Manufacturing

Make-to-Stock - Process Manufacturing Based on Production Order

2UG

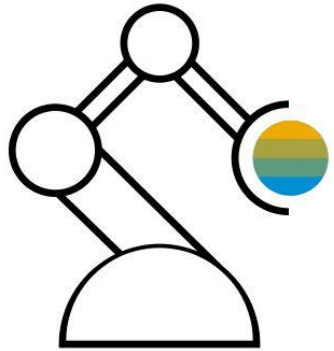
This scope item enables production planning in make-to-stock scenarios and quick reactions to incoming sales orders. The focus is on process manufacturing (supported through production orders).

The process starts with the creation of a demand forecast for semifinished goods represented by planned independent requirements (PIRs). Based on PIRs, Material Requirements Planning (MRP) creates a production plan for semifinished goods and explodes the entire bill of material structure. As a result, raw material demand is planned.

Production planners can analyze and change the planned-order-based production plan manually.

Raw material demand leads to purchase requisitions that trigger alternative procurement scenarios referenced in this scope item.

The production process itself is entirely covered via conversion of planned into production orders, order release, direct material issue or backflush, confirmation of operations and goods receipt posting. Order-based target and actual costs are created, ensuring fully integrated material and value streams.



Key process steps

- Process planned independent requirements
- Perform material requirements planning and evaluation of stock requirement list
- Process production orders: Create production order, material staging, order release, order confirmation, material movement postings for goods issue and goods receipt
- Run scrap reports optionally after production

Business benefits

- Trigger production execution with a production plan
- Explode the bill of material automatically when running the material requirements planning
- Improve usability with intuitive confirmation of production operations

Manufacturing

Make-to-Stock Production - Discrete Manufacturing

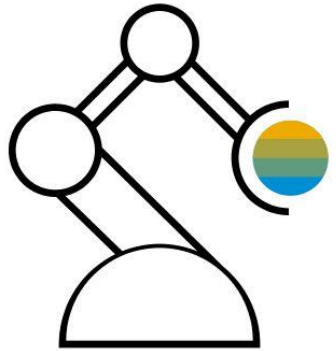
BJ5

This scope item enables production planning in make-to-stock scenarios for a serial number managed finished good.

The process starts with the creation of a demand forecast for finished goods represented by Planned Independent Requirements (PIRs). Based on PIRs, Material Requirements Planning (MRP) creates a production plan for finished goods and explodes the entire bill of material structure. As a result, semifinished component production and raw material demand is planned. Production planners can analyze and manually change the planned order-based production plan.

Raw material demand leads to purchase requisitions that trigger alternative procurement scenarios referenced in this scope item.

The production process itself is entirely covered by using the conversion of planned into production orders, order release, material staging and picking, confirmation of order operations, and goods receipt posting. Order-based target and actual cost is created, ensuring fully integrated material and value streams.



Key process steps

- Process planned independent requirements
- Execute material requirements planning and evaluation of stock requirement list
- Execute production order processing: Material staging, order release, order confirmation, material movement postings for goods issue and goods receipt incl. Available-to-Promise checks
- Run scrap reports optionally after production

Business benefits

- Trigger production execution with a production plan
- Explode the bill of material automatically when running the material requirements planning
- Calculate target costs during order creation
- Improve usability with intuitive confirmation of production operations

Manufacturing

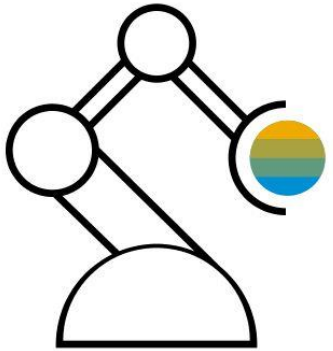
Make-to-Stock Production - Repetitive Manufacturing

BJH

Repetitive Manufacturing is commonly used when a production process meets the following criteria:

The same or similar products are produced over a lengthy period. The products produced are not manufactured in individually defined lots. Instead, a total quantity is produced over a certain period at a certain rate. The items produced always follow the same sequence through the machines and work centers in production. Routings tend to be simple and do not vary greatly.

This scenario starts with Planned Independent requirements (PIR). These are used to perform demand management functions. Material Requirements Planning (MRP) generates planned orders for the material to be produced. By using the planning table, planning the production of materials and capacity on the production lines can be completed. The confirmation of Repetitive Manufacturing triggers multiple activities, such as finished product goods receipt, backflush of component materials, and posting of costs to cost collector.



Key process steps

- Creation of planned independent requirements
- Planning of material requirements at plant level
- Adjustment of planning in planning table
- Checking range of stock coverage
- Material staging
- Confirmation of assembly activities and repetitive manufacturing backflush
- Post processing of error records

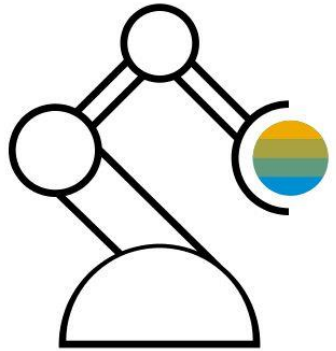
Business benefits

- Make-to-stock production based on run schedules without reference to sales orders
- Simplified handling of the production process with full cost control
- Confirmation of assembly activities without using production or process orders

Manufacturing

Make-to-Stock Production with Variant Configuration 21D

This scope item shows the Make-to-Stock Production with Variant Configuration in which Advanced Variant Configuration enables efficient state-of-the-art configuration for configurable products variants that reflect common definitions of a configurable material. The material variant is defined as a Bill of Material (BOM) where the components meet certain criteria. Initially, this material variant is produced and put into stock as later sales of it are anticipated by collection of Planned-Independent Requirements (PIRs). When a customer orders a fork lifter where the characteristics of the components meet those of the material variant, the fork lifter is taken directly from stock as production already happened based on PIRs. The sales price calculation is then based on the characteristics of the material variant. Since the material variant is available on stock, the fork lifter is directly delivered. The process finishes with the billing of the delivered fork lifter.



Key process steps

- Execute Make-to-Stock production for material variants of the configurable product
- Create a customer sales order for a configured fork lifter resulting in a material variant
- Calculate sales prices based on characteristics of the material variant
- Process the delivery and billing for the customer

Business benefits

- Improve your company's sales and manufacturing performance with integrated Advanced Variant Configuration
- Enable your sales business process to handle frequently required variants that are represented as material variants in sales and manufacturing and show the configuration on the print-out
- Produce material variants upfront to incoming sales orders based on expected demand
- Deliver customer sales order processing for material variants immediately if stock is available from production

Manufacturing

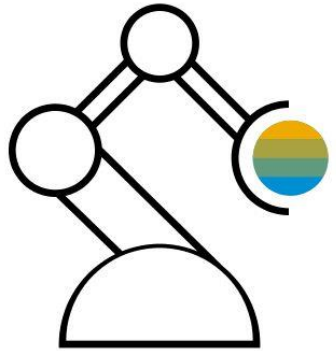
Make-to-Stock with Co- and By-Products - Process Manufacturing 3L7

This scope item enables the process of manufacturing of co- and by-products along with the main product.

The process starts with the creation of a demand forecast for semifinished goods represented by Planned Independent Requirements (PIRs). Based on PIRs, Material Requirements Planning (MRP) creates a production plan for semifinished components and raw materials. Production planners can analyze and change the planned-order-based production plan manually.

Raw material demand leads to purchase requisitions that trigger alternative procurement scenarios referenced in this scope item.

The production process itself is entirely covered via conversion of planned into process orders, order release, direct material issue or backflush, confirmation of operations and goods receipt posting for main, co- and by-products. Order-based target and actual costs are created, ensuring fully integrated material and value streams.



Key process steps

- Process planned independent requirements
- Covers material requirements planning and evaluation of stock requirement list
- Create process order, material staging, order release, order confirmation, material movement postings for goods issue and goods receipt along with co- and by-products
- Run scrap reports optionally after production

Business benefits

- Supports management of batch-oriented process manufacturing with co- and by-products
- Distribute costs to the individual co-products using equivalence numbers and apportionment structure

Manufacturing

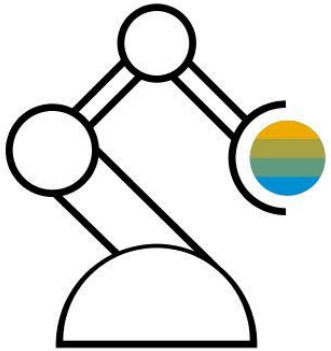
Make-to-Stock with Silo Material - Process Manufacturing

3UL

This scope item focuses on process manufacturing with more complex parameters compared to the Make-to-Stock - Process Manufacturing Based on Process Order (BJ8) scope item. It enables production planning in make-to-stock scenarios with silo materials and phantom assemblies. Silo materials are generally stored in big silos or tanks. The silos are modeled as separate storage locations.

The process starts with the creation of a demand forecast for finished goods represented by Planned Independent Requirements (PIRs). Based on PIRs, Material Requirements Planning (MRP) creates a production plan for finished goods, semi-finished components, and raw materials.

The production process itself is entirely covered via conversion of planned into process orders, direct material issue or backflush, confirmation of operations and goods receipt posting. Order-based target and actual costs are created, ensuring fully integrated material and value streams.



Key process steps

- Use planned independent requirements processing
- Use material requirements planning and evaluation of stock requirement list
- Create process order, material staging, order confirmation, material movement postings for goods issue and goods receipt in production order processing
- Run scrap reports optionally after production

Business benefits

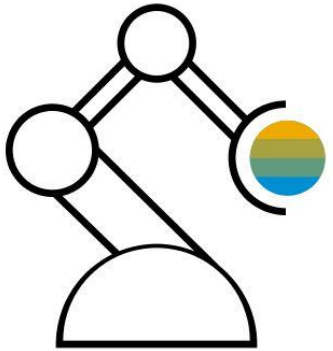
- Support management of batch-oriented process manufacturing with silo materials and phantom assemblies
- Use order-based target and actual costs management, ensuring fully integrated material and value streams

Manufacturing

Material Replenishment with Kanban - External Procurement 1E3

The Kanban method for controlling production and material flow is based on the actual stock quantity in production. Material that is required on a regular basis is continually provided in small quantities into production. With Kanban, instead of being pushed through production by higher-level planning, materials are called from the supply source by production at the manufacturing level where they are needed (pull principle). Replenishment or production of a material is only triggered when a higher production level requires the material. This replenishment is triggered directly in production using previously maintained master data.

Kanban replenishment is commonly used in - but not restricted to - repetitive manufacturing environments when a production process requires that the same or similar products are produced over a certain period at a certain rate per period. The products produced always follow the same sequence through the machines and work centers in production. Routings tend to be simple and do not vary much.



Key process steps

- Create and maintain Kanban control cycles
- Maintain output control for Kanban summarized JIT call
- Create independent planning and material requirements at plant level
- Replenish Kanban container with Kanban just-in-time calls and event-driven Kanban

Business benefits

- Reduce work in progress
- Increase supply chain visibility
- Reduce manufacturing supply chain costs
- Reduce inventory and assets
- Improve flexibility and visibility of manufacturing and supply chain processes

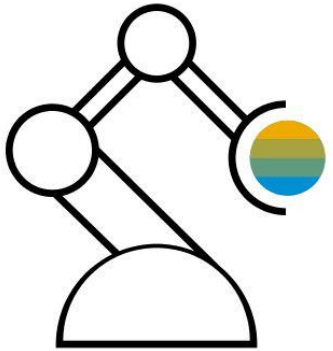
Manufacturing

Material Replenishment with Kanban - In-House Production

4B3

The Kanban method for controlling production and material flow is based on the actual stock quantity in production. With Kanban, instead of being pushed through production by higher-level planning, materials are called from the supply source by production at the manufacturing level where they're needed (pull principle). Replenishment or production of a material is only triggered when a higher production level requires the material. This replenishment is triggered directly in production using previously maintained master data.

Kanban replenishment is commonly used in - but not restricted to - repetitive manufacturing environments, when a production process requires that the same or similar products are produced over a certain period at a certain rate per period. The products produced always follow the same sequence through the machines and work centers in production. Routings tend to be simple and don't vary much.



Key process steps

- Create and maintain Kanban control cycles
- Create independent planning and material requirements at plant level
- Practice classic Kanban container replenishment with planned and production orders

Business benefits

- Reduce work in progress
- Increase supply chain visibility
- Reduce manufacturing supply chain costs
- Reduce inventory and assets
- Improve flexibility and visibility of manufacturing and supply chain processes

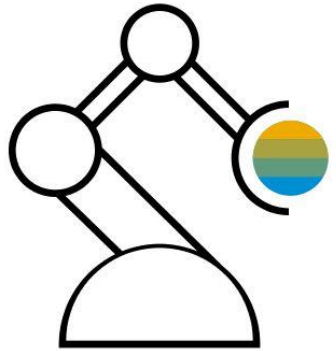
Manufacturing

Material Replenishment with Kanban - Stock Transfer

4B4

The Kanban method for controlling production and material flow is based on the actual stock quantity in production. With Kanban, instead of being pushed through production by higher-level planning, materials are called from the supply source by production at the manufacturing level where they're needed (pull principle). Replenishment or production of a material is only triggered when a higher production level requires the material. This replenishment is triggered directly in production using previously maintained master data.

