



# Difference Between S/4HANA & ECC-Sales and Distribution



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- Selection of document header data and document header status requires one SELECT statement (VBAK) instead of two SELECT statements (VBAK and VBUK). Similarly for the item tables.

o Simplified document flow

- Extension of Sales document category (Data element VBTYP) from Char1 to Char4
- Only direct relationships are stored, not indirect relationship (STUFE) in initial release of S/4HANA
- Indirect relationship with STUFE (Level of the document flow record) restored for the purpose of Archiving in later release of /4HANA
- Fewer aggregate table

There is a new database table PRCD\_ELEMENTS for pricing conditions to replace earlier cluster table KONV of SAP ECC. New table is a transparent table, hence can be accessed directly and has several extensions in its data elements and fields as shown in below image (copied from SAP note 2220005).

| Data Elements                         | Description  | Former Length | New Length | Remark  |
|---------------------------------------|--|---------------|------------|---|
| KOLNR, EVSNR, FSELNR                  | Number of Access in Access sequence                                      | NUMC2         | NUMC3      | Active  |
| DZAEHK, DZAEHK_IND, DZAEKO, BBP_ZAEHK | Condition Counter in Pricing Result                                      | NUMC2         | NUMC3      | Length is still restricted in Coding to NUMC2 to allow exchange with SAP Business Suite. This might change in the future. |
| KOBED, KOFRM, KOFRA, KOFRS            | Pricing Formula & Requirement Number                                     | NUMC3         | NUMC7      | Restriction to NUMC3 in VOFM routines still in place  |
| GRLNR                                 | Group condition routine  | NUMC2         | NUMC7      | Restriction to NUMC2 still in place.  |
| KALKS, KALVG                          | Customer and document classification for pricing procedure determination | CHAR1         | CHAR2      | Active  |

| Field   | Description                            | Length in KONV | Length in PRCD_ELEMENTS |
|---------|--|----------------|-------------------------|
| KRECH   | Calculation type for conditions        | CHAR 1         | CHAR 3                  |
| KAWRT   | Condition Base Value                   | CURR 15.2      | DEC 24.9                |
| KBETR   | Condition Rate                         | CURR 11.2      | DEC 24.9                |
| KUMZA   | Numerator for Converting to Base UoM   | DEC 5          | DEC 10                  |
| KUMNE   | Denominator for Converting to Base UoM | DEC 5          | DEC 10                  |
| KOPOS   | Sequential number of the condition     | NUMC 2         | NUMC 3                  |
| KWERT   | Condition Value                        | CURR 13.2      | CURR 15.2               |
| KSTBS   | Scale Base Value                       | CURR 15.2      | DEC 24.9                |
| KZBZG   | Scale Basis Indicator                  | CHAR 1         | CHAR 3                  |
| KWERT_K | Condition Value                        | CURR 13.2      | CURR 15.2               |
| KAWRT_K | Condition Base Value                   | CURR 15.2      | DEC 24.9                |
| KDATU   | Timestamp for Pricing Date             | DATS 8         | CHAR 14                 |

Extension of data elements and fields allow.

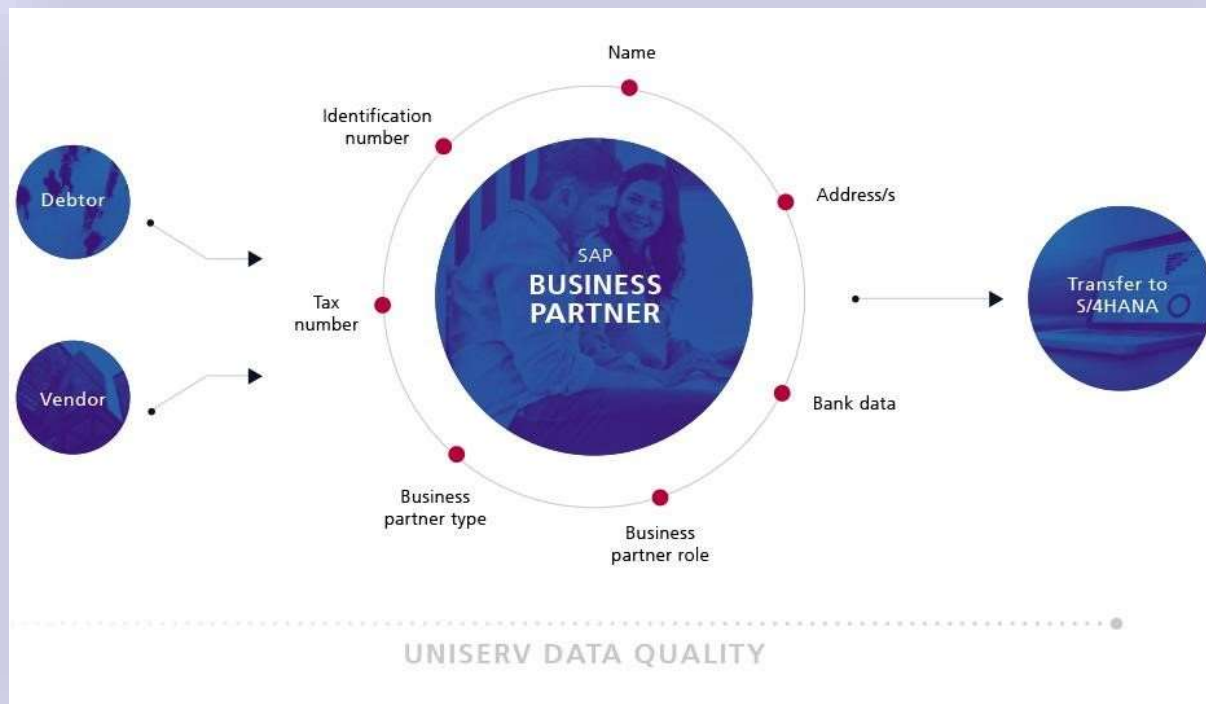
- More flexible pricing procedure determination
- possible number of customer condition table has been roughly doubled
- Possible accesses in access sequence table has been enhanced from 99 to 999
- The key of condition table (A Tables) can now be 255 characters long (previously 100)

### Business partner

Business partner (BP) is the single point of entry for creation, change and display of customer (as well as vendor) in S/4HANA. BP is a strategic object model in S/4HANA as shown in below image. Conversion of customer (and vendor) to BP is mandatory for conversion from ECC to S/4HANA. Refer SAP note 2265093 for more details on BP, its benefits and the recommended approach for conversion through Customer vendor integration (CVI).



Below image shows the data model for BP in S/4HANA. When a BP is created for a customer (or vendor) for General data, Sales organization and company code in S/4HANA , then those data also get stored in those old tables like KNA1 , KNVV and KNB1 respectively along with BP tables like BUT000 etc.



### Availability-to-promise (ATP)

S/4HANA has the same 'Available-to-promise (ATP)' functionality as in ECC. However, SAP has provided 'Advanced Available-to-promise' functionality in

S/4HANA which will be a successor of SAP APO Global ATP (GATP) as stated in SAP note 2456834.

This Advanced ATP provides very simple set up with fiori apps for advanced functionalities for Product allocation (PAL), Alternative based confirmation (ABC), Backorder processing (BOP) and Release for Delivery (RFD) as in below image.

Advanced Available-to-Promise (aATP) is a business function in SAP S/4HANA that provides a response to order fulfillment requests in Sales and Production Planning. An order fulfillment request consists of the required material, plant, requested quantity, and material availability date. The response to the request is based on the current stock situation and any future, anticipated or planned stock receipts and considers concurrent orders. Furthermore, additional restrictions based on any other order attributes (like region or customers) can be applied. The ATP function generates confirmation proposals for the requested material and plant, including confirmed quantities and dates.

### Customizing

The Customizing activities for advanced Available-to-Promise (aATP) can be reached from transaction ATP\_IMG or by navigating SAP Reference IMG CrossApplication Components Advanced Available-to-Promise (aATP).

### Features

For information about the features in advanced Available-to-Promise (aATP) in SAP S/4HANA, see:

- Product Availability Check (CA-ATP-PAC)
- Product Allocation (CA-ATP-PAL)
- Backorder Processing (CA-ATP-BOP)
- Supply Assignment (ARun)
- Alternative-Based Confirmation (CA-ATP-ABC)

- Supply Protection (SUP)
- Substitutions (CA-ATP-SUB)
- Object and Value Determination (CA-ATP-OVD)
- Supply Creation-Based Confirmation (CA-ATP-SBC)
- Data Management

With the advanced available-to-promise (ATP) capability in SAP S/4HANA, you (as a supplier) can offer a much better experience for your customer, using a product that is functional, fast, flexible, simple and integrated. This document gives an overview of the product as presented by SAP's Digital Supply Chain Director Sujeet Acharya during the 2019 SAP Sapphire Now Conference.

Making accurate delivery promises can be tricky for any business. Providing exact promise dates considering business constraints and profitability is the biggest challenge during supply shortage situations. This is where available-to-promise (ATP) comes in. ATP uses real time data to match supply with demand to provide feasible delivery promises and therefore improve customer satisfaction and service levels.

Basic ATP has been available in SAP ERP for quite some time, although it treated customers on a simple 'first come first served' basis and did not provide the level of functionality that some customers require. In the past, these customers had to rely on the module 'global available-to-promise (gATP)' within the secondary system SAP Advanced Planning and Optimization to fulfil their needs. Having to connect to the SAP SCM solution meant that simplicity suffered with gATP. Today, ATP is available in SAP S/4HANA On Premise as part of the digital core and is the same offering as SAP ECC ATP.

However, for customers who require more advanced functionality, SAP S/4HANA Supply Chain offers advanced ATP which is also part of the core solution, but for an additional license fee. This is completely new code line developed natively in SAP S/4HANA and there is no technical migration available from SAP APO gATP to SAP S/4HANA for advanced ATP:



