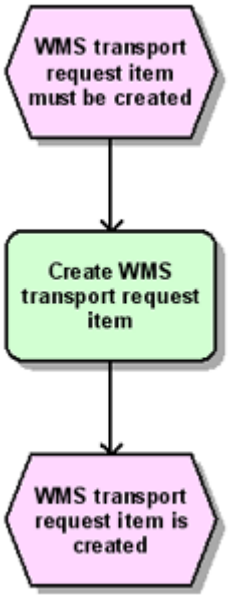
Data extraction

Only those WMS shipment items that refer to a sales document (LTAK-VBELN is not blank and LTAP- POSNR is not equal to 000000), and whose creation time (LTAK-BDATU, LTAK-BZEIT) lies within the extraction period are extracted from the LTAP table.

A source system event is generated for each extracted document item.

Data import

The following process fragment is imported for each source system event:



5.2. Processes contained

- Order processing (item)
- Cash sale
- Delivery free of charge
- Rush order
- Other orders
- Standard order
- Order processing (header)
- Order header
- Hierarchies
- Accounting process
- Shipment item process

- Consignment store processes
- Consignment pick-up
- Consignment fill-up
- Consignment withdrawal
- Consignment returns
- Contact processing
- Contract
- Delivery schedules
- Delivery schedule
- Returns and credit memos
- Credit memo
- Credit memo request
- Debit memo
- Debit memo request
- Return
- Stock transfer
- Stock transfer
- Other processes
- Delivery without reference
- Goods issue without reference
- Invoice without reference

5.3. Measures and dimensions contained

5.3.1. Process measures

Number of processors	Corresponds to the average number of different processors in the process instances
Order quantity (request)	Cumulated order quantity (VBAP-KWMENG [AUFT, KOLI] or EKPO-MENGE [BEST/PO])
Order quantity (confirmed)	Sum of confirmed volumes (VBAP-KBMENG) of orders and free deliveries
Processing frequency	Number of process steps
PO amount in base unit	Sum of purchase order quantities (in the base unit) from the **Create purchase order item** function minus the purchase order quantities from the **Cancel purchase order item** function (only included in PPM Content Package for SAP MM). The sum is created when the measure is aggregated. When using the measure, please refer to the chapter on the "PO amount in base unit" measure [46].
CT cr. billing document - transfer financial accounting	Cycle time (factory calendar): Creation of the first invoice (VBRP-ERDAT, VBRP-ERZET) until the first accounting document (BKPF-CPUDT, BKPF-CPUTM)
CT order- delivery	Cycle time (factory calendar): Entry of the first order or the first free delivery (VBAP-ERDAT, VBAP-ERZET) until entry of the first delivery (LIPS-ERDAT, LIPS-ERZET).
CT order- GI	Cycle time from entry of order item (VBFA-ERDAT/ERZET [AUFT]) to actual goods issue of delivery (LIKP-WADAT_IST)
CT order processing	Cycle time (factory calendar): Order processing time: Order date (VBAK-BSTDK) of the order or the free delivery until order entry or free delivery (VBAP-ERDAT, VBAP-ERZET)