Kanban replenishment is commonly used in - but not restricted to - repetitive manufacturing environments, when a production process requires that the same or similar products are produced over a certain period at a certain rate per period. The products produced always follow the same sequence through the machines and work centers in production. Routings tend to be simple and don't vary much.



Key process steps

- Create and maintain Kanban control cycles
- Create independent planning and material requirements at plant level
- Practice classic Kanban container replenishment with reservations

Business benefits

- Reduce work in progress
- Increase supply chain visibility
- Reduce manufacturing supply chain costs
- Reduce inventory and assets
- Improve flexibility and visibility of manufacturing and supply chain processes

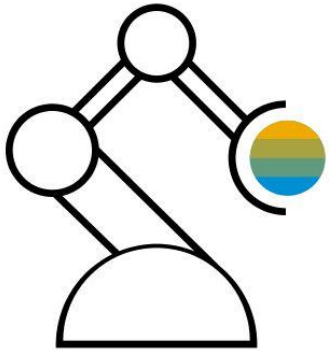
Manufacturing

Predictive Analytics Model Training - Supply Chain

20N

With this scope item, the customers can utilize the embedded predictive analytics functionality in the supply chain scenarios - produce, manufacturing, inventory management, logistics execution etc. It includes parameter selection in predictive model training and activation. Currently the following use case leverage the embedded predictive modeling.

Track materials in transit/open stock transport orders for which no goods receipt has been posted by the receiving plant yet which have already exceeded the estimated time in transit.



Key process steps

- Train a predictive model for stock in transit with available data
- Update the forecasted date column which shows the predicted delivery date by leveraging the embedded predictive model
- Update to the Stock in transit process, stock transport order process with predictions

Business benefits

- Out of the box predictive model that can be leveraged in the stock in transit app
- Get a predicted date for the stock in transit based on the delivery data for the customer
- Adjust time schedule based on empirical data
- Overall more reliable planning / scheduling of goods in transit process

Manufacturing

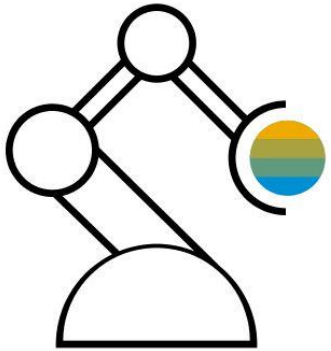
Production Operations with Manufacturing Execution System 1Y5

This scope item covers the setup of the integration from SAP S/4HANA to Manufacturing Execution Systems (MES).

An MES integrates business and manufacturing processes that help to run efficient, high-quality production on the shop floor.

You can use this scope item as an example of how to integrate a local customer shop floor system directly into SAP S/4HANA, giving manufacturing staff a clear overview of production operations and improving analytical capability for the management team. SAP S/4HANA is the system of record for all master data. An MES or a shop floor system is the system of record for all work in progress (WIP) data.

This communication scenario provides end points (inbound and outbound), which are needed to integrate an on-premise third-party MES solution (Manufacturing Execution System) to production operation through ALE IDocs, BAPI, and OData calls.



Key process steps

- Create, schedule, and release production order in the SAP S/4HANA system
- Create and release production order in a Manufacturing Execution System (MES) or shop floor system
- Update production order in an MES and send information back to the SAP S/4HANA system
- Confirm production order in the SAP S/4HANA system

Business benefits

- Simplifies the integration of SAP S/4HANA to Manufacturing Execution Systems to Production Operation

Manufacturing

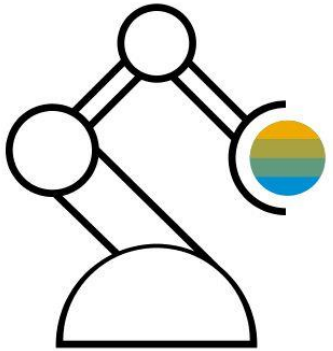
Production Operations with SAP Manufacturing Execution

2JN

SAP's manufacturing solution for discrete industries enables a fully integrated production process from top floor to the shop floor.

Production Operations with SAP Manufacturing Execution can orchestrate highly automated production processes enabling product variants with a lot size of one. Variants and their production sequence can be changed automatically, quickly, and easily. The solution also offers real-time transparency of production operations and KPIs plus complete traceability based on as-built records.

Production Operations with SAP Manufacturing Execution reflects SAP's roadmap to get connected with the future of Discrete Manufacturing. It allows very low production volumes while still making a profit, providing state-of-the-art production execution and insights to action in real-time.



Key process steps

- Connect between business processes and machines
- Standardize processes across plants and paper-based tracking systems
- Get accurate end-to-end product traceability information
- Use best practices for leveraging Big Data to gain real-time visibility into operations
- Enable better predictive maintenance

Business benefits

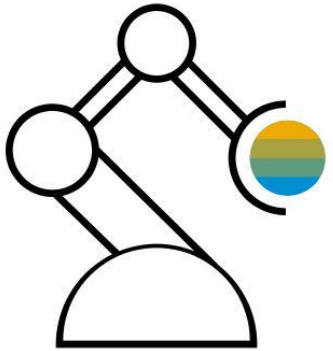
- Address individual customer requirements with real-time lot size of one production in high-volume production scenarios
- Integrate top floor to the shop floor (and the other way around) to minimize disruption including machine integration into production cycle
- Simplify and minimize manual interaction
- Allow data capture from the source
- Enable discrete and process manufacturing
- Gain new insights into the shop floor based on trends and prediction with SAP S/4HANA capabilities

Manufacturing

Production Subcontracting - External Processing

BJK

This scope item demonstrates the option to execute an operation externally within a production order. This type of processing is particularly important as it provides a company with a feasible alternative to in-house processing if capacity bottlenecks occur. During the manufacturing process, when a planned order for production is converted to a production order, the system checks if any routing or work center operations require external processing. When the order is processed and the operation to be handled externally is reached, the system creates a purchase requisition. After generating a purchase order for the operation, the production step is processed by the external subcontractor. The external service is captured with a goods receipt posting. The process is finalized by receiving the subcontractor’s invoice for the service and posting the payment accordingly.



Key process steps

- Create production order with subcontract operation
- Create purchase order for external processing of services
- Post goods receipt for subcontracted services
- Enter incoming vendor invoice and process payment

Business benefits

- Certain operations of the production order can be specified for execution by an external subcontractor
- In the case of capacity bottlenecks, the assembly procedure of the finished product can be assigned to a subcontractor

Manufacturing

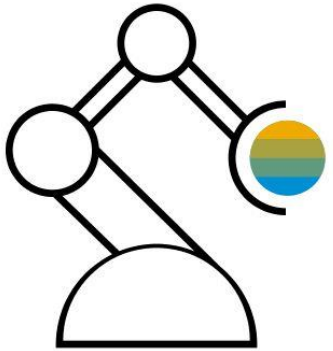
Rework Processing - Stock-Manufactured Material

BJN

This scope item focuses on rework activities and material postings after production execution for the original material (including goods receipt for the product), with an additional rework production order. Issues with the produced material are monitored after it is posted to inventory.

The rework process of stock-manufactured materials begins with the creation of a new production order. This is done using the material to be reworked as both input and output.

Costs are listed in the new production order, and are settled within controlling as production variants. The input component and product have the same material number.



Key process steps

- Create rework production order
- Release rework production order
- Issue goods for defective material including printing preview
- Confirm rework production activities
- Post goods receipt for rework production order incl. printing preview

Business benefits

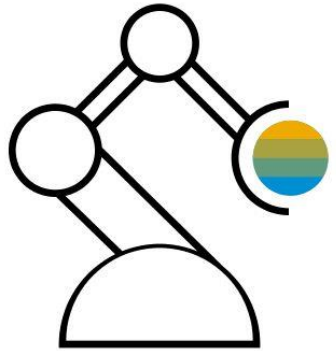
- Show transparent costs for rework activities
- Use all standard shop-floor control functionalities
- Improve usability with intuitive confirmation of production operations

Manufacturing

Rework Processing - Work-in-Process

BJQ

This scope item focuses on a rework process within production. All required rework activities are related to the production order. For this reason, defects are recognized and corrections are initiated, such as insertion of a rework operation within the same production order. The additional rework operation is confirmed and settled within the production order, causing production variances within controlling and price differences for the dedicated product.



Key process steps

- Confirm production activities
- Confirm scrap for defective material and material that can be reused
- Confirm production order at rework operation
- Continue shop-floor activities

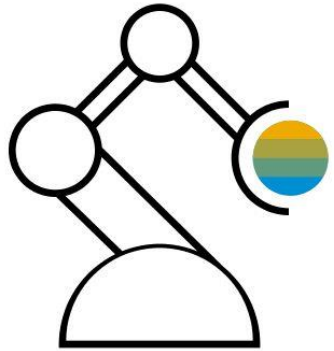
Business benefits

- Trigger the rework process automatically with a material in a defined operation
- Confirm additional activity and material consumption after rework
- Integrate rework processing fully in the production process

Manufacturing
Subcontracting

BMY

A subcontract purchase requisition is either generated via the Material Requirements Planning (MRP) process or manually by a requestor. The purchase requisition is converted into a subcontract purchase order. The purchase order is subject to approval based on predefined parameters before being issued to the subcontractor. The outbound delivery is created, and the goods are picked and shipped to the subcontractor. With the supply of the finished material, the goods receipt is created. The consumption of the sent components is recorded upon the receipt of the value-added finished material. Subsequently, the invoicing process is triggered.



Key process steps

- Manage purchase orders
- Manage stock
- Manage outbound deliveries
- Pick and post goods issues
- Manage goods receipts
- Manage invoices
- Serial number processing

Business benefits

- Streamline subcontracting processes efficiently and cost-effectively
- Ensure highly automated processes
- Reduce manual effort greatly
- Monitor the process progress in real-time

Manufacturing

Tank Trailer Filling with Residuals

42N

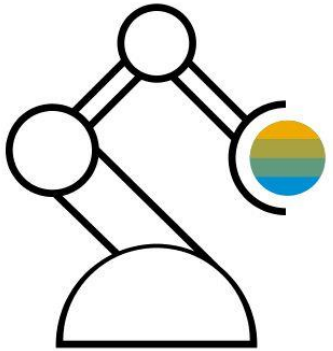
The process starts with creation of a filling process order based on an internal or external requirement.

As a prerequisite, the tank trailer with a dedicated container ID should be weighed and the existing residual quantity should be posted to a separate residual storage location. This residual stock is considered during the subsequent filling process for the same container ID.

Using container ID as a reference batch characteristic, the batch and quantity of residual stock for the specific container ID is determined for the process order using batch determination.

The net quantity of manufactured product to be filled into the tank trailer is calculated by deducting the residual material that was already present in the tank from the total filling order quantity. A simple material quantity calculation formula is used for this purpose. The appropriate batches are selected using batch determination.

The filling process order is executed to complete the tank trailer filling process.



Key process steps

- Create process order with batch for tank trailer filling
- Assign container ID to process order batch
- Perform batch determination of the materials to be filled at process order level
- Calculate material quantity of the filling quantity of the material from silo
- Perform goods issue of the material to be filled and the residue from the residual storage location
- Confirm the process order
- Perform goods receipt for the process order

Business benefits

- Take accurate account of the quantity of existing residuals in the tank trailer during filling

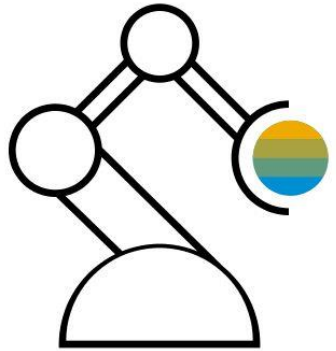
Manufacturing
Material Requirements Planning

J44

This process enables your material requirements planning (MRP) department to automate the procurement planning. The main function of MRP is to guarantee material availability and to avoid delays in order fulfillment. The planning run checks availability of each material and, in case of shortages, creates purchase requisitions, or delivery schedules if a scheduling agreement exists. Remaining shortages are displayed in the MRP app where the material planner can analyze the situation.

Procurement lead time can be longer than the time available to fulfill a demand. For this reason, you must procure the material in advance and cover your demand from stock. This process starts by creating forecast demands that are interpreted as expected customer demand. The MRP schedule runs. The system creates purchase requisitions or scheduling lines that trigger external procurement.

Optionally, you can handle purchase requisition handover and MRP material exceptions.



Key process steps

- Manage demand forecast as Planned Independent Requirements (PIRs) manually
- Calculate from consumption data to forecast and forecast to PIRs automatically
- Monitor and manage material coverage
- Run materials requirements planning (MRP) for materials with shortages
- Evaluate the results of the MRP run
- Hand over the purchase requisitions if needed (optional)
- Display MRP run material issues and key figures
- Detect and resolve MRP material exceptions

Business benefits

- Detect shortages quickly
- Create purchase requisitions or scheduling lines to cover demand automatically
- Get higher accuracy of purchased quantities
- Do a hand over for the purchase requisition (optional)
- Save costs through process automation
- Detect and resolve MRP material exceptions

Manufacturing

Predictive Material and Resource Planning

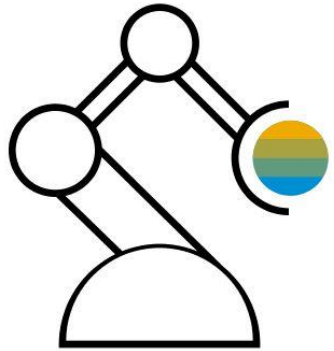
4B5

Predictive Material and Resource Planning (pMRP) enables you to create, schedule, and evaluate pMRP simulations that support you in making informed decisions for your production planning.