Figure 1: SAP ATP Evolution

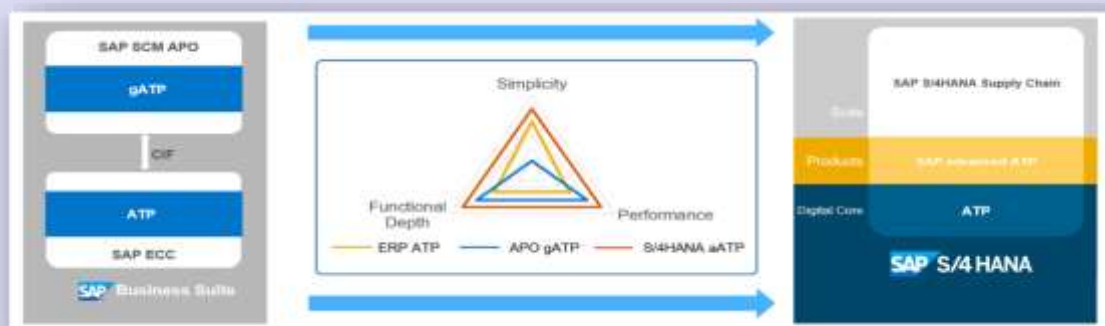
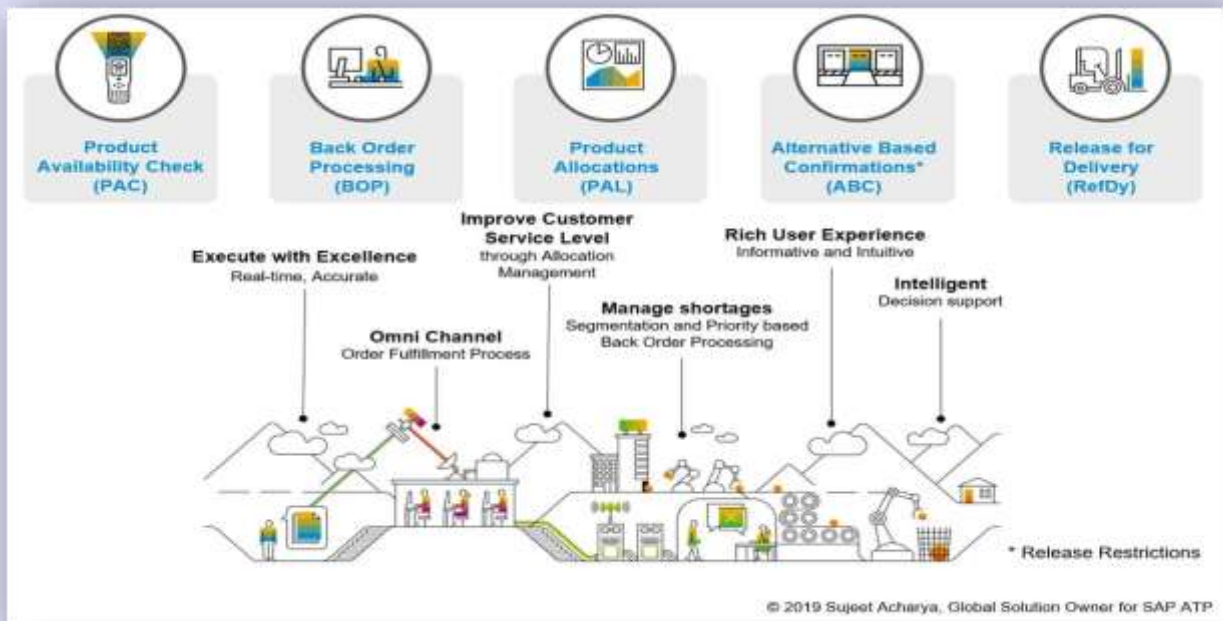


Figure 2: SAP S/4HANA – Suite 1809

|  | Sales & Marketing   | Finance   | Manufacturing   | Supply Chain  |
|--|---|---|---|---|
| <b>Sales &amp; Marketing Solutions**</b> | <ul style="list-style-type: none"> <li>SAP digital payments add-on</li> <li>SAP CRM</li> <li>SAP S/4HANA</li> <li>SAP Sales Cloud</li> <li>SAP Commerce Cloud</li> <li>SAP Marketing Cloud</li> </ul> | <ul style="list-style-type: none"> <li>Governance, risk, and compliance</li> <li>Financial services network</li> <li>SAP digital payments add-on</li> <li>SAP Cash Application</li> <li>Financial planning &amp; analysis</li> <li>SAP Analytics Cloud</li> <li>SAP Designer</li> </ul> | <ul style="list-style-type: none"> <li>Responsive manufacturing (ME, MI, QM, VE)</li> <li>Production operations (IRI, QM)</li> <li>Digital operations for manufacturing</li> </ul>  | <ul style="list-style-type: none"> <li>Integrated business planning</li> <li>Global batch traceability</li> <li>Extended warehouse management</li> <li>Transportation management</li> </ul>                 |
| <b>SAP S/4HANA LoB Solutions*</b>        | <ul style="list-style-type: none"> <li>Sales performance management</li> <li>Subscription billing and revenue management</li> </ul>   | <ul style="list-style-type: none"> <li>Advanced accounting &amp; financial close</li> <li>Advanced financial operations</li> <li>Treasury management</li> <li>Enterprise risk and compliance</li> <li>Commodity management</li> </ul>   | <ul style="list-style-type: none"> <li>Extended production planning and scheduling</li> <li>Complex manufacturing</li> </ul>  | <ul style="list-style-type: none"> <li>Advanced warehousing</li> <li>Advanced transportation</li> <li>Advanced order promising</li> </ul>   |
| <b>SAP S/4HANA Enterprise Management</b> | <ul style="list-style-type: none"> <li>Order and contract management</li> <li>Sales force support</li> </ul>  | <ul style="list-style-type: none"> <li>Accounting and financial close</li> <li>Financial operations</li> <li>Cost management &amp; profitability analysis</li> </ul>  | <ul style="list-style-type: none"> <li>Production planning</li> <li>Production operations</li> <li>Quality management</li> <li>Manufacturing insights</li> </ul>  | <ul style="list-style-type: none"> <li>Inventory</li> <li>Warehousing</li> <li>Shipping and transportation</li> <li>Order promising</li> </ul>  |
| <b>SAP S/4HANA LoB Solutions*</b>        | <ul style="list-style-type: none"> <li>Service master data and agreement management</li> <li>Service operations and processes</li> <li>Service parts management</li> </ul>                            | <ul style="list-style-type: none"> <li>Maintenance management</li> </ul>  | <ul style="list-style-type: none"> <li>Project control</li> <li>Product engineering</li> </ul>  | <ul style="list-style-type: none"> <li>Operational procurement</li> <li>Sourcing and contract management</li> <li>Supplier management</li> <li>Procurement analytics</li> <li>Invoice management</li> </ul> |
| <b>Sales &amp; Marketing Solutions**</b> | <ul style="list-style-type: none"> <li>SAP CRM</li> <li>SAP S/4HANA</li> <li>SAP Service Cloud</li> </ul>   | <ul style="list-style-type: none"> <li>Asset operations and maintenance</li> <li>Environment, health, and safety</li> </ul>   | <ul style="list-style-type: none"> <li>Enterprise portfolio and project management</li> <li>Product lifecycle management</li> <li>Product compliance</li> </ul>   | <ul style="list-style-type: none"> <li>Central procurement</li> </ul>   |
| <b>Service</b>                           | <ul style="list-style-type: none"> <li>Asset performance and intelligence</li> </ul>  | <ul style="list-style-type: none"> <li>Digital operations for R&amp;D</li> <li>Requirement management (RFC)</li> </ul>  | <ul style="list-style-type: none"> <li>Supplier collaboration</li> <li>Business network</li> <li>Guided end-user buying</li> <li>External workforce management</li> <li>SAP Ariba</li> <li>SAP Sourcing</li> <li>SAP Procurement</li> </ul> | <ul style="list-style-type: none"> <li>Core HR and time</li> </ul>  |
|  | <b>Asset Management</b>   | <b>R&amp;D / Engineering</b>  | <b>Sourcing &amp; Procurement</b>   | <b>Human Resources</b>  |

The functionality of advanced ATP is far easier to use and grouped into five parts, along with five separate acronyms to remember!

Figure 3: SAP S/4HANA for advanced ATP Functionalities and Value Proposition



1. Product Availability Check (PAC) is very similar to what was offered in basic ATP and gATP. It carries out the availability check for sales orders and stock transport orders and then provides an order promise date by checking all available stock in real time. This way, you promise only what you can deliver.

What is different in advanced ATP is the mass enablement feature whereby every line item within a sales order is checked in parallel, compared to sequential checks in basic ATP. This 'parallelization' greatly reduces the checking time for orders that have many line items. In the pipeline, an SAP Fiori based simulation and explanation tool for PAC is planned, along with the ability to take shelf life and product characteristics into consideration.

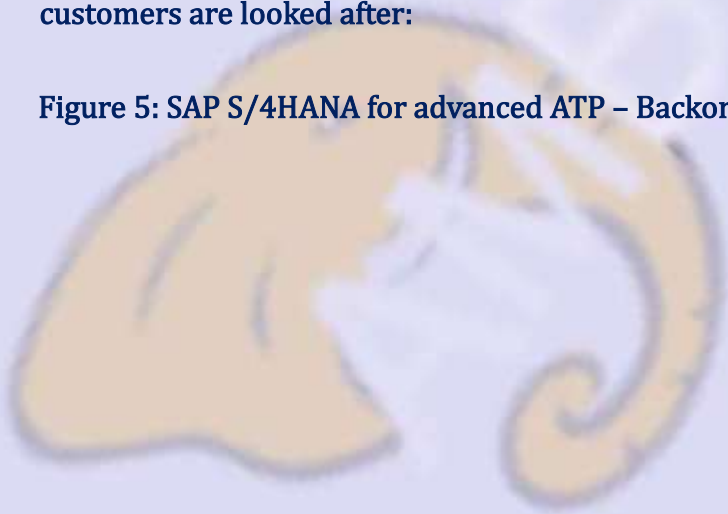
2. Backorder Processing (BOP) has been completely transformed in SAP S/4HANA and is far better than basic ATP when it comes to performance, flexible configuration and faster scheduling. BOP in SAP S/4HANA consists of four SAP Fiori Apps, that enable the user to configure BOP rules, setup and schedule BOP runs, and monitor the results of the BOP run:

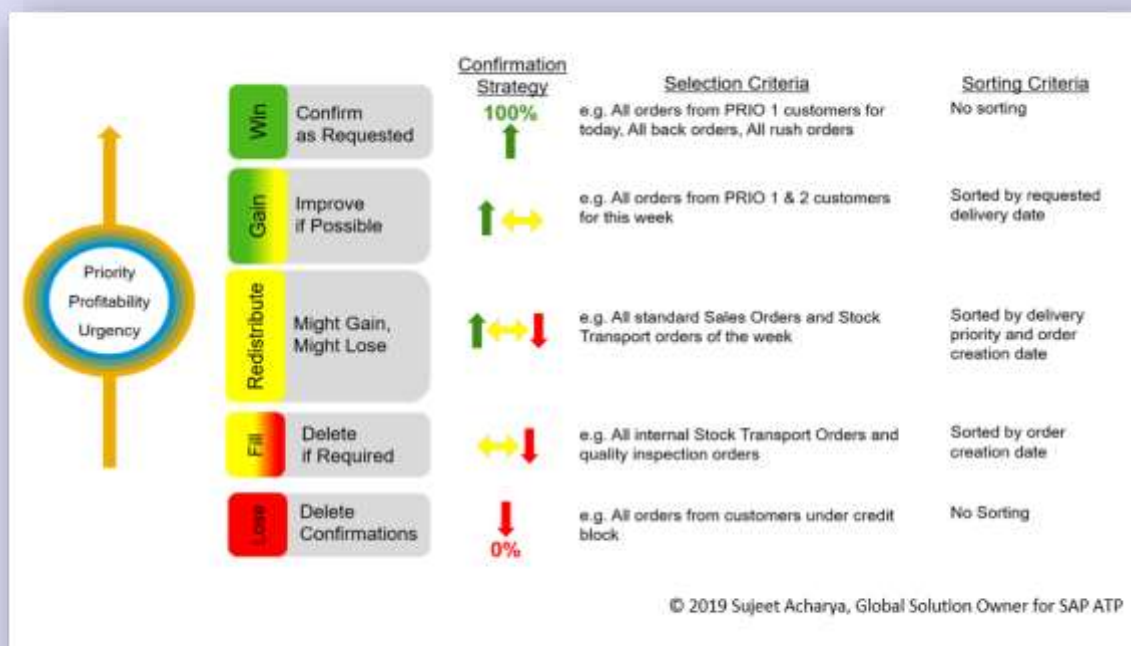
Figure 4: ATP – Backorder Processing



In advanced ATP the concept of requirement segmentation is used to adjust customer backorders depending on customer importance and the inventory situation. Orders are classified accordingly, and the image below shows how confirmed stock for an order can be a win, lose, gain, redistribution or fill for a customer. This way, the orders of 'lose' or 'fill' category customers will always have their allocations reassigned to higher priority orders and you can manage business priorities to ensure that your most important customers are looked after:

Figure 5: SAP S/4HANA for advanced ATP – Backorder Processing





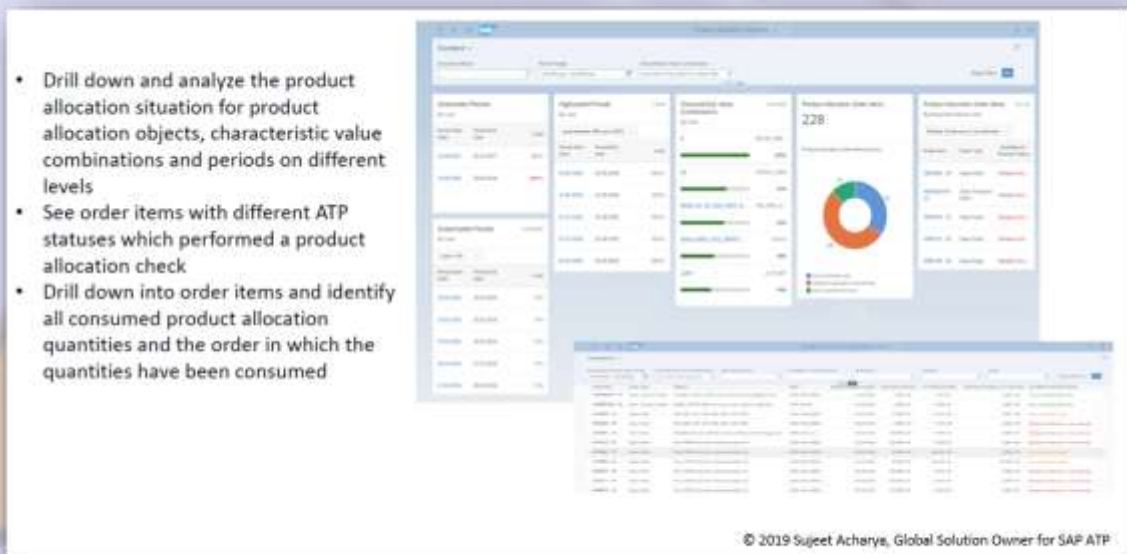
This backorder processing confirmation strategy will reduce headaches for supply chain executives who more often operate in multi-channel order fulfilment environments and deal with such prioritization issues on a daily basis. No more will back orders of high priority customers will be left unfilled while low priority orders get preference over high priority orders. You decide what the criteria or logic is behind each category and you can easily sort and filter by each customer segment.

You can also configure a fallback variant to optimize exception handling where you define a variant for BOP for automatic reschedule processing and rescheduling of materials when supply is short. In the background, an SAP Fiori based intuitive setup and result monitor will show the confirmation status and any processing issues that happened during the run. There is a new Supply Assignment (ARun) which was created with the fashion industry in mind to provide a fixed pegging between the supply and demand which is respected until the final delivery, and global filters to restrict product and location selection.

3. Product Allocation (PAL) is all about rationing or controlling a limited supply of products to certain customers. PAL was always available in basic ATP and gATP

and was extensively used by the consumer products, hi tech and fashion industry, for instance. With advanced ATP, the value proposition is much greater, with far fewer steps to configure product allocation making the setup process much simpler and allowing strict planning and control mechanisms. With advanced ATP, materials that are in short supply can be allocated to specific regions and customers for a specific period. This in turn, helps you to avoid critical situations in demand and procurement and prevents a situation where a material in low supply is all allocated to one customer, leaving others with none. There is also a Product Allocation Monitoring Cockpit (SAP Fiori app) that has been introduced with SAP S/4HANA 1809 to help you drill down and understand better the product allocation situation:

Figure 6: Product Allocation Overview: PAL Monitor



In future, more analytics is planned, along with capacity-based allocations and possibly direct integration with SAP Integrated Business Planning (IBP) for supply chain, where SAP S/4HANA can import the planned allocation from IBP.

4. Alternative-Based Confirmation (ABC) was known as 'rules-based ATP' in gATP. ABC functionality in advanced ATP comprises what is called 'location

substitution' or 'plant substitution' and is completely different from what went before. For example, in gATP location substitution happened in a sequential order, so if the order quantity was requested in location 1 and was not found there, we would move to location 2, location 3 and so on. The order would be confirmed when the first fit is found, even if that is not the 'best fit'. SAP S/4HANA for advanced ATP is different and takes 'best fit' into consideration. If the stock is not available in the requested delivery location, the system will search for the best alternative, considering all available alternatives and the criteria chosen.

### Credit management with FSCM

SAP had two system solutions for credit management – one is credit management (FI-AR-CR) with Sales & Distribution and another with Financial supply chain management (FIN-FSCM-CR) which has more advanced functionalities. In S/4HANA, FIN-FSCM-CR is mandatory to be used for credit management as stated in note 2270544.

Sales order blocked for credit can not be approved with ECC transaction code like VKM3.

A case with 'Documented credit decision' DCD is created in

S/4HANA which needs to be reviewed and approved by a Credit analyst. Sales rebate

with condition contract and settlement

Solution for Sales rebate has been simplified in S/4HANA with Condition contract & settlement.

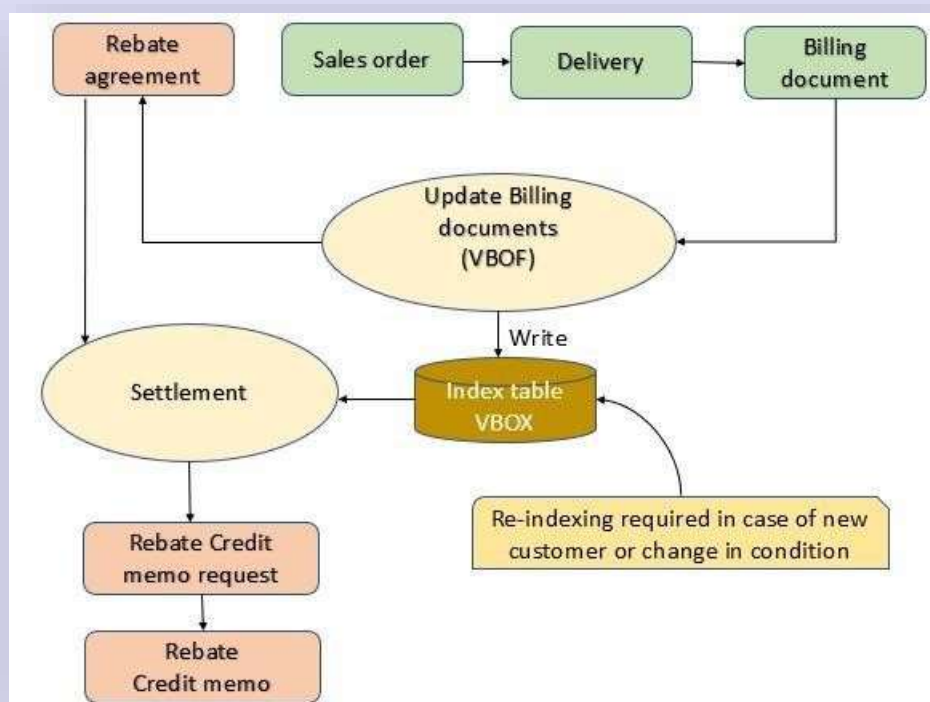
Rebate is a kind of discount paid to a customer retroactively. Generally, this discount is based on the customer's sales volume over a predefined time period and settled by credit notes at the end of the year. Accruals also generally calculated at regular intervals (monthly) for the amount that needs to be paid back to the customer . Below image shows a typical rebate scenario in which the rebate discount is applicable when the cumulative value of sales is above 50000. At the end of fourth month, the rebate has been calculated @4% on 2000(52000-50000) i.e 80 and considered as an accrual for that month. Total rebate for the year has been calculated as 3040.

| Rebate agreement |        | Discount scale |     |
|------------------|--------|----------------|-----|
| Period           | 1 year | 0-50000        | Nil |
|                  |        | 50000 & above  | 4%  |

| Sales History |                       |                             |                                |
|---------------|-----------------------|-----------------------------|--------------------------------|
| Month         | Sales per month Value | Cumulative value for period | Accrued discount for the month |
| 1             | 10000                 | 10000                       |                                |
| 2             | 15000                 | 25000                       |                                |
| 3             | 14000                 | 39000                       |                                |
| 4             | 13000                 | 52000                       | 80                             |
| 5             | 12000                 | 64000                       | 480                            |
| 6             | 11000                 | 75000                       | 440                            |
| 7             | 10000                 | 85000                       | 400                            |
| 8             | 9000                  | 94000                       | 360                            |
| 9             | 8000                  | 102000                      | 320                            |
| 10            | 7000                  | 109000                      | 280                            |
| 11            | 8000                  | 117000                      | 320                            |
| 12            | 9000                  | 126000                      | 360                            |
| <b>Total</b>  |                       | 126000                      | 3040                           |

The process flow diagram for Sales rebate in SAP ECC has been depicted in below image. After the creation of rebate agreement and billing document/s, Transaction VBOF (or program SDBONT06) needs to be run to update the corresponding sales volume in rebate agreement. Rebate is generally processed at regular intervals or at the end of the year. An Index table VBOX is used to link the rebate invoices to reduce the processing time. Finally, the rebate agreement is released for settlement and subsequent settlement creates debit memo request and debit memo to the customer.



Major limitations of the above rebate process in ECC are

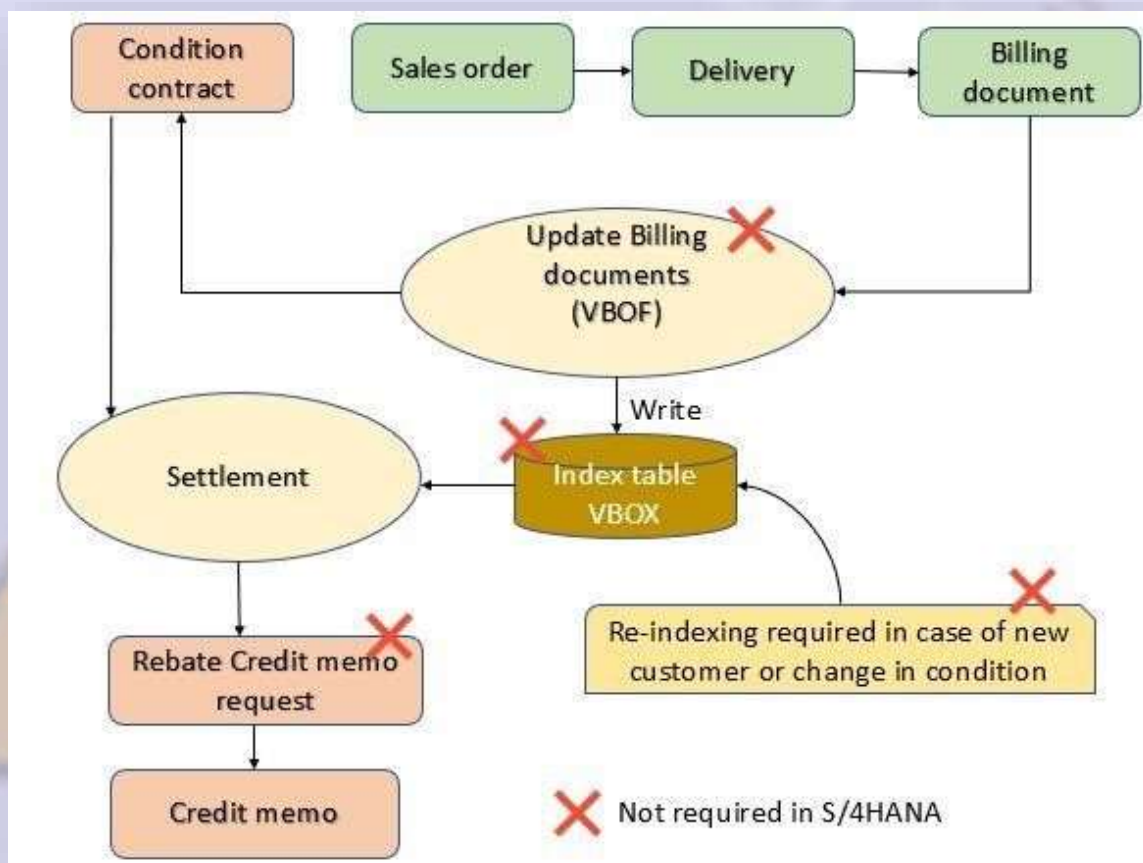
- Size of Index table VBOX can be very high (in the range of 2-5 TB), specially for Consumer goods company
- Re-indexing of table VBOX is required in case of new customers or change in rebate conditions
- Only rebate relevant customer sales documents can be processed