Number of processors	Corresponds to the average number of different processors in the process instances
CT due - netting (last invoice)	Time span (factory calendar): Payment date until clearing date of earliest accounting document
CT picking - goods issue	Cycle time (to the day, factory calendar): Creation of the first picking order (VBFA-ERDAT, VBFA-ERZET) or until confirmation of the first WMS transport request (LTAP-QDATU, LTAP-QZEIT) until the first goods issue date of the delivery (LIKP-WADAT_IST).
CT del. - picking (KI_DLZ_LF_KOM)	Cycle time (factory calendar): Creation of the first delivery (LIPS-ERDAT, LIPS-ERZET) until the first picking order (VBFA-ERDAT, VBFA-ERZET) or the first confirmation of a WMS transport request (LTAP-QDATU, LTAP-QZEIT)
CT del. - transp.	Cycle time (factory calendar): Entry of the first delivery (LIPS-ERDAT, LIPS-ERZET) until the end of the first transport process (VTTP-ERDAT, VTTP-ERZET).
CT del. - WMS	Cycle time (factory calendar): Entry of the first delivery (LIPS-ERDAT, LIPS-ERZET) until creation of the first WMS transport request (LTAK-BDATU, LTAK-BZEIT)
CT delivery - GI	Cycle time (to the day, factory calendar): Entry of first delivery (LIPS-ERDAT, LIPS-ERZET) until the last planned goods issue date (latest: VBEP-WADAT) in the order
CT invoice - netting (last invoice)	Time span (factory calendar): Payment date until clearing date of earliest accounting document
CT invoice - due (last invoice)	Time span (factory calendar): Payment date until cash discount due date
CT GI - invoice	Cycle time (factory calendar): First goods issue date of the delivery (LIKP-WADAT_IST) until creation of the first invoice (VBRP-ERDAT, VBRP-ERZET)
CT GI - GR	Cycle time (to the day, factory calendar): First goods issue (MKPF-BUDAT) until first goods issue (MKPF-BUDAT)
CT WMS - transp.	Cycle time (factory calendar): Creation of the first WMS transport request (LTAK-BDATU, LTAK-BZEIT) until the end of the first transport process (VTTP-ERDAT, VTTP-ERZET).
Delivery capability (deviation)	Delivery capability quality measure (factory calendar); that is, latest desired schedule line date or free delivery (VBEP-EDATU, VBEP-EZEIT) with desired volume unequal to zero) until first confirmed schedule line time of the order or the free delivery (VBEP-EDATU, VBEP-EZEIT) with desired volume zero); if this time span is negative, the value is set to 0.
Delivery capability ratio	Delivery capability measure in percent
Delivery quantity	Delivery quantity: Sum of delivery quantities (LIPS-LFIMG) of the delivery, batch, and returns items
Delivery reliability (GI deviation confirmed)	GI delivery reliability quality measure: Non-negative time span between the last goods issue date of the delivery (LIKP-WADAT_IST) and the last planned goods issue (latest: VBEP-WADAT of an order) in the free delivery. If free delivery does not exist, order schedule lines are used.
Delivery reliability rate (GI confirmed)	Delivery reliability (GI deviation confirmed) in percent
Quantity reliability (deviation confirmed)	Difference from sum of delivery quantities and the confirmed quantity in order
Quantity reliability (deviation of request)	Quantity reliability (deviation of request) measure: Sum of delivery quantities (LIPS-LFIMG) of the delivery, batch, and return items minus the sum of desired delivery quantities (VBAP-KWMENG) of the order items and free delivery items
Net value order	Net value order (VBAP-NETWR)
Net value invoice	Net invoice value: Sum of net values (VBRP-NETWR) of invoices minus the net value (VBRP-NETWR) of the canceled invoices
Number of processes	Corresponds to the number of process instances.
Process cycle time (factory calendar)	Corresponds to the period between the start time of the first function and the end time of the last function of a process instance considering the factory calendar
Process cycle time	Corresponds to the time span between the start time of the first function and the end time of the last function of a process instance
Time span order lead	Cycle time (to the day, factory calendar): Order date (VBAK-BSTDK) of the first order or the first free delivery until the first desired schedule line date of the order or the free delivery (VBEP-EDATU, VBEP-EZEIT) with desired volume unequal to zero

For the **Transportation planning process** process type only:

Number of shipment items	Number of shipment items

More process measures

Returns rate

5.3.2. Function measures

Number of processors	Corresponds to the average number of processors who have executed a function within the set of process instances being analyzed.
PO amount in base unit	PO amount in base unit (only at the **Create purchase order item** function), or the negated PO amount in base unit (only at the **Cancel purchase order item** function; only included in PPM Content Package for SAP MM). The sum is created when the measure is aggregated. When using the measure, please refer to the chapter on the "PO amount in base unit" measure [46].
CT due - netting	Longest time span (factory calendar): Cash discount due date until clearing date of earliest accounting document
CT invoice - netting	Time span (factory calendar): Payment date (VBRK-FKDAT) until clearing date of earliest accounting document (BSEG-AUGDT)
CT invoice - due	Time span (factory calendar): Payment date (VBRK-FKDAT) until cash discount due date
Cycle time (factory calendar)	Corresponds to the time span between the start time and the end time of the function being analyzed considering the factory calendar
Cycle time	Corresponds to the time span between the start time and the end time of the function being analyzed
Number of functions	Corresponds to the sum of the occurrences of a function in the process instances being analyzed
Volume (function)	Volume (VBAP-KBMENG, LIPS-LFIMG, MSEG-ERFMG, EKPO-MENGE, LTAP-NISTM)
Net value (function)	Net value (VBAP-NETWR, VBRP-NETWR, LIPS-NETWR, EKPO-NETWR)