You can create and schedule pMRP simulations with your top-level demands and resource constraints. During the simulation creation, the system creates simplified data, based on your forecasted product demand and master data for material- and resource-planning, which is used as reference data in pMRP.

After the creation, you can process and evaluate your simulation. The number of capacity issues and a delivery performance KPI are constantly updated to enable you to compare your simulated changes so that you can assess the impact of changes to your simulation.

Finally, after you decide which simulation best fits your production plan, you can take over the resulting component demand and release it to your operational data as planned independent requirements.



Key process steps

- Create planned independent requirements
- Schedule pMRP simulation creation
- Evaluate and process pMRP simulations
- Check and (if desired) apply changes to planned independent requirements

Business benefits

- Simulate MRP runs to evaluate impacts of possible changes to production plans
- Helps you create optimized production plans by giving the ability to make informed decisions for changes based on the simulations

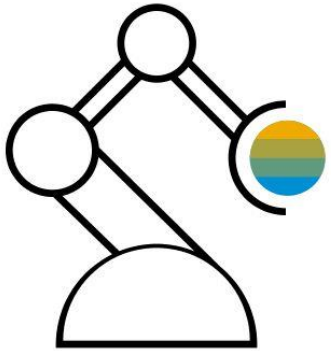
Manufacturing
Production Capacity Evaluation

31L

This scope item enables quick capacity evaluation and planning for make-to-stock scenarios in Discrete and Process Manufacturing. You can determine the industry type selection and displayed data in the app settings.

The process starts with the creation of a demand forecast for finished goods represented by Planned Independent Requirements (PIRs). Based on PIRs, Material Requirements Planning (MRP) creates a production plan for finished goods and explodes the entire bill of material structure.

As a result, semifinished component production and raw material demand is planned. All orders and operations that are planned with the MRP are allocated to the required capacities. Production planners can evaluate the capacity utilization for a defined time horizon and execute manual changes in orders to resolve upcoming bottleneck situations in the defined area of responsibility.



Key process steps

- Evaluate capacity load
- Apply changes to available capacity to meet the production requirements

Business benefits

- Get overview and transparency of capacity load and critical situations
- Gain insight into the KPIs on capacity load and backlog
- View a graphical presentation of utilization per work center/resource

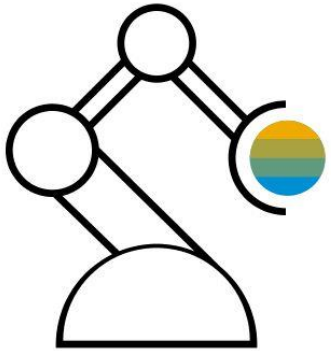
Manufacturing
Production Capacity Leveling

3LQ

This scope item supports both Discrete and Process Manufacturing capacity leveling functionality for their demands. You can determine the industry type and displayed data under the app settings. The process of production capacity leveling represents a central part of preparation for the manufacturing process of components.

After you forecast a demand for finished goods represented by Planned Independent Requirements (PIR) and the Material Requirements Planning (MRP) run created a production plan, the process of capacity leveling (scheduling) takes place.

This process enables production planners to assign orders and operations from the production plan to available timeslots of capacities. Additionally, the planners can simulate and choose other alternatives for production by assigning other available production versions, letting the planners schedule the best option for their manufacturing.



Key process steps

- Dispatch production order or process order
- Change production version

Business benefits

- Dispatch orders to available time slots of work centers or resources
- Redispatch to alternative production versions

Manufacturing

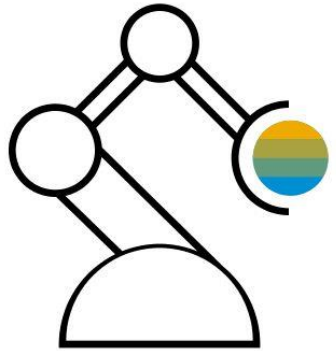
Nonconformance Management

2QN

This scope item describes the management of defects and nonconformances. The quality technician creates a defect record and if required, adds a picture that documents the defect. The quality engineer further processes the defect record by documenting or defining immediate, corrective, and preventive actions. The quality technician executes the defined actions and confirms processing by setting a respective status. After defect resolution, the quality engineer closes the defect record.

Furthermore, the quality engineer monitors and analyzes defect records from various sources (for example, defects detected during quality inspection or manually created defects) and deduces common preventive actions.

If required, the quality technician creates additional, manual inspection lots for the available inspection origins to perform additional quality inspections. After inspection results are captured, the quality engineer makes a usage decision to close the manual inspection process.



Key process steps

Manage defects:

- Record defect
- Process defect and define quality task
- Execute quality task and document outcome
- Complete defect processing
- Record defect using SAP Co-pilot
- Assign defect to quality notification

Manual inspection process:

- Create inspection lot
- Record inspection results
- Make usage decision

Business benefits

- Capture defects and nonconformances for documentation and for further processing
- Decide whether a simple defect can be managed as generic defect or must be escalated to a quality notification for comprehensive processing
- Execute quality tasks to mitigate or resolve the defect
- Change quality tasks and defects using mass-processing
- Capture status of quality task
- Evaluate the defect data comprehensively
- Define and execute additional manual quality inspections

Manufacturing

Quality Management for Complaints Against Suppliers

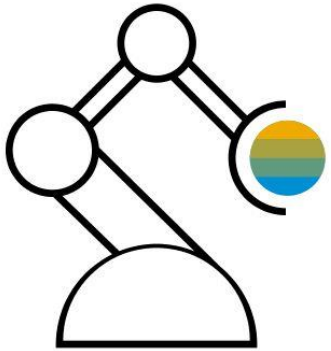
2F9

This scope item describes the management of complaints against suppliers, for example, after delivery of a product.

Leveraging quality notifications, the quality engineer captures all complaint-related information including the observed defects. The quality engineer enters immediate actions for documentation purposes and requests a root cause analysis from the supplier. Furthermore, the quality engineer can keep a record of his communication with the supplier.

The quality engineer defines tasks either globally at notification level or per defect. The quality engineer assigns one processor to each task. The task is processed, and task processors give feedback per task. After having received the supplier's root cause analysis, identified root causes can be assigned to each defect.

Finally, the quality engineer reviews each task and closes the notification.



Key process steps

- Create quality notification with basic data
- Capture defects and document immediate actions
- Define tasks
- Execute tasks and document outcome
- Review tasks
- Document supplier root cause analysis
- Complete notification

Business benefits

- Capture complaint details, related defects, causes, and activities in one single place
- Manage different types of activities (for example immediate, corrective, and preventive actions)
- Assign a person responsible to each action and track action status and outcome

Manufacturing

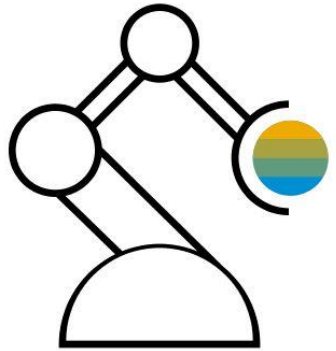
Quality Management for Complaints from Customers

2FA

This scope item describes the management of customer complaints, for example, after delivery of a product. Using quality notifications, the quality engineer can capture all complaint-related information provided by the customer. The quality engineer enriches the notification by adding internal logistical information, such as delivery and purchase documents. Further immediate actions can be captured for documentation purposes. To identify the complaint's root cause, the engineer documents a root cause analysis. After having identified the error and the related root cause, the quality engineer classifies this information using code groups, codes, and free text information.

The quality engineer defines corrective and preventive actions either globally at notification level or per defect. The engineer assigns one processor to each action. The action is processed, and action processors give feedback per action.

Finally, the quality engineer reviews each action and closes the notification.



Key process steps

- Create quality notification with basic data
- Capture defects, define root cause analysis, and document immediate actions
- Define corrective actions and correction tasks
- Execute root cause analysis, corrective actions, correction tasks, and document outcome
- Review root cause analysis and document root cause, review corrective actions, and review correction tasks
- Define preventive actions
- Execute preventive actions and document outcome
- Review preventive actions
- Complete quality notification

Business benefits

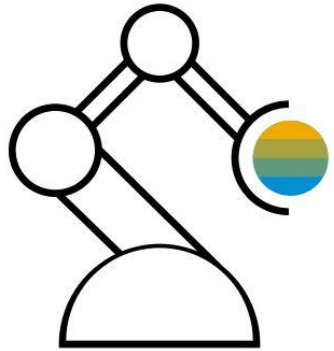
- Capture complaint details, related defects, causes, and activities in one place
- Manage different types of activities (for example immediate, corrective, and preventive actions)
- Assign a person responsible to each action and track action status and outcome

Manufacturing

Quality Management in Discrete Manufacturing

1E1

This scope item manages quality inspection in discrete manufacturing processes. Quality inspection activities are relevant during the production process or at goods receipt from production: At goods receipt, the material is posted to quality inspection stock and an inspection lot is created based on an inspection plan. The quality technician records the inspection results and the quality engineer makes a usage decision (acceptance or rejection of the material) and posts the material to unrestricted or blocked stock or to scrap. During the production process, a quality operation within the production order triggers the quality inspection. The quality technician records the inspection results for inspection points. Based on the inspection point valuation, the quality operation is confirmed with the respective yield and scrap amounts and the inspection lot is closed by making a usage decision. In case of rejected characteristics, a defect is automatically recorded.



Key process steps

Quality Inspection for Goods Receipt from Production:

- Produce material
- Display inspection plan
- Post goods receipt for production order
- Display material stock before inspection
- Display inspection lot
- Record inspection results
- Make usage decision
- Review and analyze defects
- Review material stock after inspection

Quality Inspection Within the Production Process:

- Start production of material using a production order
- Display routing including quality operation
- Display inspection lot
- Analyze and activate control chart
- Record inspection results
- Review and analyze defects
- Confirm the quality operation of the production order
- Make usage decision

Quality Inspection Within the Production Process - Make-to-Stock Production of a Batch Managed Material:

- Create and release production order
- Perform goods issue of batch-managed components via pick-list
- Confirm production operations
- Execute quality inspection with inspection points
- Confirm production operations
- Post goods receipt for order
- Make usage decision
- Review batch data

Business benefits

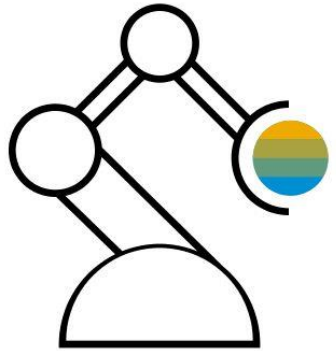
- Integrate quality inspection activities in production processes
- Use inspection plans or inspection points for quality inspections
- Use the statistical process control tool control chart for valuation of inspection characteristics
- Detect nonconformities during production to avoid cost-intensive reprocessing or unnecessary waste

Manufacturing

Quality Management in Procurement

1FM

This scope item manages quality inspection in procurement: At goods receipt, a good is posted to quality inspection stock and an inspection lot is created based on an inspection plan. The quality technician records the inspection results. The quality engineer then makes a usage decision – for example, accepting or rejecting the material, posting the material to unrestricted stock or blocked stock, or triggering return to the supplier, with the option of posting as a consumed sample. For rejected results, a defect is automatically recorded. The supplier is rated on the quality score defined in the usage decision. With a dynamic modification rule, quality inspections can be tightened, reduced, or skipped based on previous inspection results. You can block the creation of purchase orders or limit the purchased quantity due to quality reasons. By leveraging quality certificates in procurement, you can ensure that suppliers provide the documents if required.



Key process steps

- Purchase material from a supplier
- Review quality info record
- Review inspection plan, optionally with dynamic modification rule and sampling scheme; optionally with inspection method with documents attached
- Post goods receipt for purchase order
- Review material stock before inspection
- Display open inspection lots
- Record inspection results
- Make usage decision
- Review and analyze defects
- Review material stock after inspection

Business benefits

- Integrate quality inspection activities in the purchasing process
- Use inspection plans for quality inspections with dynamic modification, sampling scheme, and material-supplier release
- Display open and completed receipts of quality certificates in procurement
- Record nonconformities at the right point in time to avoid cost-intensive reprocessing or unnecessary waste

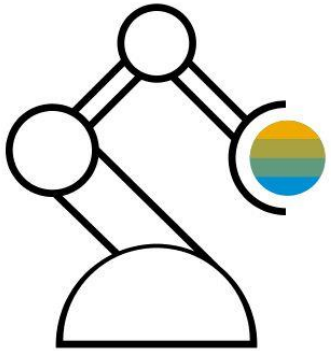
Manufacturing

Quality Management in Sales

1MP

This scope item manages quality inspection activities in outbound delivery processes. Quality inspection activities may be important before goods issue.

When creating an outbound delivery for a material that is the subject of an inspection in the sales and delivery process, an inspection lot is created based on an inspection plan. The quality technician records the inspection results for a sample size. Based on these inspection results, the quality engineer makes a usage decision, for example, accepting or rejecting the material. If accepted, the goods are posted and sent to the customer. If rejected, the whole quantity is posted to blocked stock and the delivery is updated. For the rejected results, a defect is automatically recorded. Any further stock of the same material must be accepted before they are delivered.