S/4HANA has simplified the rebate processing with the

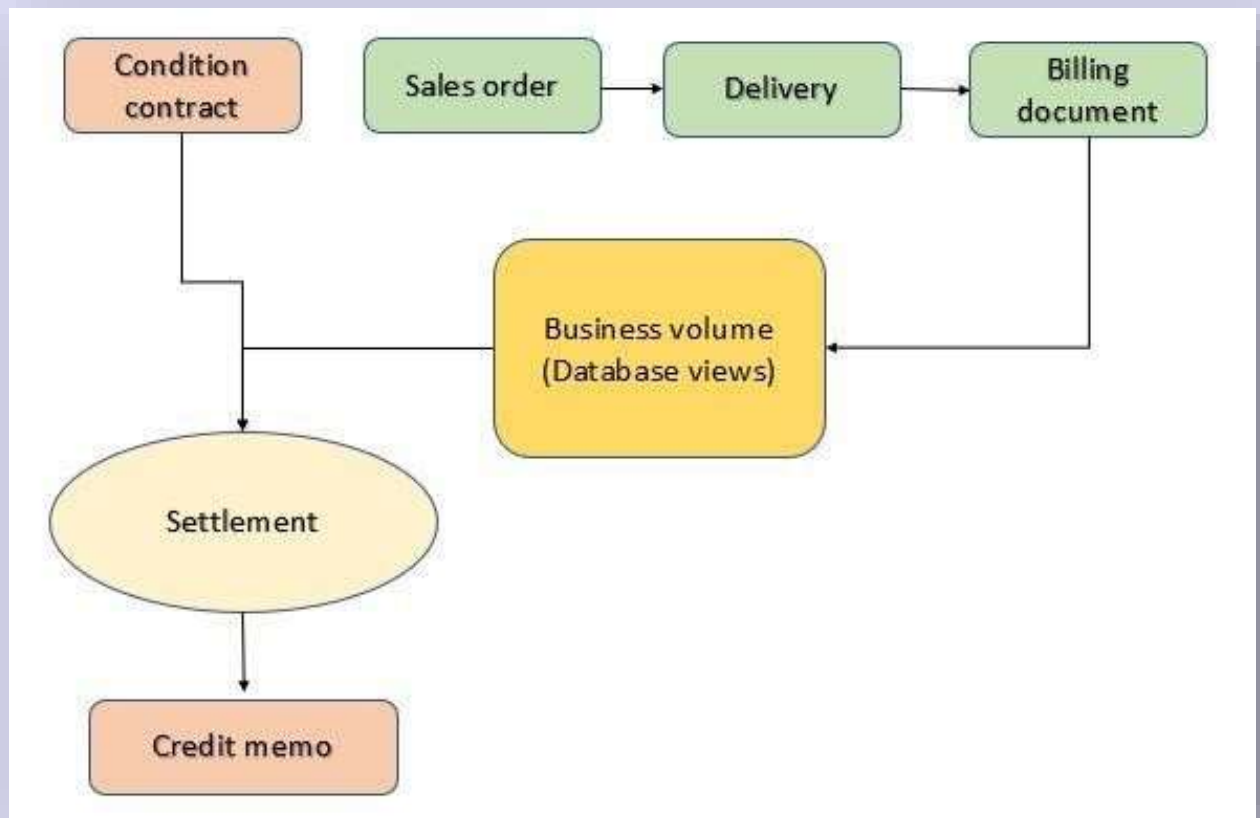
- Elimination of Index table
- In-memory HANA database with the capability to access and process the primary / billing documents directly
- Elimination of debit memo request
- Harmonization of rebate processing for 'Order to cash' and 'Procure to pay' scenarios



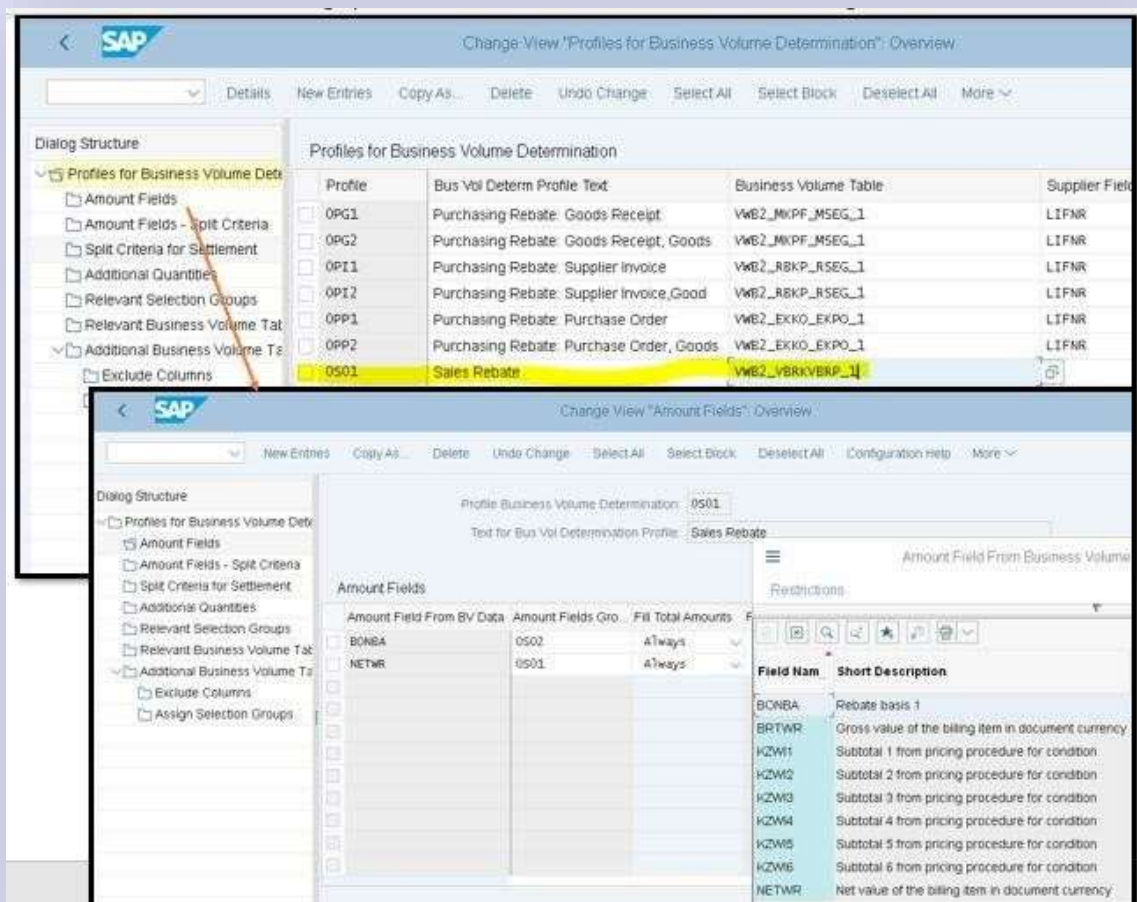
A Condition contract is created in S/4HANA instead of a rebate agreement as shown in below image. System now neither requires to update the billing document in rebate agreement (condition contract) nor separate tables (like VBOX as in case of ECC). HANA database now directly accesses the relevant (billing) documents and calculates the accrual values based on the accrual conditions of business volume for Condition contracts. Also, note that no credit memo request is created which is a further simplification. Settlement document directly creates credit memo along with corresponding financial accounting



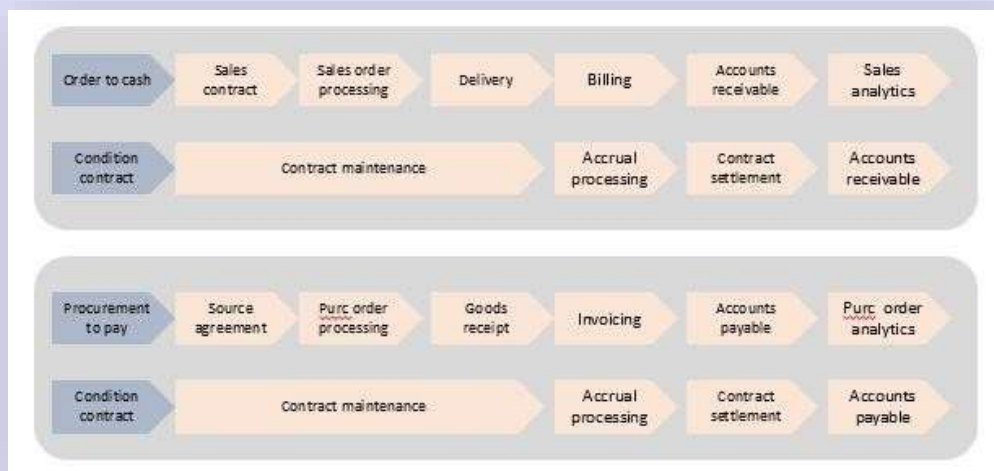
Simplified sales rebate flow with condition contract in S/4HANA is depicted in below image. Business volume is determined based on the parameters in condition contract and the relevant data is read directly from the corresponding business documents like billing documents for sales rebate.



The parameters for determination of business volume is also very much configurable (i.e not fixed ) in S/4HANA . Below image shows the standard configurations for business volume determination for Sales rebate OS01 which considers the fields BONBA (Rebate basis 1) and NETWR (Net value of billing item). If the gross value of billing item is more appropriate for a particular business scenario, then that can be achieved with standard configuration.



Another big advantage of rebate solution with condition contract is that it can be applied to vendor rebates as well (and many other scenarios like bonus , commissions etc). The process and system solution for rebates in Sales (Order to cash) and procurement (Procure to pay) is same as shown in below image.