Further function measures

Function in process processing frequency

5.3.3. Process dimensions

- ABC indicators (MARC-MAABC)
- Reason for rejection (VBAP-ABGRU)
- Reason for investment (VBAK-AUGRU)
- Sold-to party [country]
- Order currency
- Base unit (purchase order)
- Document number
- Order type customer (VBKD-BSARK)
- Company code billing
- Company code for sales organization (TVKO-BUKRS)
- Company code for plant (T001K-BUKRS)
- MRP controller [plant]

- End time
- Flag: Delete merge keys
- In full indicator (confirmed)
- Incoterms
- Netting indicator (last invoice)
- BOM item indicator
- Account assignment group customer (VBKD-KTGRD)
- Controlling area (VBAK-KOKRS)
- Sales district
- Customer group
- Unit of measure (delivery)
- Delivery block (VBAK-LIFSK)
- Material account assignment group (MVKE-KTGRM)
- Material
- Material type/material
- Material group
- Ontime indicator (confirmed)
- Product hierarchy
- Profit center (VBAP-PRCTR)
- Process type
- Checking group (MARC-MTVFP)
- Invoice currency (VBRK-WAERK)
- Division
- Sales office (VBAK-VKBUR)
- Sales unit
- Sales organization
- Sales position type
- Sales group (VBAK-VKGRP)
- Shipping condition
- Shipping point (LIKP-VSTEL)
- Sales document type
- Distribution channel
- Ship-to party [country]
- Material group
- Plant/storage location
- Plant
- Terms of payment order

For the **Stock transfer** process type group only:

- Order type purchase
- Purchasing organization

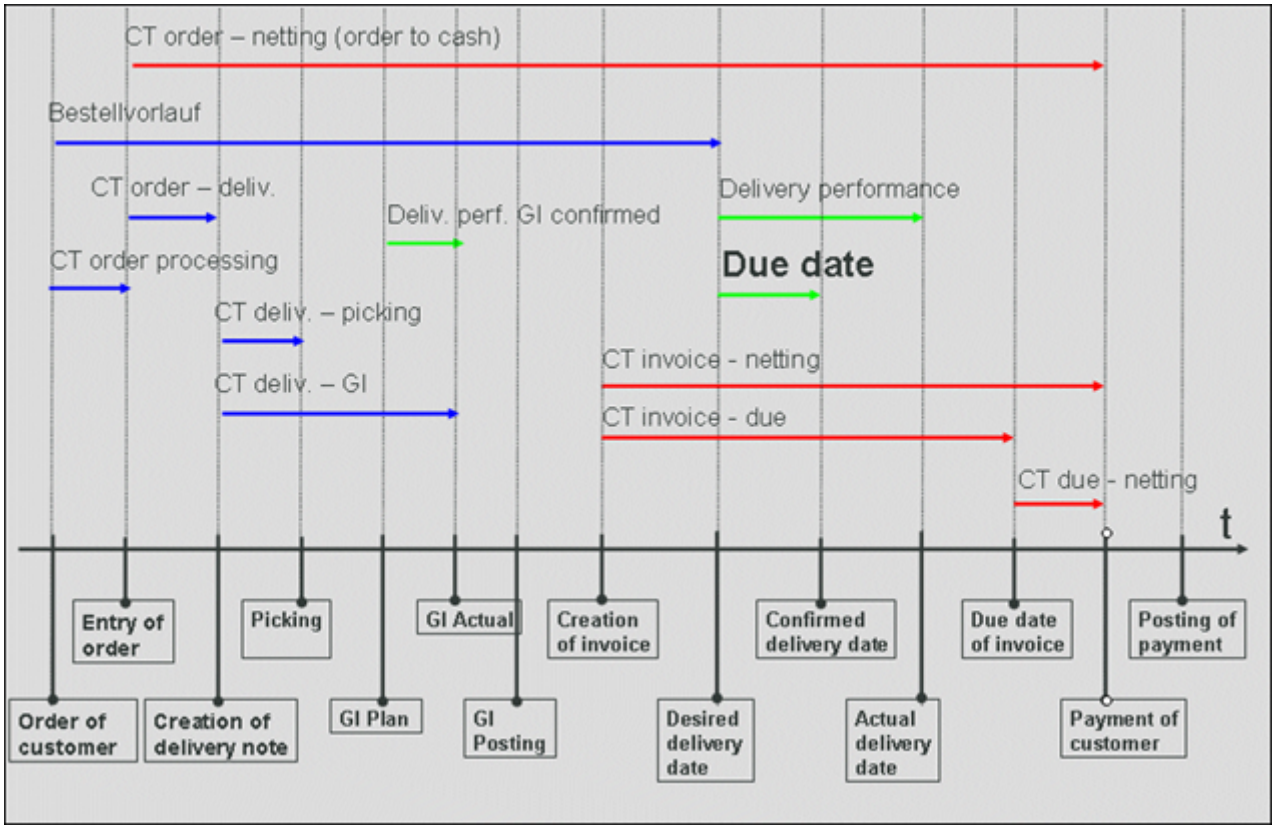
For the Transportation planning process process type only:

- Shipment type
- Shipping type transport

5.3.4. Function dimensions

- Base unit (purchase order)
- Processor
- Document type [sales document category]
- Movement type
- Schedule ID
- Function
- Function time
- Payment indicator
- Unit of measure (function)
- Item category
- Route
- Time of day
- Preceding document category (VBAP-VGTYP)
- Currency (function)
- Terms of payment

Overview of some time-based measures



5.4. "PO amount in base unit" measure

The function or process measure **PO amount in base unit** does not have a unit. You find the unit of the value in the function dimension or process dimension **Base unit (purchase order)**.

When using this in evaluations, please note that various base units exist, such as "kilogram" or "liter". This means that if you evaluate processes and functions regarding the **PO amount in base unit** measure, and the processes contain purchase orders for materials **A**, **B**, and **C**, the measure value **PO amount in base unit** of material A may have the unit **Pieces**, the measure value of material **B** may have the unit **Kilograms**, and the measure value of material **C** may have the unit **Liters**.

Therefore, an evaluation based on the **PO amount in base unit** should always be performed in combination with the **Base unit (purchase order)** dimension. In most cases it might also be useful to add the **Material** dimension.

The function measure **PO amount in base unit** for the function **Create purchase order item** (create_purchase_order_item) is calculated as follows:

- Is the table field **EKPO-LMEIN** empty or does it have the same value as the field **EKPO-MEINS**?
  Yes: The value from the table field **EKPO-MENGE** is used for the measure.
  No: The value of the table field **EKPO-MENGE** is multiplied by the value of the field **EKPO-UMREZ** and divided by the value of the field **EKPO-UMREN**.

If you select the first option, the PO amount already has the base unit. If you select the second option, the PO amount has a different unit and the PO amount must be multiplied with the conversion factor. The conversion factor is saved with numerator (EKPO-UMREZ) and denominator (EKPO-UMREN) for the purchase order document item.

The measure is calculated exactly as described above for the **Cancel purchase order item** function (cancel_purchase_order_item) and then negated. By default, the **Cancel purchase order item** function is generated in PPM Content Package for SAP MM only, not in PPM Content Package for SAP SD.

To calculate the **PO amount in base unit** process measure, the sum of the **PO amount in base unit** measures of all functions is created. The default value is **0.0**.

Following are two examples. The first shows the summed up process measure **PO amount in base unit** with the dimensions **Material** and **Base unit (Purchase order)**. The second contains the same dimensions as the first plus the **End time [By month]** dimension.

Example 1.

Example 1

Table		
PO amount in base unit	Base unit (Purchase order)	
Material	Piece (ST)	US pound (LB)
'Sophia I.' pizza, 3-pack (R100004)	249,924.000	
Basketball 'Professional' (R100011)	139,452.984	
Body lotion 'Alabaster' (R100014)	581,381.000	
Bottle 1.5 (R100022)	120.000	
Crate 12 bottles (R100023)	10.000	
Fauna margarine (R100001)	1,431,300.000	
Fitdrink 2000 (Can) (R100032)	3,605,928.000	
Hammer, 20 oz framing (R100010)	111,073.000	
Hexagon head screw ISO4017 M6x20-8.8-A1C (QS6X20)	15,000.000	
Hexagon head screw ISO4017 M8x20-8.8-A1C (QS8X20)	4,170.000	
Ladies' blouse, linen, 36, red (R100018001)	415.000	
Ladies' blouse, linen, 36 green (R100018002)	475.000	
Ladies' blouse, linen, 38, yellow (R100018004)	380.000	
Ladies' blouse, linen, 38 green (R100018003)	380.000	
Ladies' blouse, linen, 40, blue (R100018006)	510.000	
Ladies' blouse, linen, 40 yellow (R100018005)	390.000	
Lemonade 1.5 l bottle (R100003)	120.000	
Meyer's cream of mushroom soup (R100026)	1,310,609.000	
Meyer's goulash soup (R100027)	986,831.000	
Meyer's soup display (R100028)	2.000	
MEYER'S tomato soup (R100006)	306,568.000	
Net of oranges, 4 lb (R100007)	395,210.000	
Pepper (R100008)		269,120.000
RAVIOLI 'LA MAMMA' (R100005)	77,734.000	
Salami parma (R100002)		620,540.000
Screwdriver (cross-head) (R100009)	665,676.000	
Shampoo 'Splash' (R100013)	471,233.000	
Shirt 'Smart' (fl, 14,5, 0034, dark blue (R100019003)	415.000	
Shirt 'Smart' (flan, 15, 0034, dark blue (R100019004)	430.000	
Shirt 'Smart' (flannel,14,5, 0033, white (R100019002)	440.000	
Shirt 'Smart' (flannel), 14, 0033, white (R100019001)	355.000	
Skateboard 'Hells Bells' (R100012)	15,705.000	
Tuner X300 (R100016)	12,316.000	
Yoghurt all natural (R100000)	2,922,620.000	