Key process steps

- Sell material to a customer and create an outbound delivery
- Review inspection plan
- Display open inspection lots
- Record quality inspection results
- Make usage decision, optionally attach documents
- Review and analyze defects
- Post goods issue for the outbound delivery

Business benefits

- Integrate quality inspection activities in the sales process
- Use inspection plans for quality inspections
- Detect nonconformities before delivering materials to a customer

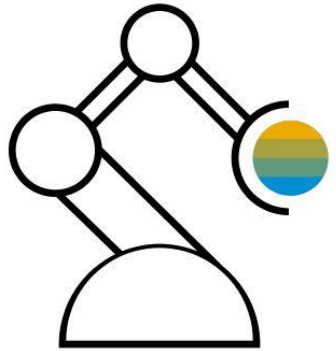
Manufacturing

Quality Management in Stock Handling

1MR

This scope item manages quality inspection activities in stock handling processes. Quality inspection activities may be relevant for materials during the storage of goods.

During the storage of goods, a warehouse clerk may identify damage that must be checked and investigated. To follow up, the material is posted to quality inspection stock and an inspection lot is created automatically. The quality engineer inspects the material and makes a usage decision that triggers the posting of the material, for example, to unrestricted stock, to blocked stock, or to scrap. Additionally, the quality inspection stock may be moved from one storage location to another, for example, if a specific check can only be done at one location in the plant where the equipment is available.



Key process steps

- Post material from unrestricted or blocked stock to quality inspection stock
- Execute inspection and record results
- Make usage decision
- Review material stock after inspection

Business benefits

- Integrate quality inspection activities in the stock handling process
- Detect nonconformities and necessary follow-up actions as soon as possible to avoid inappropriate usage

Manufacturing

Quality Management of Internal Problems

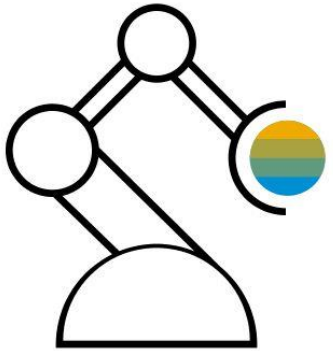
2QP

This scope item describes the management of internal problems, for example, deviations observed during production or storage of goods.

Leveraging quality notifications, the quality engineer can capture all problem-related information. Further immediate actions can be captured for documentation purposes. To identify the root cause of the complaint, the quality engineer starts a root cause analysis. After having identified the error and the related root cause, the quality engineer classifies this information using code groups, codes, and free text information.

The quality engineer defines corrective and preventive actions either globally at notification level or per defect. The quality engineer assigns one processor to each action. The action is processed and action processors give feedback per action.

Finally, the quality engineer reviews each action and closes the notification.



Key process steps

- Create quality notification with basic data
- Capture defects, define root cause analysis, and document immediate actions
- Define corrective actions
- Execute root cause analysis and corrective actions, and document outcome
- Review root cause analysis and document root cause, review corrective actions
- Define preventive actions
- Execute preventive actions and document outcome
- Review preventive actions
- Complete quality notification

Business benefits

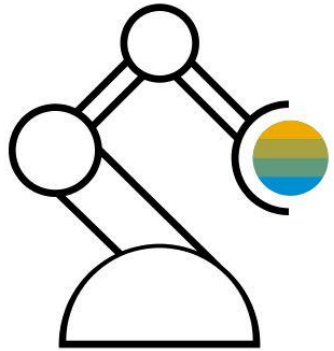
- Capture problem details, related defects, causes, and activities in one place
- Manage different types of activities (for example immediate, corrective, and preventive actions)
- Assign a person responsible to each action and track action status and outcome

Manufacturing

SAP Fiori Analytical Apps for Quality Management

2V0

This scope item provides overview pages for the quality technician and the quality engineer. The quality engineer overview page displays important information and tasks related to quality inspection management with a focus on usage decisions (for example, inspection lots without usages decisions, or lots that are ready for usage decision), defects (for example, top defective materials, inspection lots with defects), action limits, quality levels, and quality tasks. The quality technician overview page focuses on processing of the inspection lot, executing the quality inspection, and processing of quality tasks. Further apps for the detailed analysis of the past and current quality situation are provided: You can analyze accepted and rejected inspection lots or inspection characteristics with respect to different KPIs and drill down by accounting for additional parameters. Defects and results history can be analyzed to deduce measures to improve the current quality situation.



Key process steps

- Provide overviews for quality engineer and quality technician
- Analyze accepted and rejected lots
- Analyze skipped and non-skipped lots
- Analyze inspection lots leveraging inspection lot detailed analytics
- Analyze inspection characteristics
- Analyze inspection characteristics leveraging inspection characteristic detailed analytics
- Manage defects
- Display results history
- Display quality level history
- Manage control charts
- Manage quality tasks

Business benefits

- Provide a dashboard of information for quality engineer or quality technician to perform their daily activities smoothly
- Provide high-level insights for the quality engineer to understand key figures and drill down to act on a variety of inspection-related information
- Provide tools to analyze the past and current defect situation and inspection results to identify areas for improvement

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: R&D/Engineering

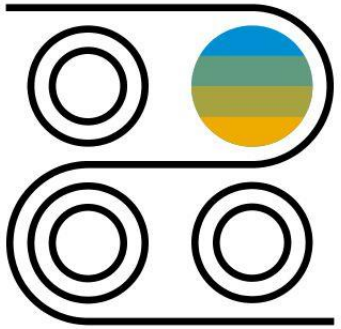
R&D/Engineering

Enterprise Portfolio and Project Management

Product Compliance

Product Engineering

Product Lifecycle Management

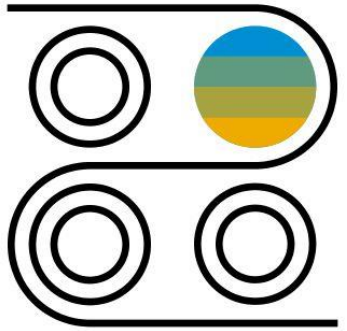


R&D/Engineering

Engineering Change Management with Change Records

1NF

SAP Engineering Change Management with Change Records flexibly supports the management of engineering changes. It can handle several types of objects (such as materials and documents) that are affected by the intended changes. The engineering record keeps all information in one place. The progress of the change is controlled by a dedicated status management, and the change process is supported by workflow capabilities. Communication with SAP CoPilot during the change process allows effective communication with all involved parties.



Key process steps

- Create change record
- Start workflow
- Review change request (optional)
- Rework request
- Assign design document
- Assign product/engineering structure
- Approve/reject change record
- Modify validity date in change master
- Perform design changes
- Perform product master changes
- Perform engineering structure changes

Business benefits

- Handle various object types with and without change numbers and model workflows flexibly
- Gain transparency with powerful workflow capability combined with a status driven change control
- Improve efficiency with all change information in one easy-to-navigate place
- Single source of truth of all the data involved in a change
- Drive change process efficiently through best practices and workflow templates
- Allow ad-hoc communication with stakeholders (Copilot)
- Create and easily manage customer specific attributes in order to determine the best fit template and responsibility
- Leverage insights from engineering cockpit

R&D/Engineering

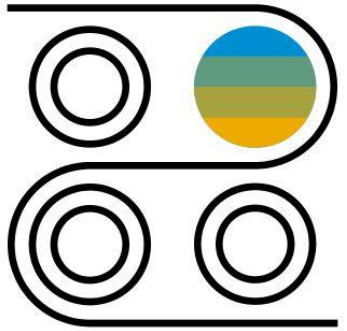
Assess Dangerous Goods for a Product

3FC

For chemical products, you determine if a product can be transported via certain transportation modes with the result of a dangerous goods classification decided according to applicable dangerous goods regulations.

You create a dangerous goods description that is used on transportation documents to describe the product in compliance with the rules defined in each dangerous goods regulation.

To start the classification process, the product steward specialist assigns compliance purposes to the product. These compliance purposes define the relevant dangerous goods regulations, and allow a dangerous goods specialist to classify the product for each of those regulations and to decide for which regulations and modes of transport the product can be transported.



Key process steps

- Flag products as relevant for a compliance assessment
- Determine countries or regions where a product is planned to be transported
- Derive relevant compliance purposes based on countries or regions where transport is required
- Assess dangerous goods classification for an unpackaged product
- Assess dangerous goods classification for all related packaged products

Business benefits

- Integrate the dangerous goods assessment of a product with the process of creating and changing products
- Integrate the dangerous goods assessment of a product with your logistic processes
- Use compliance requirements out-of-the-box for dangerous goods regulations in different countries or regions for certain modes of transport
- Manage the impact of changing and evolving dangerous goods regulatory requirements on how and where your products can be transported

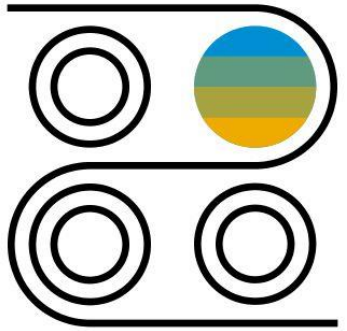
R&D/Engineering

Assess Marketability of a Product

31H

For a certain country and business process, the result of the marketability assessment for a product describes if a business process for a country is allowed, allowed with restrictions, or not allowed.

To start the assessment process, the Product Steward Specialist assigns markets (combination of country and business process) to the product. Based on these markets, the user determines the compliance purposes that cover the relevant countries and business processes (for example, selling an industrial chemical within an EU country).



Key process steps

- Flag products as relevant for a marketability assessment
- Determine and assign markets to your products
- Derive relevant compliance purposes from the assigned markets for your products
- Automatically calculate compliance requirement results
- Process and release compliance requirement results
- Use compliance requirement results as input for the marketability assessment
- Assess business processes for your product in specific countries as allowed, allowed with restrictions, and not allowed

Business benefits

- Integrate the marketability assessment of a product with the process of creating and changing products
- Integrate the marketability assessment of a product with your logistic processes
- Combine automatically calculated compliance requirement results with expert judgment for the marketability assessment of a product
- Use compliance requirements out-of-the-box for chemical compliance regulations in many different countries and regions
- Manage the impact of changing and evolving regulatory requirements on the marketability of your products efficiently

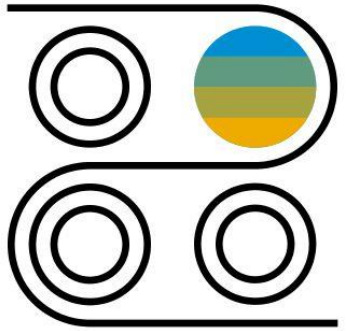
R&D/Engineering

Chemical Compliance Approval for Purchased Material and Supplier 31G

This scope item manages the compliance assessment for fulfillment of purchased materials and their suppliers.

Raw or purchased materials must cover compliance requirements of the associated products that are produced by using the raw materials.

The compliance data is requested from raw material suppliers. First, this lets you approve or block a supplier and second, assess the fulfillment of a raw material against the requirements. When this is done, you have approved suppliers and raw materials. Additionally, detailed compliance data is available for audits.



Key process steps

- Set compliance relevance for raw material master
- Process request for external sourcing
- Assign supplier to raw material
- Maintain supplier compliance data
- Assess compliance of raw material

Business benefits

- Summarize usage of purchased materials requirements
- Manage coverage of requirements on a supplier level
- Perform supplier approval process
- Aggregate and assess compliance on purchase material based on supplier data

R&D/Engineering

Chemical Compliance in the Value Chain

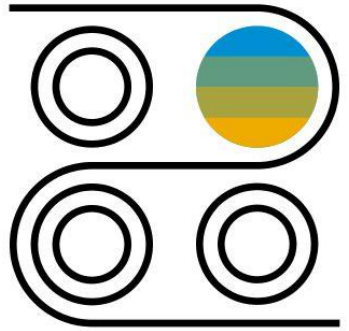
31J

This scope item manages the compliance marketability checks in sales order processes and during outbound delivery.

Any material included in a sales order or sales quotation which is defined as relevant for compliance must be verified if the selling into the country and for the customer is allowed. The result of the marketability check may block the follow up documents or initiate a request for the product steward ship department.

If selling is only possible under restrictions, the internal sales representative can initiate an approval process. The product stewardship department processes the approval request and approves or rejects the selling.

The sales documents are also blocked if selling is not possible or has not yet been assessed. A request is created for the product stewardship department if the assessment for a country and customer has not yet been done.



Key process steps

- Create sales order
- Perform compliance marketability check
- Verify compliance information
- Process request for approval
- Create outbound delivery and execute compliance check

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Integrate compliance marketability checks in the selling processes
- Product steward specialists get informed about new markets
- Go through approval process to validate restrictions for selling

R&D/Engineering

Dangerous Goods in the Value Chain

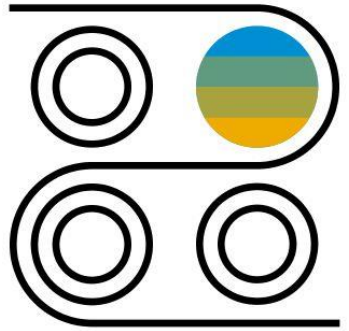
3G8

This scope item manages the dangerous goods check in sales and delivery documents. In addition, dangerous good descriptions are printed on the sales order confirmations, sales contracts and the delivery notes.

For each compliance-relevant product added to a sales order, a sales contract or sales quotation, you must verify if the product is classified as a dangerous good. If so, you check if the product can be transported.