Business benefits with new Rebate solution with Condition Contract have captured / summarized as below.

| ECC  | S/4HANA  | Business benefits         |
|--|--|---------------------------|
| Index table VBOX and statistical info table of high size   | No requirement of index or info table. SAP HANA directly accesses the primary documents(Billing documents) | Reduced data foot print   |
| Performance issues in update of billing documents in case of new pricing or retrospective agreements       | No such update required  | Lower TCO                 |
| High processing time for re-build of index table due to change in conditions, Retrospective agreements etc | No such update required  | Simpler business process  |
| Business volume determination on condition record  | Business volume is flexible and not determined on condition record   | Flexible business process |
| Does not support external data sources   | Supports external and multiple data sources  |                           |

Below images show a sales condition contract (1) , Delta accrual (2) and Partial settlement (3) in S/4HANA 1909 release. Settlements are carried as per the settlement

**Display Sales Rebate**

Condition Contract: 2000000001 **1** From: 01.01.2020 To: 12.05.2020

Customer: 10100001 Instandskunde DE 1

**Condition contract**

Complete Document Flow

- 11.05.2020 (Parial Settlement)
  - Credit Memo 7000000003 **3**
  - 11.05.2020 (Delta Accruals)
    - Credit Memo 7800000000 **2**
  - 12.05.2020 (Final Settlement)
    - Credit Memo 7000000004

Basic Data

Sales Organization: 1010 Dem: Sales Org DE  
 Distribution Channel: 10 Direct Sales  
 Division: 00 Product Division 00  
 Sales office:   
 Sales group:   
**Condition contract**

Condition Table: V4AB Condition Contract | 4 entries

| Condition type | Condition Type Description | Calculation Type | Condition Rate | Unit | Unit Uom | Valid From | Valid To   | Deleted |
|----------------|----------------------------|------------------|----------------|------|----------|------------|------------|---------|
| REA1           | Rebate Accruals            | Percentage       | 9,000          | %    |          | 13.05.2020 | 31.12.2020 |         |
| RES1           | Rebate                     | Percentage       | 9,000          | %    |          | 13.05.2020 | 31.12.2020 |         |
| RES1           | Rebate                     | Percentage       | 9,000          | %    |          | 01.01.2020 | 12.05.2020 |         |
| REA1           | Rebate Accruals            | Percentage       | 9,000          | %    |          | 01.01.2020 | 12.05.2020 |         |

**Display Sales Rebate Delta Accruals (0S40) 7800000000: Settlement Docu...**

Settlement Doc. Type: 0S42 Sales Rebate Delta Accruals **2**

Bill-to party: 10100001 Instandskunde DE 1 / L...

**Delta Accrual**

Accounting Data

Posting Date: 11.05.2020  
 Reference: 7800000000  
 Gross Credit Memo Amount: 900,00

List of Documents

| Document   | Object type text     |
|------------|----------------------|
| 0100000095 | Accounting document  |
| A000021500 | Controlling Document |

**Display Document: Data Entry View**

Document Number: 1000000095  
 Document Date: 11.05.2020  
 Reference: 7800000000  
 Currency: EUR

Company Code: 1010  
 Posting Date: 11.05.2020  
 Cross-Comp No.:  
 Texts Exist:

Fiscal Year: 2020  
 Period: 5  
 Ledger Group:

| Co.  | Item K. | SC Account | Description         | Amount  | Curr. | Tx |
|------|---------|------------|---------------------|---------|-------|----|
| 1010 | 1 40    | 44001000   | Sales Rebates       | 900,00  | EUR   |    |
|      | 2 50    | 21770000   | Accrd Volume Rebate | 900,00- | EUR   |    |



Display Sales Rebate (OS10) 7000000003 - Settlement Document Overview

Settlement Doc. Type: OS12 Sales Rebate Credit

3

Partial settlement

Accounting Data:

Posting Date: 11.05.2020

Reference: 7000000003

Documents in Accounting:

| Document   | Object type text     |
|------------|----------------------|
| 1600000003 | Accounting document  |
| A000021700 | Controlling Document |



Data Entry View

Document Number: 1600000003

Document Date: 11.05.2020

Reference: 7000000003

Currency: EUR

Company Code: 1010

Posting Date: 11.05.2020

Cross-Comp.No.:

Fiscal Year: 2020

Period: 5

Tests Exist:

Ledger Group:

| Co.  | Item | K. | SC Account | Description         | Amount  | Curr. | Tx. |
|------|------|----|------------|---------------------|---------|-------|-----|
| 1010 | 1    | 11 | 10100001   | Inlandskunde DE 1   | 900,00- | EUR   | A0  |
|      | 2    | 40 | 44001000   | Sales Rebates       | 900,00  | EUR   | A0  |
|      | 3    | 50 | 44001000   | Sales Rebates       | 900,00- | EUR   |     |
|      | 4    | 40 | 21770000   | Accrd Volume Rebate | 900,00  | EUR   |     |

Apart from sales rebate condition contracts (OS01), S/4HANA 1909 release has provided several kinds of sales scenarios with sales bonus, commission etc as shown in below image . Same is applicable also for vendor rebates (not shown in picture) .

| Condition Contract Types      |  | 1909 Release |
|-------------------------------|--|--------------|
| Contract Ty...                | Text                                     |              |
| <input type="checkbox"/> 0S01 | Sales Rebate                             |              |
| <input type="checkbox"/> 0S02 | Sales Rebate - Multiple Customers        |              |
| <input type="checkbox"/> 0S03 | Sales Rebate - 2Step                     |              |
| <input type="checkbox"/> 0S04 | Sales Rebate - Mult. Customers - 2Step   |              |
| <input type="checkbox"/> 0SG1 | Sales Rebate Goods Related               |              |
| <input type="checkbox"/> 0SG2 | Sales Rebate Goods Rel - Mult. Customers |              |
| <input type="checkbox"/> 0SG3 | Sales Rebate Goods Related - 2Step       |              |
| <input type="checkbox"/> 0SG4 | Sales Rebate Goods Rel- MultCust - 2Step |              |
| <input type="checkbox"/> 0ST1 | Sales Rebate TPM                         |              |
| <input type="checkbox"/> 0ST2 | Sales Rebate TPM - Multiple Customers    |              |
| <input type="checkbox"/> 0ST3 | Sales Rebate TPM with Claims             |              |
| <input type="checkbox"/> 0ST4 | Sales Rebate TPM with Claims - Mult Cust |              |
| <input type="checkbox"/> C001 | Sales Condition Contract                 |              |
| <input type="checkbox"/> C002 | Customer List                            |              |

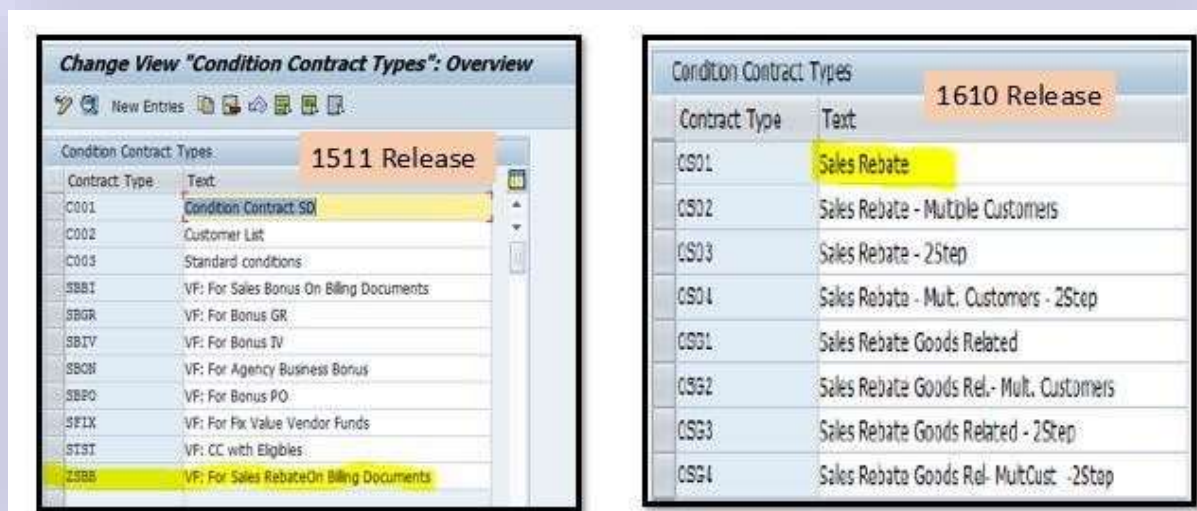
  

| Condition Contract Types      |  | 1909 Release |
|-------------------------------|--|--------------|
| Contract Type                 | Text                                     |              |
| <input type="checkbox"/> C003 | Standard Conditions                      |              |
| <input type="checkbox"/> SBBI | Sales Bonus Based On Billing Documents   |              |
| <input type="checkbox"/> SBGR | Purchase Bonus Based On Goods Receipt    |              |
| <input type="checkbox"/> SBIV | Purchase Bonus Based On Supplier Invoice |              |
| <input type="checkbox"/> SBON | Pooled Payment Bonus                     |              |
| <input type="checkbox"/> SBPO | Purchase Bonus Based On Purchase Ord..   |              |
| <input type="checkbox"/> SFIX | Fix Value Supplier Funds                 |              |
| <input type="checkbox"/> STST | Condition Contracts With Eligibles       |              |

| Condition Contract Types      |  | 1909 Release |
|-------------------------------|--|--------------|
| Contract Type                 | Text                                     |              |
| <input type="checkbox"/> 0CS1 | Commission External: Billing Document    |              |
| <input type="checkbox"/> 0CS2 | Commission External: Billing Doc, 2step  |              |
| <input type="checkbox"/> 0CS3 | Commission External: Billing Doc Paid    |              |
| <input type="checkbox"/> 0CS4 | Commission External: Bill Doc Paid,2step |              |

Rebate solution with condition contract was introduced initially in 1511 release of S/4HANA. Solution has matured and got extended for various scenarios in subsequent releases of S/4HANA. Below images show the condition contract types available in S/4HANA 1511 and 1610 releases. In fact, there was no SAP Standard condition contract type for typical 'Sales rebate' in 1511 release, I had to create a custom condition contract type ZSBB copying SBBI (condition contract type for sales bonus) and also do several configurations in pricing etc. Now in 1909 release, no (or very minimal) additional configuration is needed for a typical Sales rebate scenario condition contract type 0S01.



SAP has also provided very detailed and useful documents on White paper, process descriptions, configurations, FAQ etc with several notes like 2481672, 2815535, 2200691, 2267377, 2535889.

In my view, this new Rebate solution is one of the most significant simplifications in S/4HANA.

### Output management

SAP introduced new Output management (OM) in S/4HANA. Pros & cons of the OM has been depicted in below image.