Example 2

Table		
PO amount in base unit		Base unit (Purchase order)
Material	End time [By month]	Piece (ST)
Fitdrink 2000 (Can) (R100032)	Jun 99	15,024.000
	Jul 99	126,600.000
	Aug 99	133,944.000
	Sep 99	127,800.000
	Oct 99	121,752.000
	Nov 99	113,184.000
	Dec 99	127,800.000
	Jan 00	115,656.000
	Feb 00	120,528.000
	Mar 00	121,752.000
	Apr 00	120,528.000
	May 00	122,952.000
	Jun 00	122,952.000
	Jul 00	129,024.000
	Aug 00	121,752.000
	Sep 00	127,800.000
	Jan 01	115,656.000
	Feb 01	263,376.000
	Mar 01	121,752.000
	Apr 01	120,528.000
	May 01	122,952.000
	Jun 01	122,952.000
	Jul 01	129,024.000
	Aug 01	121,752.000
	Sep 01	42,456.000
	Oct 01	121,752.000
	Nov 01	113,184.000
	Dec 01	143,712.000
	Jan 02	77,256.000
	Feb 02	120,528.000

5.5. Documentation

In PPM CTK, you can generate detailed documentation for the configurations of your PPM client, which you have created on the basis of PPM Content Package for SAP/SD. The **Create client documentation** program extracts the most important XML configuration files for PPM and creates documentation in the form of HTML pages. The application is available in the **Programs** component of the **Client** module. The files of your documentation are saved under **<installation directory>\ppm\server\bin\work\data_ppm\custom\<client>\docu**.

You can document the configuration of the following elements of your client:

- Process type
- Measures
- User-defined measures
- Dimensions
- Functions
- Attributes
- Calculated attributes (incl. calculation rule)
- Process instance-independent measures
- Relations

6. Support and legal information

This section provides you with some general information regarding product support and legal aspects.

6.1. Documentation scope

The information provided describes the settings and features as they were at the time of publishing. Since documentation and software are subject to different production cycles, the description of settings and features may differ from actual settings and features. Information about discrepancies is provided in the Release Notes that accompany the product. Please read the Release Notes and take the information into account when installing, setting up, and using the product.

If you want to install technical and/or business system functions without using the consulting services provided by SAG ARIS GmbH, you require extensive knowledge of the system to be installed, its intended purpose, the target systems, and their various dependencies. Due to the number of platforms and interdependent hardware and software configurations, we can describe only specific installations. It is not possible to document all settings and dependencies.

When you combine various technologies, please observe the manufacturers' instructions, particularly announcements concerning releases on their Internet pages. We cannot guarantee proper functioning and installation of approved third-party systems and do not support them. Always follow the instructions provided in the installation manuals of the relevant manufacturers. If you experience difficulties, please contact the relevant manufacturer.

If you need help installing third-party systems, contact your local ARIS sales organization. Please note that this type of manufacturer-specific or customer-specific customization is not covered by the standard ARIS software maintenance agreement and can be performed only on special request and agreement.

6.2. Support

Product support

We provide support for ARIS products to all customers with a valid support contract.

Information on product version availability and support, as well as sustained support dates, is available at ARIS Community.

Contact our Global Support services at ARIS Community to raise and update support incidents, or post ideas and feature requests.

Community

Register with ARIS Community to download products, updates and fixes, find expert information, and interact with other users.

Documentation

For information on how to use and activate products and for other technical support questions, visit the ARIS Documentation website.

If you want to give feedback on any documentation topic, write to documentation@aris.com.

6.3. Legal notices

This document applies to ARIS Process Performance Manager Version 10 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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