If the product is not classified or if transport is not allowed, this check can result in a sales order block. The determination is based on the dangerous goods regulations that are applicable for the transport between departure and destination countries/regions.

If a dangerous goods assessment is not yet completed, a corresponding request to the product stewardship department or the dangerous goods specialists is created.



Key process steps

- Create sales order
- Perform dangerous goods check
- Trigger a dangerous goods assessment if it is missing
- Create outbound delivery
- Perform dangerous goods check in delivery
- Include dangerous goods information on delivery note and picking list

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Integrate dangerous goods checks in the selling and delivery processes
- Inform the product steward and dangerous goods specialists about new countries / regions where transport is required

R&D/Engineering

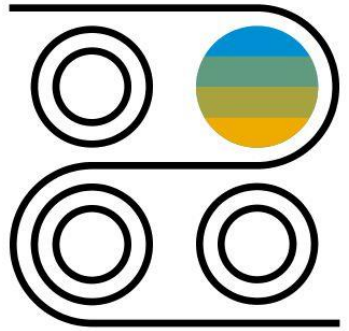
Manage Safety Data Sheets for Products

3VR

Placing chemical products on the market requires an efficient system support for handling mandatory documentation as defined by regulators. This scope item covers the main process steps for the maintenance of final safety data sheets as documents for products in the required languages for geographically defined jurisdictions.

Compliance requirements for safety data sheets can be managed and linked to products via this scope item using the purpose concept.

Applicable safety data sheet documents can be assigned to products and released. The compliance status of affected products can be tracked.



Key process steps

- Flag products as relevant for compliance
- Determine and assign markets to your products
- Derive relevant compliance purposes from the assigned markets for your products
- Use dedicated compliance requirements to manage, version, and store Safety Data Sheets
- Assess product requirements for Safety Data Sheets in specific countries and language variants and maintain the status

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Have product steward specialists get informed about new markets
- Integrate the Safety Data Sheet requirements and management into the general product compliance management processes, providing an integrated view on the status
- Integrate the Safety Data Sheet processes of a product with your logistic processes

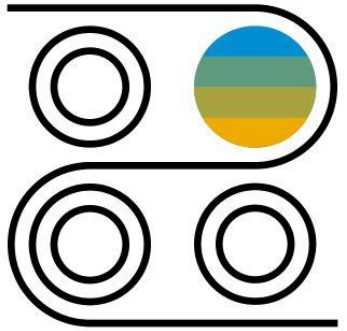
R&D/Engineering

Safety Data Sheets in the Value Chain

3VQ

This scope item covers the main process steps for the maintenance of safety data sheets for products during sales processes.

Products flagged as relevant for compliance must have a completed safety data sheet assessment by the product steward. A missing assessment results in a country-specific automatic block of sales order fulfillment that can be resolved by the product steward, typically by assigning a relevant safety data sheet to the products.



Key process steps

- Flag products as relevant for compliance
- Determine and assign markets to your products
- Derive relevant compliance purposes from the assigned markets for your products
- Use dedicated compliance requirements to manage, version, and store safety data sheets
- Assess product requirements for safety data sheets in specific countries and language variants and maintain the status and documents

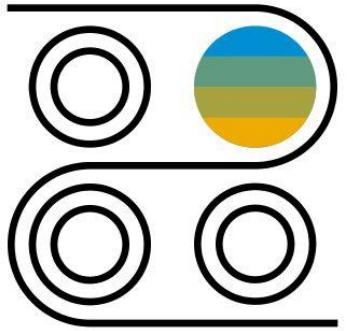
Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Inform product steward specialists about new markets
- Integrate the safety data sheet requirements and management into the general product compliance management processes, providing an integrated view on the status
- Integrate the safety data sheet processes of a product with your logistic processes
- Integrate the product stewardship department via a release cycle into sales and distribution processes

R&D/Engineering
Substance Volume Tracking

4OL

With this scope item, you can enable substance volume tracking of confirmed quantities from purchasing, manufacturing, and sales. Substance volume tracking helps you comply with chemical regulations. These regulations require you to track and monitor the volumes of regulated substances that you import into, produce, or export to a country or region within a certain period. Substance volume tracking is integrated with the logistic processes for purchasing, manufacturing, and sales and tracks, calculates, aggregates, and monitors the imported, produced, and exported substance volumes that result from the processes.



Key process steps

- Create mappings of plants to legal entities
- Procure stock materials
  - Create a purchase requisition to a purchase order
  - Convert a purchase requisition to a purchase order
  - Post material movements for goods receipt
- Process manufacturing based on a process order
  - Create a process order
  - Confirm a process order
  - Post material movements for goods issue and goods receipt
- Process sales orders
  - Create a sales order
  - Add a market assessment (optional)
  - Post material movements for goods issue
- Perform substance volume tracking in background
- Monitor substance volumes
  - Check substance volume tracking status
  - Trace aggregated substance volumes back to the logistics document from which the substance volumes originate

Business benefits

- Integrate with the logistic processes of purchasing, manufacturing, and sales
- Enable tracking, calculation, and aggregation of volumes of imported, produced, and exported substances on a legal entity level and based on the relevant compliance requirements and tracking period
- Simplify the comparison between the aggregated substance volumes and the thresholds in the relevant compliance requirements by calculating a substance volume tracking status
- Support monitoring of substance volumes tracing back to the respective logistics document via an SAP Fiori app

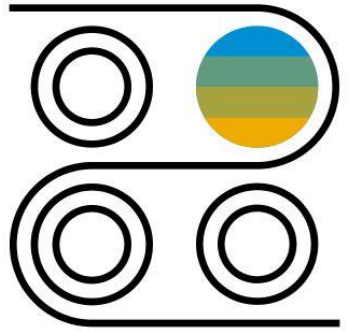
R&D/Engineering

Supplier Compliance in the Value Chain

5OJ

With this scope item, a check is performed in purchasing documents that considers the status of the supplier assessment of any compliance-relevant product. If the supplier of all items is compliant, the document can be processed. If the supplier is not approved for an item, the item and the business transaction are blocked.

For a blocked item, a compliance request for the product steward specialist is created to check the assessment of the supplier. If the compliance result of the assessment is positive, the block is released.



Key process steps

- Create purchase order
- Perform compliance check
- Process requests from logistics
- Supplier assessment

Business benefits

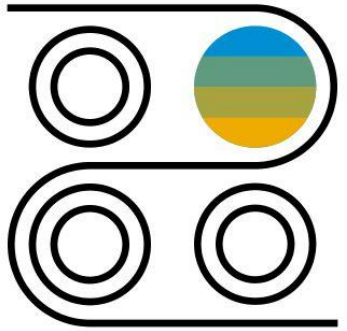
- Mitigate compliance risks with up-to-date information integrated into the value chain
- Integrate compliance marketability checks in the procurement processes
- Inform product steward specialists about new suppliers
- Go through approval process to validate restrictions for purchasing

R&D/Engineering

Engineering Bill of Material - Change Master Management 1R3

This scope item covers two central PLM BOM processes: setup and release steps for change master controlled Engineering BOM, and change iteration.

The change-number-controlled approach allows date-effectivity-based attributes management on the Engineering BOM (EBOM) header level and the Bill of Materials (BOM) items level. Setting the change number status to inactive releases the scope per change number. Once the status becomes inactive, changes are no longer possible. The EBOM header and items can only be changed with a new active change number. The change iteration process starts and ends again with setting the change number status to inactive. The process distinguishes between major changes of the BOM where it has been copied or created newly and minor changes where the BOM is being changed.



Key process steps

- **Create new BOM**
  - Create Change Master
  - Create BOM
  - Set Change Master status to inactive
- **Form Fit Function Change - Negative case**
  - Change BOM
  - Set Change Master status to inactive
- **Form Fit Function Change - Positive case**
  - Copy (Create) Header Material
  - Create Change Master
  - Copy BOM
  - Discard BOM
  - Change BOM
  - Set Change Master status to inactive

Business benefits

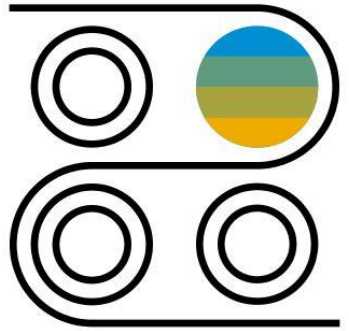
- Control engineering change management centrally with engineering change master
- Manage progress of engineering change
- Manage effective changed day in engineering change master

R&D/Engineering

Engineering Bill of Material - Mass Change

1R5

This scope item covers the follow-up material and component date effectivity-controlled mass change process of one or more Engineering Bills of Materials (BOMs). To control the replacement date of the follow-up component or material, you first create a date effectivity-controlled change master. When you start the Where-Used List application with the component or material to replace, all BOMs are listed. To replace the component or material of one or more Engineering BOMs, the BOMs must be selected. The change number is used to manage the phase in date. All changes are managed as draft changes and must be confirmed before setting the change number status to inactive to finalize the mass replacement process.



Key process steps

- Create change master
- Display Where-Used List
- Replace material
- Set change master to inactive

Business benefits

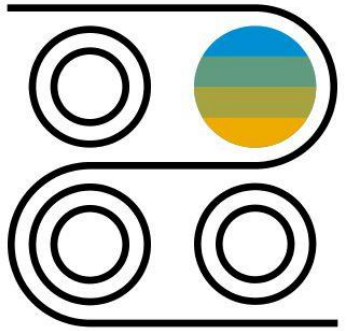
- Control the exchange of components in an Engineering BOM with Change Master and version management
- Change multiple BOMs with one activity
- Plan future changes for components or materials with date effectivity support

R&D/Engineering

Engineering Bill of Material - Versions Management

1NR

An engineering bill of material (EBOM) is a type of bill of material (BOM) that reflects the product as designed by engineering, referred to as the as-designed bill of material. The lifecycle of the EBOM is covered via a new versioning technology. By setting a released status at the header level, the EBOM is ready for handover to manufacturing. After releasing a BOM version, no further changes are allowed. A new version must be created. All process steps are carried out by the BOM engineer. The process distinguishes between major BOM changes where it is copied or created and minor changes where the BOM is being changed.



Key process steps

- Create new versioned BOM
- Create BOM
- Release version
- Perform form fit function change - Negative case
- Create new version of BOM
- Release version
- Perform form fit function change - Positive case
- Copy (Create) Header Material
- Copy (Create) versioned BOM
- Discard versioned BOM
- Change versioned BOM
- Release version

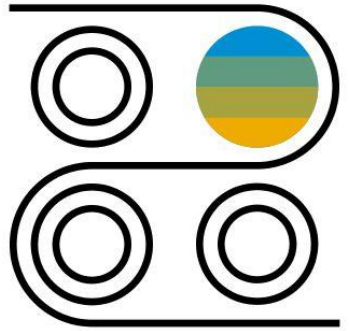
Business benefits

- Support EBOM creation and change process
- Manage lifecycle of EBOM easily by using new release and versioning technology
- Integrate documents intuitively on text item level with Document Attachment Service
- Support the stock item and text item categories

R&D/Engineering

Make-to-Order Production with Variant Configuration 1YT

This scope item shows a Make-to-Order Production scenario using the Advanced Variant Configuration for an efficient state-of-the-art configuration of a material ordered by a customer, covering single-level and multi-level configurable materials. The configurable material is defined as a bill of material. In this process, a sales order (optionally based on a sales quotation) is created with an individual configuration for a fork lifter. This is captured by defining the different component characteristics desired by the customers and considering the constraints and dependencies of the components. The sales price calculation is then based on the individually chosen characteristics of the components. The sales order is considered for production planning when doing the Materials Requirements Planning (MRP). The production execution for the individual fork lifter takes place before delivering it to the customer. The process finishes with the billing to the customer.



Key process steps

- Create a customer sales order (optionally based on a sales quotation) for an individually configured fork lifter either single-level or multi-level
- Calculate sales prices based on the customer chosen characteristics of the configurable product
- Execute the Make-to-Order production of the fork lifter ordered by the customer with routings according to the configuration
- Process the delivery and billing for the customer

Business benefits

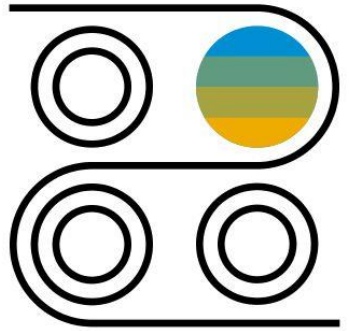
- Improve your company's sales and manufacturing performance with integrated Advanced Variant Configuration covering single-level and multi-level configurable materials
- Enable your business processes to handle highly individualized products in sales and manufacturing
- Leverage the sophisticated algorithms in the performance-optimized rules engine within a state-of-the-art configurator
- Use dependencies to prevent combinations of options that are not allowed and can be used to select exactly the right components
- Get sales pricing and print-out according to the configuration

R&D/Engineering

Make-to-Stock Production with Variant Configuration

21D

This scope item shows the Make-to-Stock Production with Variant Configuration in which Advanced Variant Configuration enables efficient state-of-the-art configuration for configurable products variants that reflect common definitions of a configurable material. The material variant is defined as a Bill of Material (BOM) where the components meet certain criteria. Initially, this material variant is produced and put into stock as later sales of it are anticipated by collection of Planned-Independent Requirements (PIRs). When a customer orders a fork lifter where the characteristics of the components meet those of the material variant, the fork lifter is taken directly from stock as production already happened based on PIRs. The sales price calculation is then based on the characteristics of the material variant. Since the material variant is available on stock, the fork lifter is directly delivered. The process finishes with the billing of the delivered fork lifter.