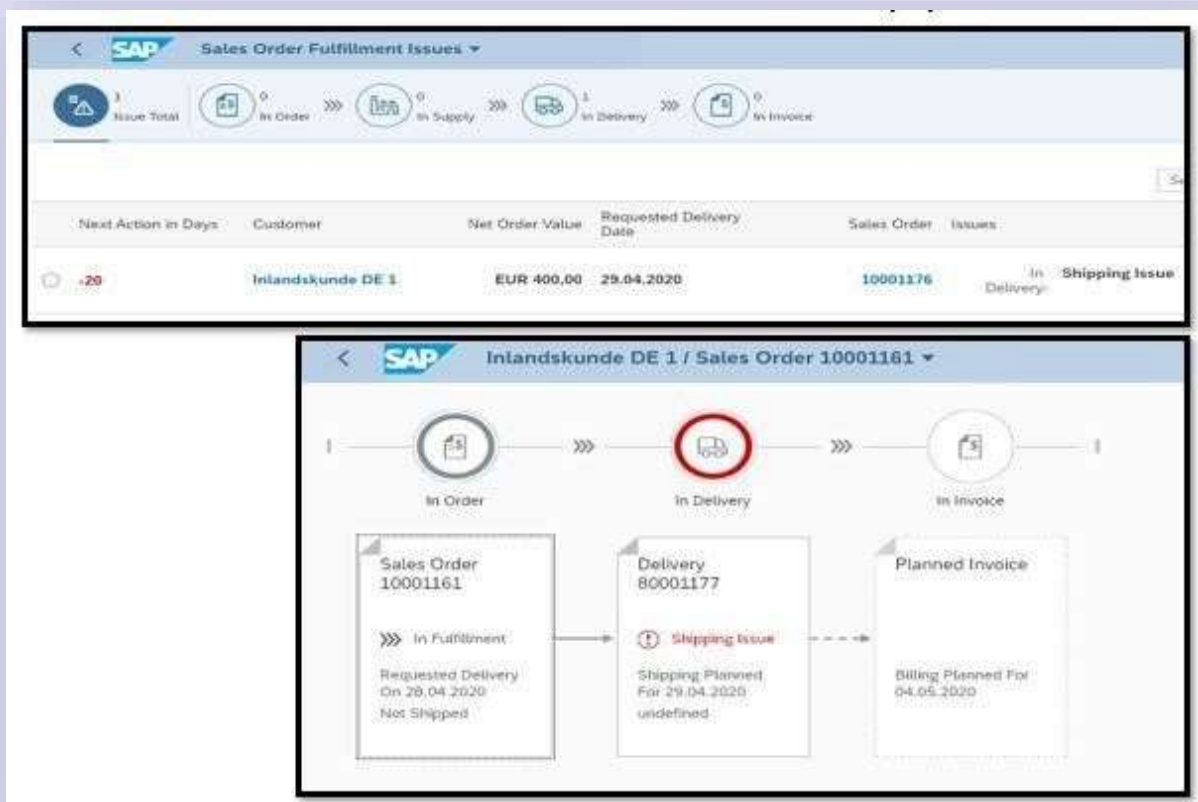


| Pros  | Cons  |
|---|---|
| <ul style="list-style-type: none"> <li>• Unified solution across SD, MM , FI etc</li> <li>• Same Look &amp; feel for business users &amp; administrators</li> <li>• Full integration with Fiori</li> <li>• BRF+ is powerful and flexible with benefits like               <ul style="list-style-type: none"> <li>➤ User can send multiple messages to multiple recipients using multiple channels at the same time</li> <li>➤ User can configure without ABAP development</li> <li>➤ User can use pre-delivered content / determination rules to allow running output control out of the box</li> <li>➤ Extensibility via CDS is supported</li> </ul> </li> </ul> | <p>Does not support following transmission medium (and NAST has to be used)</p> <ul style="list-style-type: none"> <li>▪ 8 Special functions</li> <li>▪ 9 Events (Business workflow)</li> <li>▪ A (ALE)</li> <li>▪ T Tasks (Business workflow)</li> </ul> |

As of S/4HANA 1909 release, both (new output management and traditional NAST output of ECC) are available i.e New Output management is optional, not mandatory to be used in S/4HANA. Refer SAP notes 2228611, 2470711 for more details.

### Fiori apps

Discussion on S/4HANA is never complete without Fiori apps. SAP has provided fiori apps like 'Sales order fullfilment' which will help the 'Order management' persons to analyse the issues with sales orders with easier navigation to process flows with issues in a sales order as in below image.

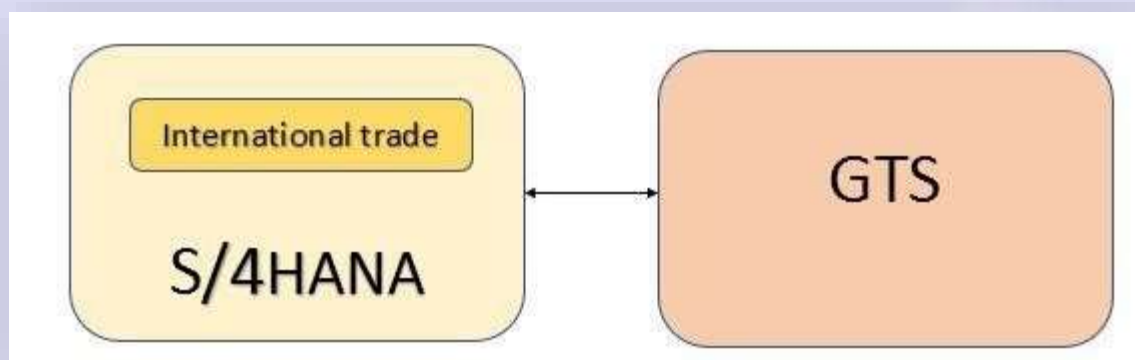


Many customers complain that there is no native fiori app for 'Creation of sales order' as of 1909 release of S/4HANA. It is in SAP's roadmap , hope to get that app in upcoming release. Understand from SAP that it is quite complex to combine various SAP standard Sales order types in a single fiori app and that is the reason for the delay.

### Foreign trade

SAP has deprecated ECC's Foreign trade (SD-FT) functionality. Hence, the Tables like EIKP and EIPO are redundant in S/4HANA as shown in first image of this. SAP recommended to use SAP's application Global trade services (GTS) to be used for foreign trade functionalities. However, SAP later introduced 'International trade' which can be used for Intra-stat and most of the export – import functionalities. Refer SAP notes 2223144, 2267310, 2839197 for more details.

SAP's GTS can also be interfaced for advanced functionalities like Preferential management, Free trade agreement etc with S/4HANA as in below image. As of 1909 release, SAP does not have any plan to embed GTS within S/4HANA.



SAP Variant configuration is intended for the manufacturing of complex products with many variants. During the order processing, you change the existing product designs. It's all about responding quickly to customer requirements.

The customer determines the features of the product. Think about buying a car, for example. You choose from a long list of options and combination possibilities, turning your car into a unique piece of value. For true car lovers, these are the days of glory!

Many industries use SAP Variant configuration: manufacturers of automobiles, hydraulic elevators, PCs, pumps, furniture, chemical adhesives, and so on.

Variant configuration helps the customer and the salesperson to obtain the correct price for the configured product. It also ensures that the product is manufacturable and does not contain impossible combinations.



### Features of Variant Configuration

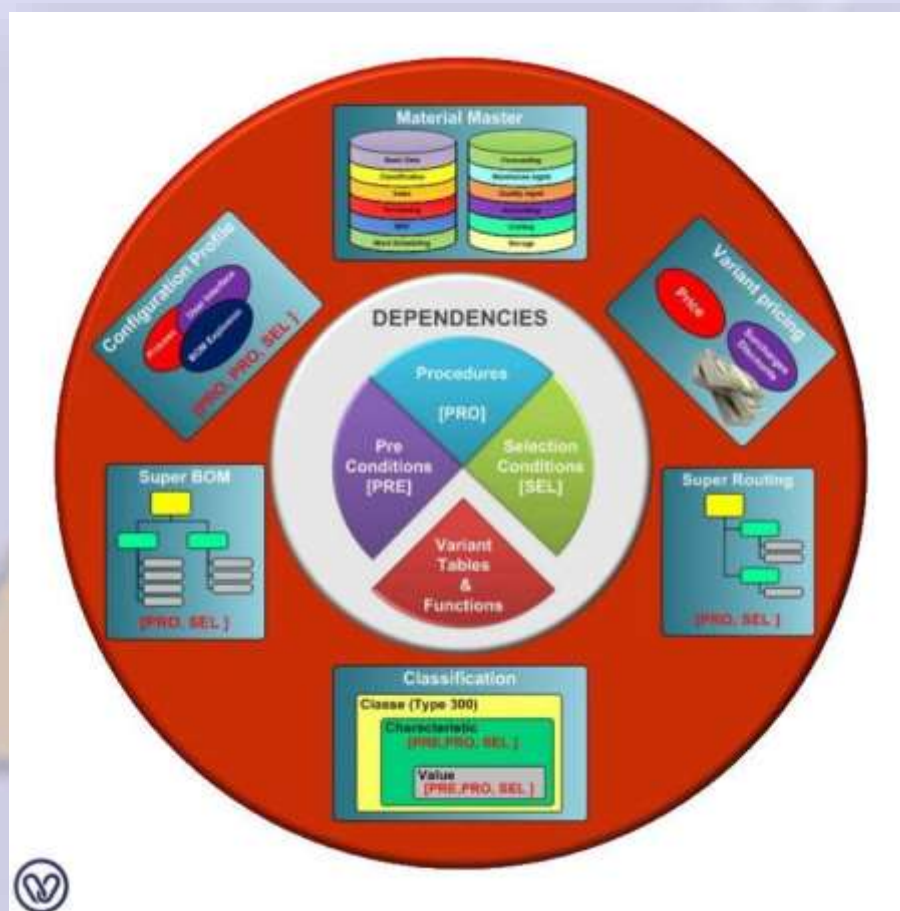
With Variant Configuration, you don't need to create a separate material for each variant. You use one configurable material that covers all possible variants. One super bill of material (BOM) and a super routing contain all the components and operations that you need to produce all variants.

The features of the configurable material are converted into characteristics with different values in the SAP system.



The customer can choose from different options (values) for each characteristic. The only limitations are combinations of features that are not possible for technical or marketing reasons. With dependencies, you control these limitations. Each configurable object must have a configuration profile. This ensures that the configuration process when creating a sales order is correct.

In some cases, the price of a variant depends on the chosen characteristic values. SAP Variant configuration covers this by using variant conditions to define surcharges and discounts for a variant.



### What's New in Advanced Variant Configuration in S/4HANA

S/4HANA incorporates the clever functionality of R/3 and adds some excellent extra features.

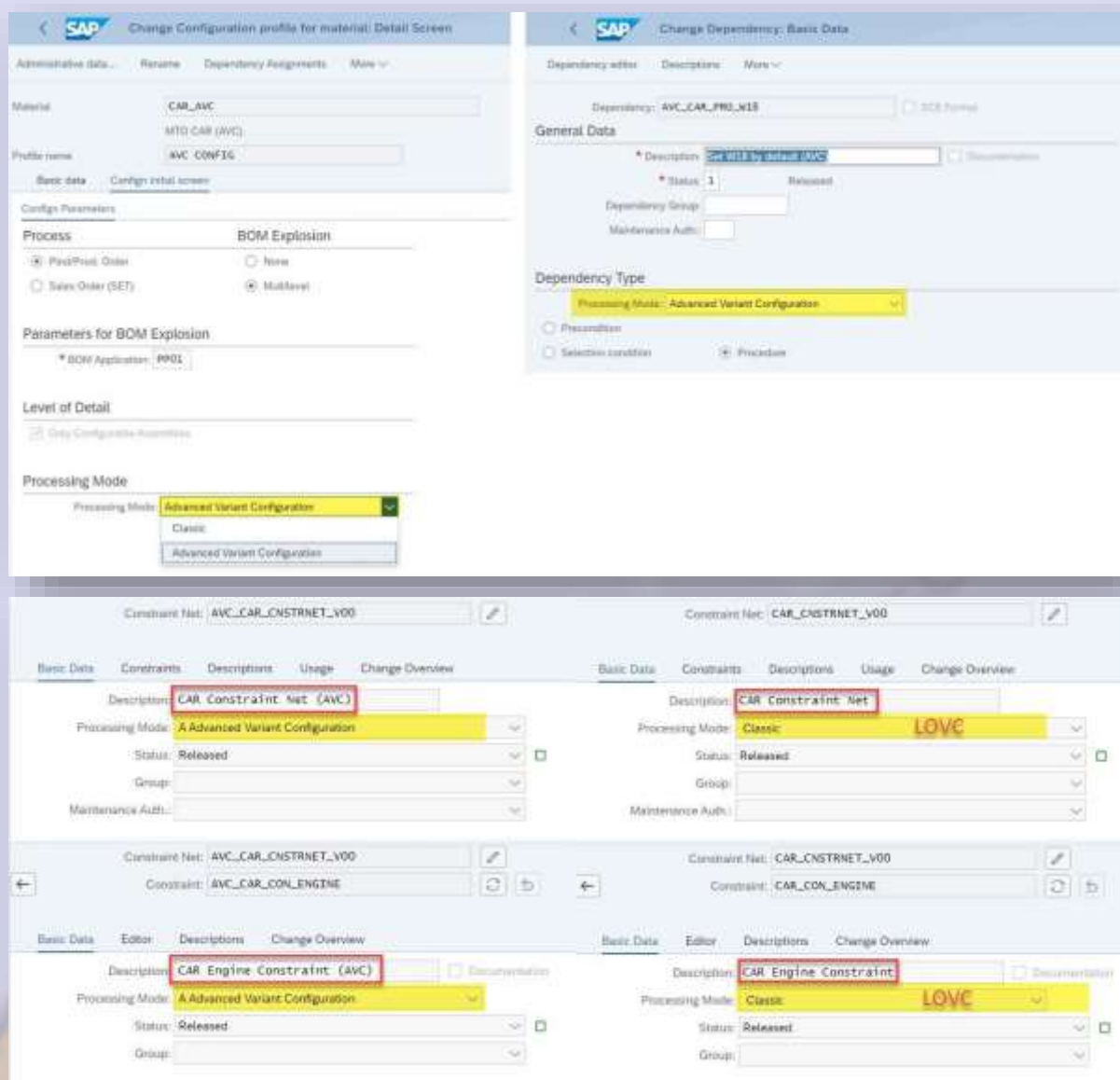
### Processing mode

An interesting new feature in S/4HANA is that it offers you an alternative way to process your configuration: Advanced Variant Configuration. This 'engine' gives new possibilities in high-level configuration.

You choose between two processing modes: the well-known Logistics General Variant Configuration (LO-VC) or the new Advanced Variant Configuration (AVC).

The decision is made via a new data object 'processing mode' that you specify in the configuration profile, dependencies, constraint nets and constraints. The processing mode of the constraint will be inherited from the constraint net.



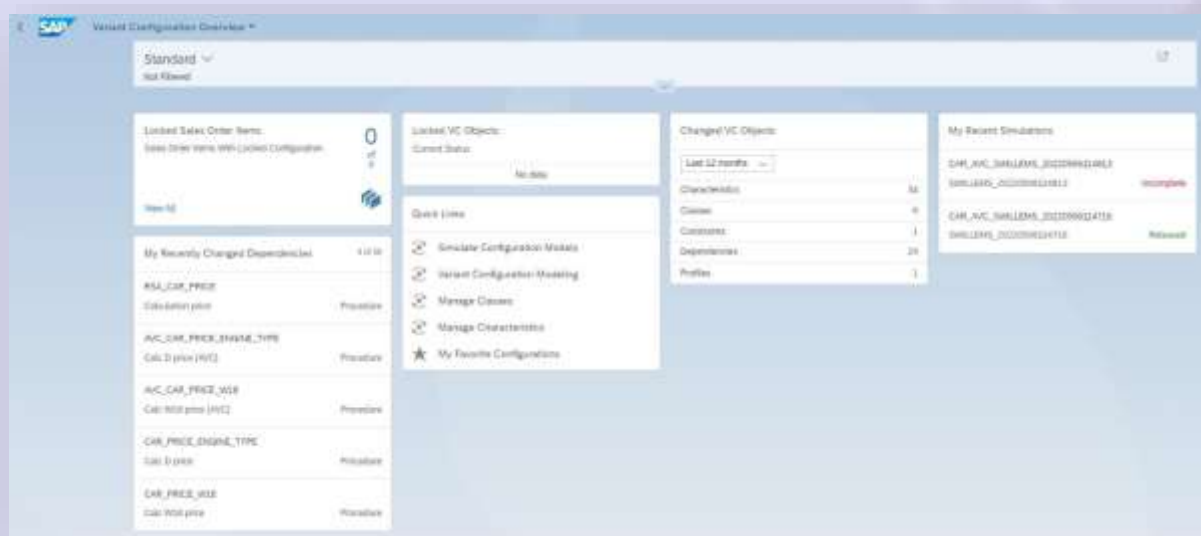


If you select Classic mode, the good old LO-VC engine will process the data model. With Advanced mode, the new AVC engine will.

A small remark: if you need object dependency for the super BOM and super routing in your low-level configuration, you still need to use the Classic processing mode. Selection condition to select BOM items or routing operations still uses the LO-VC processing mode. BOM items and routing operations are part of the low-level configuration. The new Advanced processing mode is used in the Product Variant Configurator for high-level configuration.

## New Fiori app – Variant Configuration overview

One of the new AVC features is the new overview page, only available in Fiori. As a product modeler, you can view and change all objects that are relevant for you.



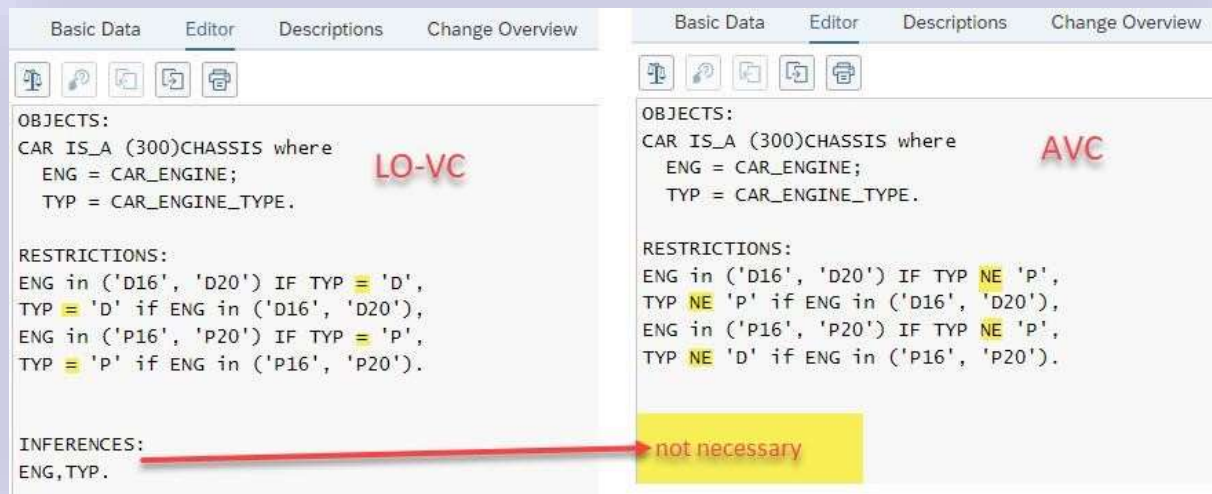
## Negative expressions

With AVC, you can now use negative expressions to restrict domains. In the LOVC engine, the concept of truth is important. A statement always needs to be true before it is processed. The LO-VC engine uses the Truth Maintenance System (TMS) for this purpose. The AVC engine does not use that system. TMS has been replaced by a new constraint solver and mathematical formulas. Therefore the truth principal is no longer critical.

In LO-VC, you have to list all values for which a certain condition is possible. In AVC you can now exclude the value for which the condition is not possible.

Also, the interference section is no longer needed in AVC: all characteristics will always be inferred, while in LO-VC you need to indicate which characteristics are inferred.

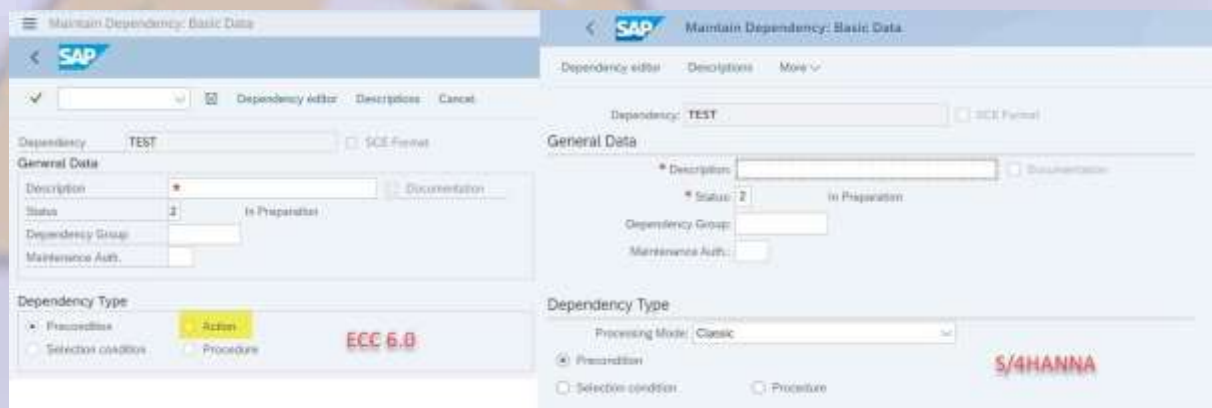




Actions have been removed

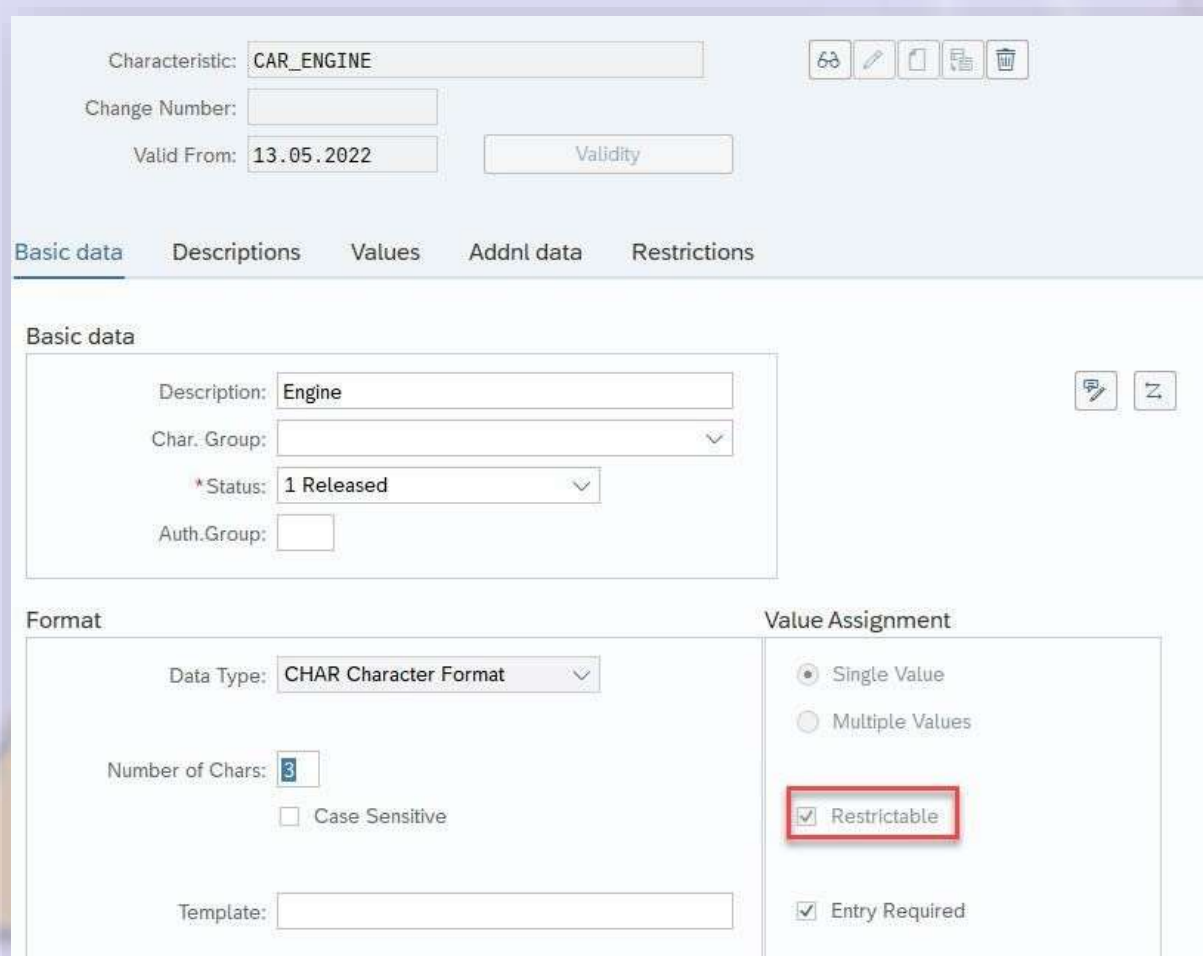
A long time ago, SAP announced that the dependency type 'Actions' was outdated. It was recommended to convert them into dependencies of type 'Procedure'.