Key process steps

- Execute Make-to-Stock production for material variants of the configurable product
- Create a customer sales order for a configured fork lifter resulting in a material variant
- Calculate sales prices based on characteristics of the material variant
- Process the delivery and billing for the customer

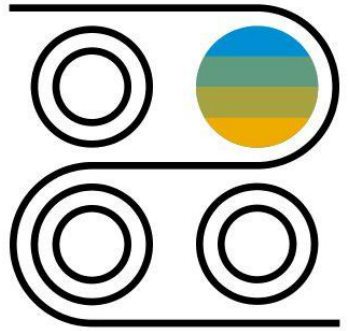
Business benefits

- Improve your company's sales and manufacturing performance with integrated Advanced Variant Configuration
- Enable your sales business process to handle frequently required variants that are represented as material variants in sales and manufacturing and show the configuration on the print-out
- Produce material variants upfront to incoming sales orders based on expected demand
- Deliver customer sales order processing for material variants immediately if stock is available from production

R&D/Engineering
Manage Documents

22P

During the product engineering phase, new products are designed and developed. You design new products or product lines to take advantage of current process technology and to improve quality and reliability. Alternately, you change an existing product due to changing market or customer requirements. The result of this product phase is drawings and specifications that must be maintained through the documents created in the Document Management System. This scope item allows for creation of a Document Info Record (DIR), and the addition and maintenance of metadata and attachments to the DIR.



Key process steps

- Search and display Document Info Records (DIR)
- Create DIR
- Add and edit metadata to the DIR
- Upload and download attachments

Business benefits

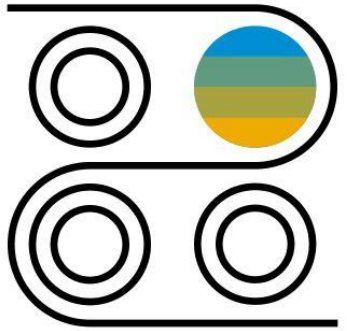
- Search and maintain Document Info Records with the new Manage Documents SAP Fiori app
- Upload and download attachments without active plug-ins
- Manage versions of the document effectively
- Share additional information simply and effectively by adding URLs
- Classify documents manually or automatically

R&D/Engineering

Procurement of Materials with Variant Configuration

2XU

Variant configuration is an important tool in the manufacturing process. Improve your company's product Engineering, Sales, Procurement, and Manufacturing performance with SAP software for integrated variant configuration and classification. Enable your business process to handle highly individualized products in sales, Procurement and Manufacturing.



Key process steps

- Create a customer sales order (optionally based on a sales quotation) for a product configured per customer requirement
- Identify and create a purchase order for required configurable material for the supplier
- Post goods receipt and invoice for payment to supplier
- Process delivery and billing to customer

Business benefits

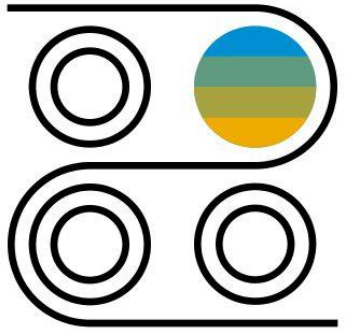
- Improve your company's manufacturing and procurement performance with integrated Advanced Variant Configuration covering single-level as well as multi-level configurable materials
- Enable your business processes to handle highly individualized products in manufacturing and Procurement
- Leverage the sophisticated algorithms in the performance-optimized rules engine within a state-of-the-art configurator
- Use dependencies to prevent combinations of options that are not allowed and can be used to select exactly the right components
- Set pricing according to the configuration

R&D/Engineering

Product Structure Management

3ND

This scope item supports the setup of products or product families with many variants and components. It provides a highly flexible product structure that can manage configurable products or product families as well as non-configurable products as assemblies in one product structure. The product structure can be built up manually or derived from functional structures. You can structure a product as a set of hierarchically and multi-disciplined (for example, mechanical and software) ordered objects in SAP S/4HANA Cloud. Additionally, the definition and maintenance of product structures is optimized for SAP S/4HANA Cloud. Product structures manage product variant structures in early development phases without the need to employ material master data. Simulation functions enable analysis of the product structures for various purposes.



Key process steps

- Create product master of type "Configurable Material" - MDS
- Setup high level product configuration
- Create product structure from template
- Define product family
- Manage date effectivities
- Create item variants
- Manage variant effectivities (optional)
- Manage software effectivities
- Manage software variant
- Add software and document info record with version
- Manage simulation
- Select filter/simulation
- Simulate product structure
- Add components to item variant (optional)
- Filter and review product structure
- 2G5 - Check software compatibility
- Release for handover

Business benefits

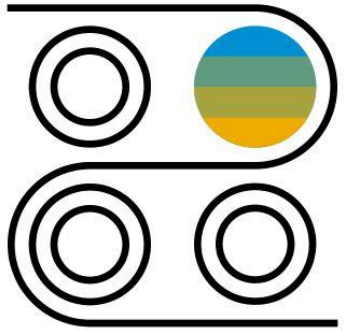
- Structure a product as a set of hierarchically ordered objects
- Optimize the definition and maintenance of product structures
- Get state-of-the-art variant configuration and variant management capabilities
- Provide comprehensive product simulation capabilities
- Use continuous modeling right from an early design phase until start of production
- Enable multi-level product structure maintenance

R&D/Engineering

Product Structure Template Management

35Q

This scope item supports the setup of templates for products or product families with many variants and components. They provide a highly flexible product structure that can manage configurable products or product families as well as nonconfigurable products as assemblies in one product structure. The product structure template can be built up manually or derived from functional structures. You can structure a product as a set of hierarchically and multidisciplined (like mechanical and software) ordered objects in SAP S/4HANA.



Key process steps

Manual creation of Product Structure:

- Create high level product structure template manually (Product Family/Product View/Product Structure)
- Save product structure template

Automated creation of Product Structure:

- Create high level product structure template using Block Definition Diagram (BDD)
- Save product structure template

Business benefits

- Structure a product as a set of hierarchically ordered objects and use it as template
- Optimize the definition and maintenance of product structures
- Create automatically product hierarchies from Block Definition Diagrams (BDD)

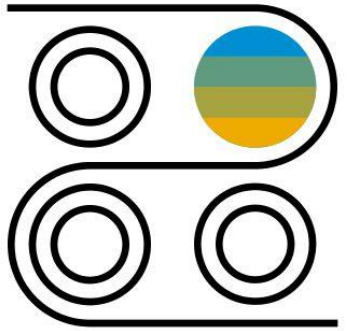
R&D/Engineering

Setup Configurable Model using Variant Configuration

22T

Improve your company's product engineering, sales, and manufacturing performance with SAP software for integrated variant configuration and classification. Enable your business process to handle highly individualized products in sales and manufacturing.

A comprehensive simulation environment supports state-of-the-art configuration, sophisticated analysis of your configurable products, and real-time integration to the configurable BOM Explosion. Get support from integrated requirements management.



Key process steps

- Create characteristics for class (to be used for variant configuration)
- Create class (to be used for variant configuration)
- Assign class to product
- Create variant table
- Maintain variant table content
- Create configuration profile
- Create and assign grouping
- Create constraint net
- Create and assign high-level dependencies
- Create super BOM
- Add stock item
- Add class node item
- Add low level dependencies
- Simulate configurable BOM
- 2G4: Requirements driven development
- Create and assign high-level dependencies
- Perform simulation and root cause check

Business benefits

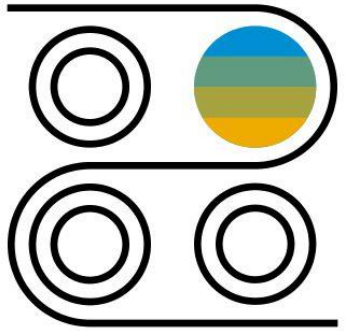
- Reduce costs and optimize usability with sophisticated variant configuration
- Increase sales force efficiency by higher tool support within order configuration to allow the sales force to focus on selling
- Increase modeling efficiency for new configured product modeling by effective simulation of new product variants and options
- Reduce time to market for new products by advanced variant configuration modeling and effective simulation of new product variants and options
- Establish efficient collaboration between requirements management and modeler

R&D/Engineering

Advanced Ingredient Replacement for Recipes

22R

This scope item supports finding recipes based on header attributes and calculated values. You can view the result list with key attributes displayed for the user, collect items for further processing, and get an analysis that supports the decision to replace an ingredient.



Key process steps

Recipe Analysis by Assigned Materials:

- Determine usage of material in recipes
- Export selection to Microsoft Excel (optional)
- Analyze search result list
- Decide upon ingredient replacement

Recipe Analysis by Standard Composition of Ingredients:

- Determine usage of pure substance in recipes
- Export selection to Microsoft Excel (optional)
- Analyze search result list
- Decide upon ingredient replacement

Recipe Analysis by Ingredients:

- Determine usage of an ingredient in recipes
- Export selection to Microsoft Excel (optional)
- Analyze search result list
- Decide upon ingredient replacement

Business benefits

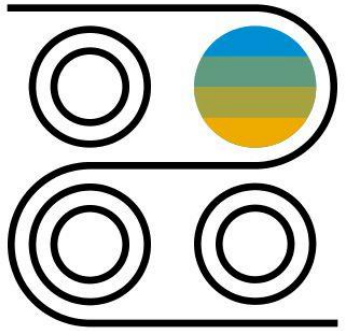
- Find products or recipes based on calculated data that has not been stored
- Search based on direct and cumulated values
- Display calculation results and object attributes
- Collect and organize result items into result sets
- Result analysis supports the selection of ingredients to replace

R&D/Engineering

Basic Handover of Bill of Material

1ZI

Handover to Manufacturing allows the user to create a Manufacturing Bill of Material from an Engineering Bill of Material within one step. The manufacturing Bill of Material is initially being created as a copy of the Engineering Bill of Material. With this step the system automatically generates a linkage between both Bill of Materials. As an optional step this newly created Manufacturing Bill of Material can be reworked with Change Management technology. Finally this Bill of Material will be release for productive use.



Key process steps

- Create change master
- Create manufacturing bill of material as copy of engineering bill of material
- Rework manufacturing bill of material
- Release manufacturing bill of material
- Set status of change master to inactive
- Create product version

Business benefits

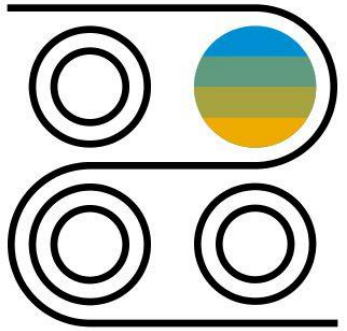
- Simple handover of Engineering Bill of Material to Manufacturing Bill of Material
- Linkage between Engineering and Manufacturing Bill of Material helps to keep both structures in sync

R&D/Engineering

Embedded Software Management

2G6

Embedded Software Management enables the Systems Engineer to manage software parts of products together with hardware components in a Bill of Material. The BOM Engineer can maintain relevant software material and software documents in a Bill of Material.



Key process steps

- Create software material
- Create software document and link the software material
- Add new software item to BOM
- Create new document version
- Update software item with new version

Business benefits

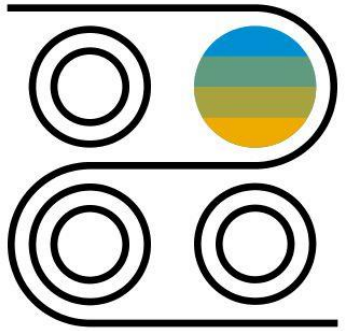
- Facilitates the reconciliation between the two development disciplines comprising a smart product: physical and digital
- Represent embedded software seamlessly in a Bill of Material using material and document
- Gain support for both engineering and production scenarios

R&D/Engineering

Formulation - Recipe Development

1QC

This scope item provides Web applications to handle formulas. Formula calculation allows calculation of recipe composition and aggregation of components (such as allergens) for the formula based on the proportions of the ingredients. To facilitate comparisons between recipes derived from each other, you can display several formulas side by side. You can manage ingredients and output substances, subcomponents (for example, pure substances, nutrients, or allergens) with role-based Web applications.



Key process steps

- Review recipe and decide to use a new ingredient
- Create a development recipe by copying an existing recipe
- Modify recipe ingredients
- Release recipe

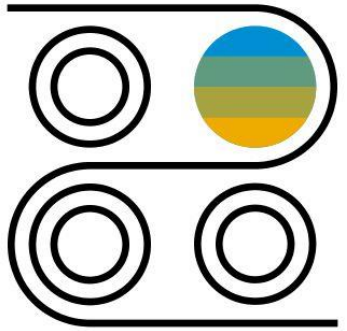
Business benefits

- Store all product development (product and process) information centrally (single source of truth)
- Reduce redundant or inconsistent data
- Integrate with downstream use of formula development information in logistics processes directly

R&D/Engineering

Handover of Product Information to SAP Asset Intelligence Network 2WK

This business process enables a fast creation of the SAP Asset Intelligence Network model based on available product information by transferring this data from manufacturing to service. The Bill of Material serves as a basis for the transfer of the product data. SAP Asset Intelligence Network is one of the applications included in the SAP Leonardo Internet of Things (IoT) portfolio's Connected Assets pillar. It is a secure cloud-based information exchange for equipment manufacturers, operators, and maintenance providers in asset-intensive industries.



Key process steps

- Identify spare parts in the Manufacturing BOM
- Set the Manufacturing BOM as ready for handover
- Handover to Asset Intelligence Network
- Publish the model in SAP Asset Intelligence Network
- Create new software version
- Maintain the new software version in Manufacturing BOM
- Handover the new software version to SAP Asset Intelligence Network
- Validate the software version change in SAP Asset Intelligence Network

Business benefits

- Create asset structures out of already available product data in a fast, automated manner
- Reduce master data maintenance efforts

R&D/Engineering

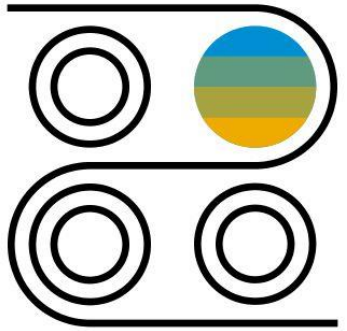
Intelligent Content Processing for Document Classification

2YC

Classification of documents having written language (unstructured text) requires huge manual effort.

Recent advances in the field of machine learning (ML) and natural language processing (NLP) allow for very precise and fully automated classification of documents based on their textual content.

The prerequisite for such an automation is the training data containing examples that represent correctly classified documents to allow a machine to use this history data to correctly classify a document.



Key process steps

- Create new document (as part of Manage Documents)
- Retrieve auto-classification
- Validate auto-classification

Business benefits

- Save costs and increase efficiency
- Replace manual work through automatic document classification
- Reduce human error during increasing volume of documents

R&D/Engineering

Recipe Handover to Production - Bill of Material

1QG

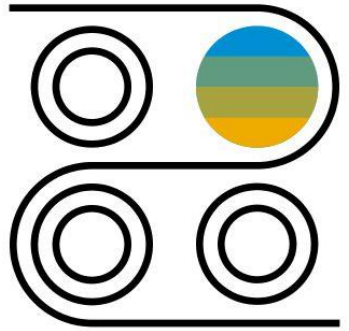
You can use this business process to create and update a bill of material using a recipe as data source. A bill of material is created to enable the manufacturing of the product.

The creation or update of BOMs typically occurs when the development department completes product definition and the information is finalized and approved for use in production.

The BOM is synchronized to the recipe to enable processing of all subsequent recipe changes.

You can hand over formula items and their quantities to production to fully support the procurement of the ingredients.

The handover of process parameters to production is not covered by this scope item and must be set up by the customer.



Key process steps

- Review recipe and decide to handover to production
- Copy development recipe to site recipe and assign materials
- Release site recipe
- Define plant specific target bill of material for the recipe for synchronization
- Simulate and execute synchronization of the recipe into a bill of material
- Save manufacturing bill of material
- Check manufacturing bill of material
- Create Production Version

Business benefits

- Create manufacturing data from development data in a fully integrated way
- Provide a permanent link between the two states to ensure full linkage between design and manufacturing states
- Minimize possible inaccuracies in handover process by identifying differences between development and production and providing guided assistance for reconciliation

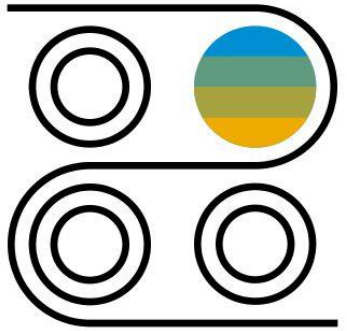
R&D/Engineering

Requirements Driven Development

2G4

With Requirements Driven Development, you can link requirements and block definition diagrams to product lifecycle management objects such as document info records, materials, and configurable BOMs.

Usually, the Systems Engineer creates requirements models to link different products to block definition diagrams.



Key process steps

- Create requirements
- Create block definition diagrams
- Link the requirements to the block definition diagram
- Link the design document, configuration profile, or material to the block definition diagram

Business benefits

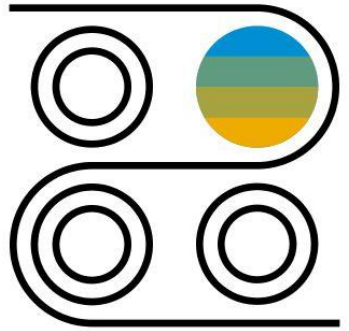
- Use linked requirements to PLM objects to ensure consistency between defined requirements and changes during product development
- Plan for intended changes with the support of impact analysis
- Ensure the fulfillment of all requirements during the product-design process

R&D/Engineering

Software Compatibility Management

2G5

Software Compatibility Management enables the Systems Engineer to define the compatibility of software versions with hardware and other software components in a product. Based on the set constraints, the BOM Engineer can check a Bill of Materials for compatibility of contained software versions with other components of the same Bill of Materials.



Key process steps

- Design software compatibility
- Check software compatibility
- Fix conflicts in Bill of Material

Business benefits

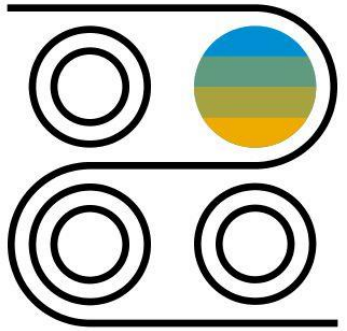
- Define relevant constraints intuitively between software versions with hardware and software
- Ensure compatibility of software versions with the other components in a product

R&D/Engineering

Specification Management for Recipes

1QA

Within the recipe development functionality, specification management provides you with a Web UI to manage ingredients and output substances of a recipe. Simplified data maintenance also supports occasional users. The maintenance functionality covers the management of attributes (physical, chemical, compositional, regulatory, and nutritional properties) needed by a recipe developer.



Key process steps

- Create qualitative attributes (such as allergens)
- Create nutrients
- Create pure substances
- Create raw substance

Business benefits

- Balance software requirements and user needs with a new, user-focused UI
- Use a tool set designed for product development use cases

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Supply Chain

Supply Chain

Order Promising

Advanced Order Promising

Inventory

Warehousing

Advanced Warehousing

Logistics Material Identification

Delivery and Transportation

Advanced Transportation

Supply Chain

Basic Available-to-Promise Processing

2LN

A product availability check can be executed for planned orders, production orders, deliveries, sales orders, and stock transport orders, resulting in the order document containing one or more confirmed schedule lines.

If the available quantity of a material is insufficient to fulfill requirements, backorder processing can be performed for sales orders or stock transport orders in alignment with a specific business strategy. Backorder processing is scheduled to run automatically and periodically, resulting in the generation of reprioritized requirements.

Characteristic catalogs contain attributes that can be used as characteristics when you check availability and can be adapted to suit your business needs.

The review availability check result can be used to display if the ordered products can be delivered in time and quantity, and when and how much of the ordered product will presumably be delivered. The result can also list if alternative shipping locations were found, and if so, which can be used.

Key process steps

- Execute a product availability check at order creation
- Configure and schedule backorder processing
- Configure characteristic catalogs to suit business requirements
- Monitor the results of backorder processing and availability checks for new and changed sales orders

Business benefits

- Execute a product availability check at order creation
- Configure and schedule backorder processing
- Monitor the results of backorder processing
- Adapt and extend characteristic catalogs for product allocation, backorder processing, and alternative-based confirmation
- Display if ordered products can be delivered in time and quantity
- Display when and how much of the ordered product will presumably be delivered
- Display if and which alternative shipping locations were found and used
- Fine-tune and optimize confirmations

Supply Chain

Advanced Available-to-Promise Processing

1JW

The scope item details the process for configuring and checking availability against defined quantities during specific time periods. Furthermore, this scope item enables you to manually prioritize requirements in order documents for materials in limited supply and release them for subsequent delivery.

You can also use this scope item to substitute the originally requested delivery plant in an order document with an alternative plant when an originally requested plant cannot fulfill a requirement in terms of requested quantity or date.

This scope item builds on the features from the Basic Available-to-Promise Processing (2LN) scope item.

Key process steps

- Configure, manage and monitor product allocation
- Manually prioritize due order documents for materials with limited availability and release reprioritized documents for delivery
- Fulfill a requirement by replacing the originally requested delivery plant with an alternative plant

Business benefits

- Plan and manage allocations for products in shortage situations
- Fulfill order requirements manually when quantities are insufficient and trigger subsequent logistics processes
- Substitute the delivering plant for sales order items with an alternative plant (either for an entire line item or a subitem)

Supply Chain

Automated Purchase-to-Pay with SAP Ariba Commerce Automation J82

Automation of purchase order to invoice processing in the Ariba Network with SAP Ariba Commerce Automation integration enables you to seamlessly connect from SAP S/4HANA to your suppliers in the Ariba Network. You can send electronic purchase orders to your suppliers using the Ariba Network and receive electronic order confirmations, advance shipping notices, and invoices from your suppliers in the Ariba Network in SAP S/4HANA. You can use Ariba Network integration in the procurement of direct or indirect materials and in the procurement of project-based services processes.

Digitized collaboration with your suppliers in the Ariba Network supports you in speeding up procurement processes and in reducing the number of manual process steps, reducing the cost of transactions with your suppliers.

The Automation of Source-to-Pay with Ariba Network (42K) scope item is the successor to J82, leveraging SOAP APIs and the cloud integration gateway to integrate with Ariba Network. Customers who didn’t activate J82 previously need to activate 42K instead. Customers who already activated J82 can continue to use it until further notification.

New functionalities will be added only to the 42K scope item. Presently, 42K does not fully cover all functionalities of J82. The existing gaps will be closed with future releases of SAP S/4HANA Cloud. Once the gaps are closed and 42K covers all of J82's functionalities, J82 will be deprecated.

Key process steps

- Approved purchase orders are sent electronically to the suppliers you interact with via the Ariba Network
- Automatically receive digital order confirmations from your suppliers
- Electronically process digital advance shipping notices sent by your suppliers in the Ariba Network into inbound deliveries in SAP S/4HANA
- Automatically send goods receipt notices to suppliers in the Ariba Network
- Electronically receive invoices from suppliers in the Ariba Network
- Digitally update suppliers in the Ariba Network on invoice status updates

Business benefits

- Reduce transaction costs
- Speed up procurement processes
- Improve compliance
- Reduce manual process steps and achieve 98% touchless invoice processing
- Increase productivity of procurement and accounts payable staff

Supply Chain
Complementary Procurement Functions

2TW

The scope item covers the usage of complementary functions in sourcing and procurement. By enabling a lightweight process, the scope item enables the user to procure operating supplies as well as batch and serial-number-managed materials. Both processes can be summarized by the three following steps: purchase order creation, posting of a goods receipt, and invoice creation. The scope item focuses on the main process steps but can be enhanced by additional optional steps.

Operating supplies are externally procured materials that are used to manufacture products and comprise auxiliary materials and expendable supplies.

The procurement of batch managed materials enables the user to work with homogeneous partial quantities of a material. This can be leveraged for example to meet legal requirements, to track defects, or to ensure procedural requirements throughout the production process.

In alignment with the batch process, you can also procure serial-number-managed materials.

Key process steps

- Manage purchase orders
- Manage goods receipts
- Manage invoices

Business benefits

- Streamline procurement processes in an efficient and cost-effective manner
- Enable highly automated processes for the procurement of operating supplies
- Enable highly automated processes for the procurement of batch and serial number managed materials
- Reduce manual effort greatly
- Support the user to meet legal requirements and track defects with batch and serial number managed material
- Ensure procedural requirements throughout the production process with batch and serial number managed material
- Enable monitoring for batch and serial-number-managed materials

Supply Chain
Consumable Purchasing

BNX

This scope item contains the creation and approval of purchase orders for consumables. Alternatively, the process can also be triggered via a purchase requisition, which can then be converted to a purchase order. Subsequently, the goods receipt and invoice processes are triggered.

Both standard and limit items can be procured with this scope item. As the value of the consumable goods is directly expended to an account assignment category, no inventory is provided.

Key process steps

- Manage purchase requisitions
- Manage purchase orders
- Manage goods receipts
- Manage invoices

Business benefits

- Streamline procurement processes in an efficient and cost-effective manner
- Ensure highly automated processes for the procurement of consumables
- Reduce manual effort greatly
- Monitor the procurement progress in real-time
- Monitor purchase order items with analytical list page

Supply Chain
Core Inventory Management

BMC

This scope item covers core inventory management processes, including the following processes: post goods receipt without reference, scrapping, block stock, unblock stock, one step stock transfer, two steps stock transfer, stock overview, slow or Non-Moving Materials, Dead Stock Analysis, Goods Movement Analysis, and material document overview.

Key process steps

- Perform customer returns scrapping: Goods issue to CO-PA
- Perform general stock scrapping: Goods issue to cost center
- Block material - stock transfer unrestricted to blocked
- Unblock material - stock transfer blocked to unrestricted
- Unblock material - stock transfer blocked to quality inspection stock

Business benefits

- Support process-related transfer postings
- Support legally required transfer postings

Supply Chain

Direct Procurement with Inbound Delivery

2TX

Starting with the creation of a purchase order, the actual supply situation can be monitored and planned. The subsequent creation of an inbound delivery enables the user to process enhanced procurement processes including the goods receipt and the putaway. The procurement process is enclosed with the creation of a supplier invoice.