In S/4HANA, the dependency type 'Actions' has been removed. Existing actions will still work, but you can't create new ones as a user.



## Multiple Characteristics can be restricted

In the LO-VC set-up, you had to flag all the characteristics you wanted to use in constraints as 'restrictable'. For multiple value characteristics, however, this is impossible. The only way to create restrictions on multiple value characteristics is by using preconditions.



The screenshot shows a configuration window for a characteristic named 'CAR\_ENGINE'. At the top, there are fields for 'Characteristic: CAR\_ENGINE', 'Change Number', and 'Valid From: 13.05.2022'. Below this is a tabbed interface with 'Basic data', 'Descriptions', 'Values', 'Addnl data', and 'Restrictions' tabs. The 'Basic data' tab is active, showing fields for 'Description: Engine', 'Char. Group', '\* Status: 1 Released', and 'Auth. Group'. Below the 'Basic data' section are two sub-sections: 'Format' and 'Value Assignment'. In the 'Format' section, 'Data Type' is set to 'CHAR Character Format', 'Number of Chars' is 3, and 'Case Sensitive' is unchecked. In the 'Value Assignment' section, 'Single Value' is selected, 'Multiple Values' is unselected, 'Restrictable' is checked (highlighted with a red box), and 'Entry Required' is checked.

In AVC ALL characteristics are considered 'restrictable'. You can now restrict multiple value characteristics by using them in constraints.

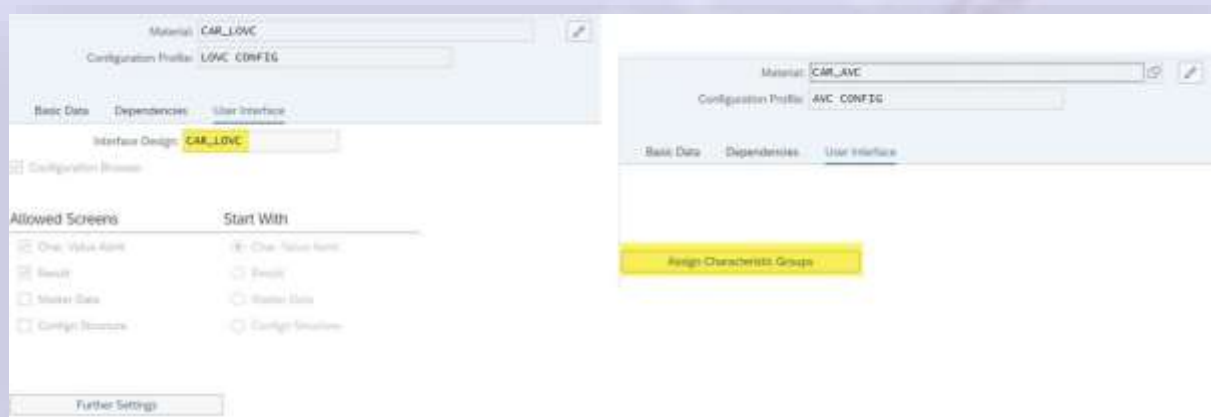
If you still want to use preconditions on values, this still works in AVC, but you need to check the configuration result via the simulation apps. I have read that users have experience issues, especially when using the SPECIFIED statement. This is because AVC

handles preconditions as constraints. As a result, it is no longer possible to control the order in which they are executed.

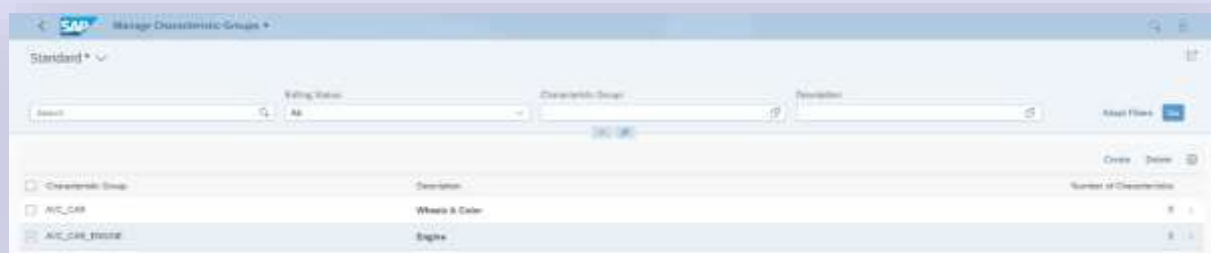
## Characteristic Groups

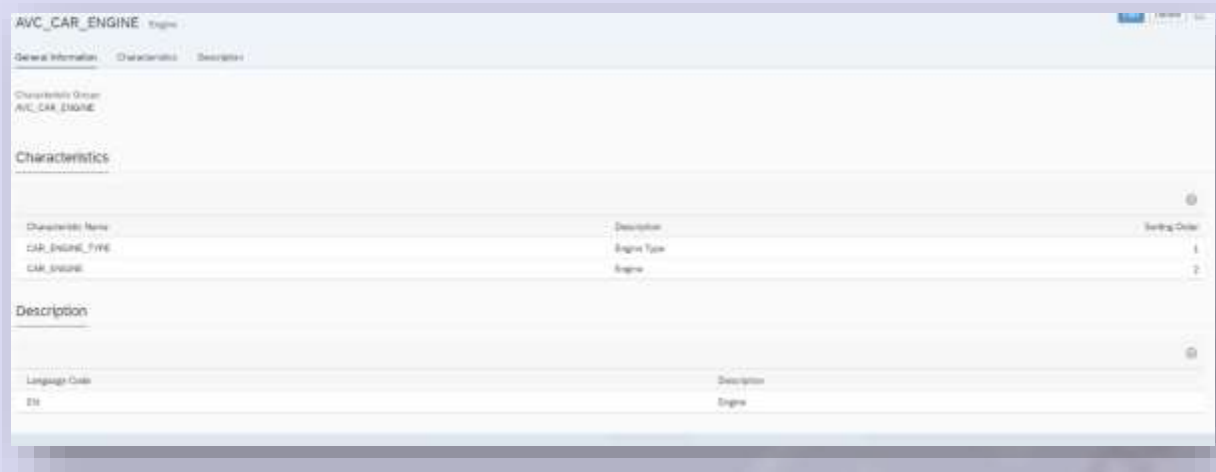
In order to keep a clear overview off all characteristics of a configurable material in the configurator, you can group them on several tab pages in LO-VC. The prerequisite is that you specify an interface design name in the configuration profile.

In AVC, a new master data object, 'Characteristics Groups', is available to achieve this. This makes it easier to design a user interface.

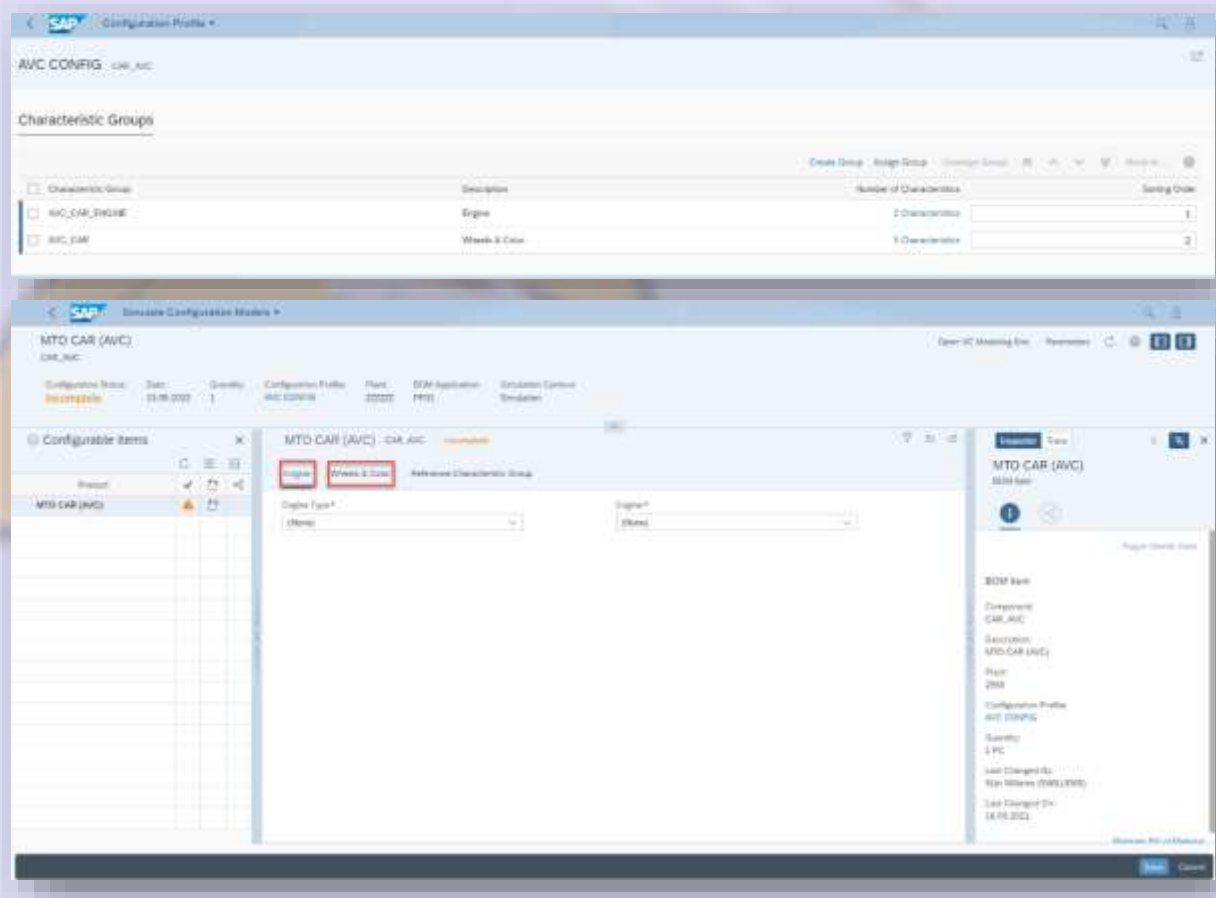


In a new Fiori application, you can create new groups or assign existing groups. You determine how to group the characteristics, and how you want to sort them within the group.





A characteristic group can be reused in multiple configuration profiles (materials). You can sort the assigned characteristics and change the order in which the user gets to see them.



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