Key process steps

- Manage purchase orders
- Monitor supplier confirmations
- Manage inbound deliveries
- Manage goods receipt
- Detect critical situations automatically

Business benefits

- Streamline procurement processes in an efficient and cost-effective manner
- Ensure highly automated processes for the procurement of direct materials
- Reduce manual effort greatly
- Monitor the procurement progress in real-time
- Use an analytical list page to monitor purchase order items
- Automated detection of critical situations

Supply Chain

Enablement of SAP Excise Tax Management

4LO

This integration scenario deals with integration of SAP S/4HANA APIs with SAP Excise Tax Management. The APIs are in the areas of master data (business partners, materials, organizational data), materials management (material documents), logistics execution (delivery for EMCS (Excise Movement and Control System)), sales (pricing in sales order and billing), financials (posting of excise taxes to accounting).

Country- and customer-specific details aren't covered and must be implemented on an individual basis to meet both legal and customer requirements.

Key process steps

- Replicate organizational data - storage locations and plants
- Replicate master data - material master and business partners
- Replicate material documents
- Replicate financial documents for tax accruals (optional)

Business benefits

- Enable SAP Excise Tax Management

Supply Chain

Physical Inventory - Cycle Counting

4LU

The cycle counting method is a special physical inventory procedure where inventory is counted at regular intervals within a fiscal year. In general, it starts with classification of materials based on ABC analysis or at the user's discretion. Additional counting intervals are set based on classification of materials. The counting intervals depend on the cycle count indicator. Creation of physical inventory documents then takes place. The creation can either be done manually by a requester or automatically (applicable for large volumes) based on cycle count indicator. The physical stocks are compared and realized for the given materials in the system. Any discrepancies in the system quantities and physical count are reviewed. The inventory may be recounted until final counts are accepted and inventory differences are posted.

Key process steps

- Set cycle counting classification
- Schedule physical inventory document creation
- Print physical inventory documents
- Execute physical count or recount
- Enter physical count
- List and post physical count differences

Business benefits

- Increase overall inventory accuracy
- Process inventory adjustments efficiently
- Enable real-time reporting of your company's warehouse stock

Supply Chain

Physical Inventory - Inventory Count and Adjustment

BML

The process begins with the generation of the required inventory count sheets. Materials can be blocked here for posting during the physical inventory. Once the inventory sheets are printed out, the actual physical inventory count is realized for the given materials. The count result is entered in the system and discrepancies in the system quantities are reviewed. The inventory may be recounted until final counts are accepted and inventory differences are posted.

Key process steps

- Create physical inventory documents
- Print physical inventory documents
- Execute physical count or recount
- Enter physical count
- List and post physical count differences

Business benefits

- Get a transparent view on the stocks currently available
- Process inventory adjustments efficiently

Supply Chain

Procurement of Direct Materials

J45

This purchasing process uses purchase requisitions that are generated either by the Material Requirements Planning (MRP) process or manually by a requester. The conversion from a purchase requisition to a purchase order can either be done manually (in case adoptions are necessary) or automatically (applicable for large volumes). Alternatively, the purchase orders can be generated manually.

The purchase order can be subject to approval before being issued to a supplier. Goods are shipped from the supplier and the goods receipt is created with reference to the corresponding purchase order. Subsequently the invoicing process is triggered. The user can monitor the progress throughout the entire procurement process and can initiate reactive actions if needed.

Key process steps

- Manage purchase requisitions
- Manage purchase orders
- Manage goods receipts
- Manage stock
- Manage invoices
- Manage down payments

Business benefits

- Streamline procurement processes in an efficient and cost-effective manner
- Ensure highly automated processes for the procurement of direct materials
- Reduce manual effort greatly
- Monitor the procurement progress in real-time
- Use an analytical list page to monitor purchase order items

Supply Chain

Quality Management for Complaints Against Suppliers

2F9

This scope item describes the management of complaints against suppliers, for example, after delivery of a product.

Leveraging quality notifications, the quality engineer captures all complaint-related information including the observed defects. The quality engineer enters immediate actions for documentation purposes and requests a root cause analysis from the supplier. Furthermore, the quality engineer can keep a record of his communication with the supplier.

The quality engineer defines tasks either globally at notification level or per defect. The quality engineer assigns one processor to each task. The task is processed, and task processors give feedback per task. After having received the supplier's root cause analysis, identified root causes can be assigned to each defect.

Finally, the quality engineer reviews each task and closes the notification.

Key process steps

- Create quality notification with basic data
- Capture defects and document immediate actions
- Define tasks
- Execute tasks and document outcome
- Review tasks
- Document supplier root cause analysis
- Complete notification

Business benefits

- Capture complaint details, related defects, causes, and activities in one single place
- Manage different types of activities (for example immediate, corrective, and preventive actions)
- Assign a person responsible to each action and track action status and outcome

Supply Chain

Quality Management for Complaints from Customers

2FA

This scope item describes the management of customer complaints, for example, after delivery of a product. Using quality notifications, the quality engineer can capture all complaint-related information provided by the customer. The quality engineer enriches the notification by adding internal logistical information, such as delivery and purchase documents. Further immediate actions can be captured for documentation purposes. To identify the complaint's root cause, the engineer documents a root cause analysis. After having identified the error and the related root cause, the quality engineer classifies this information using code groups, codes, and free text information.

The quality engineer defines corrective and preventive actions either globally at notification level or per defect. The engineer assigns one processor to each action. The action is processed, and action processors give feedback per action.

Finally, the quality engineer reviews each action and closes the notification.

Key process steps

- Create quality notification with basic data
- Capture defects, define root cause analysis, and document immediate actions
- Define corrective actions and correction tasks
- Execute root cause analysis, corrective actions, correction tasks, and document outcome
- Review root cause analysis and document root cause, review corrective actions, and review correction tasks
- Define preventive actions
- Execute preventive actions and document outcome
- Review preventive actions
- Complete quality notification

Business benefits

- Capture complaint details, related defects, causes, and activities in one place
- Manage different types of activities (for example immediate, corrective, and preventive actions)
- Assign a person responsible to each action and track action status and outcome

Supply Chain

Quality Management in Procurement

1FM

This scope item manages quality inspection in procurement: At goods receipt, a good is posted to quality inspection stock and an inspection lot is created based on an inspection plan. The quality technician records the inspection results. The quality engineer then makes a usage decision – for example, accepting or rejecting the material, posting the material to unrestricted stock or blocked stock, or triggering return to the supplier, with the option of posting as a consumed sample. For rejected results, a defect is automatically recorded. The supplier is rated on the quality score defined in the usage decision. With a dynamic modification rule, quality inspections can be tightened, reduced, or skipped based on previous inspection results. You can block the creation of purchase orders or limit the purchased quantity due to quality reasons. By leveraging quality certificates in procurement, you can ensure that suppliers provide the documents if required.

Key process steps

- Purchase material from a supplier
- Review quality info record
- Review inspection plan, optionally with dynamic modification rule and sampling scheme; optionally with inspection method with documents attached
- Post goods receipt for purchase order
- Review material stock before inspection
- Display open inspection lots
- Record inspection results
- Make usage decision
- Review and analyze defects
- Review material stock after inspection

Business benefits

- Integrate quality inspection activities in the purchasing process
- Use inspection plans for quality inspections with dynamic modification, sampling scheme, and material-supplier release
- Display open and completed receipts of quality certificates in procurement
- Record nonconformities at the right point in time to avoid cost-intensive reprocessing or unnecessary waste

Supply Chain
Quality Management in Sales

1MP

This scope item manages quality inspection activities in outbound delivery processes. Quality inspection activities may be important before goods issue.

When creating an outbound delivery for a material that is the subject of an inspection in the sales and delivery process, an inspection lot is created based on an inspection plan. The quality technician records the inspection results for a sample size. Based on these inspection results, the quality engineer makes a usage decision, for example, accepting or rejecting the material. If accepted, the goods are posted and sent to the customer. If rejected, the whole quantity is posted to blocked stock and the delivery is updated. For the rejected results, a defect is automatically recorded. Any further stock of the same material must be accepted before they are delivered.

Key process steps

- Sell material to a customer and create an outbound delivery
- Review inspection plan
- Display open inspection lots
- Record quality inspection results
- Make usage decision, optionally attach documents
- Review and analyze defects
- Post goods issue for the outbound delivery

Business benefits

- Integrate quality inspection activities in the sales process
- Use inspection plans for quality inspections
- Detect nonconformities before delivering materials to a customer

Supply Chain

Quality Management in Stock Handling

1MR

This scope item manages quality inspection activities in stock handling processes. Quality inspection activities may be relevant for materials during the storage of goods.

During the storage of goods, a warehouse clerk may identify damage that must be checked and investigated. To follow up, the material is posted to quality inspection stock and an inspection lot is created automatically. The quality engineer inspects the material and makes a usage decision that triggers the posting of the material, for example, to unrestricted stock, to blocked stock, or to scrap. Additionally, the quality inspection stock may be moved from one storage location to another, for example, if a specific check can only be done at one location in the plant where the equipment is available.

Key process steps

- Post material from unrestricted or blocked stock to quality inspection stock
- Execute inspection and record results
- Make usage decision
- Review material stock after inspection

Business benefits

- Integrate quality inspection activities in the stock handling process
- Detect nonconformities and necessary follow-up actions as soon as possible to avoid inappropriate usage

Supply Chain
Return to Supplier

BMK

The return process begins with the creation of a return purchase order and is followed by the outbound delivery. Subsequently the items are picked and shipped to the supplier. Alternatively, you can also directly post a goods issue. The process is closed with the creation of a credit memo, which transfers the liability to the corresponding supplier.

Key process steps

- Return purchase order management
- Stock management
- Return delivery management
- Picking and post goods issue
- Credit memo management

Business benefits

- Efficient and cost-effective streamlined return processes
- Ensure highly automated processes for the return of materials
- Reduce manual effort
- Real-time monitoring of the return progress
- Analytical list page: Monitor purchase order items

Supply Chain
Subcontracting

BMY

A subcontract purchase requisition is either generated via the Material Requirements Planning (MRP) process or manually by a requestor. The purchase requisition is converted into a subcontract purchase order. The purchase order is subject to approval based on predefined parameters before being issued to the subcontractor. The outbound delivery is created, and the goods are picked and shipped to the subcontractor. With the supply of the finished material, the goods receipt is created. The consumption of the sent components is recorded upon the receipt of the value-added finished material. Subsequently, the invoicing process is triggered.

Key process steps

- Manage purchase orders
- Manage stock
- Manage outbound deliveries
- Pick and post goods issues
- Manage goods receipts
- Manage invoices
- Serial number processing

Business benefits

- Streamline subcontracting processes efficiently and cost-effectively
- Ensure highly automated processes
- Reduce manual effort greatly
- Monitor the process progress in real-time

Supply Chain
Supplier Consignment

2LG

By using the consignment process for procurement, the supplier provides the material and stores it at site of the procuring party. The supplier maintains the legal owner of the material until it is withdrawn from the consignment stores. Payment for consignment stock is only required in case the material is withdrawn. For this reason, the supplier is informed of withdrawals of consignment stock on a regular basis.

Key process steps

- Manage purchase orders
- Manage goods receipts
- Manage stock
- Settle consignment

Business benefits

- Store supplier goods at own warehouse
- Access goods at any time
- Hold billing process until the goods are withdrawn from the warehouse
- Return goods to the supplier if they are not needed
- Streamline procurement processes in an efficient and cost-effective manner
- Ensure highly automated processes
- Reduce manual effort greatly
- View analytical list page: Monitor purchase order items

Supply Chain

Basic Warehouse Inbound Processing from Supplier

1FS

In this process, differently packed goods received from suppliers are put away to final storage bins in the warehouse. For example, full pallets go to the high rack narrow aisle while cartons or pieces of the product would go to the mezzanine. Large parts are routed to the Bulk Storage. During putaway, you might use a handover point due to the physical constraints of the high rack narrow aisle, where only a specialized high-level truck can reach all levels. The destination storage type for putaway is partially determined by the product's Putaway Control Indicator (PACI). If a product is missing the PACI or there is insufficient space in the storage type, it is moved to a clarification zone. You get full RF/mobile device support throughout the process.

Key process steps

- Create purchase order
- Create EWM inbound delivery
- Process goods receipt
- Check warehouse orders (optional)
- Option 1: Putaway of products
- Option 2: Move products to clarification zone and perform repacking
- Check inbound delivery (optional)

Business benefits

- Manage stock on a storage bin level
- Provide flexible variations of the basic inbound process using different storage types
- Enable warehouse processes with RF/mobile device
- Distribute workload between the different resources (low-level trucks, high-level trucks, human resources, and so on) using the full capabilities of RF queues following the physical layout of the warehouse
- Support clarification zone for handling units that currently cannot be put away to a destination

Supply Chain

Basic Warehouse Inbound Processing from Supplier with Quality Management 1V9

This process allows you to inspect the products received from external suppliers in a basic warehouse inbound process using basic warehouse management functionality seamless integrated with quality management in SAP S/4HANA. The process starts with the creation of a purchase order and an EWM inbound delivery. Upon arrival of the purchased goods, they are unloaded, packed, and the goods receipt is posted. By posting goods receipt, the system runs active inspection rules. The system creates an inspection lot for the inbound delivery items if they are inspection relevant.

Upon creation of the inspection lot the system updates the EWM inbound delivery by adding the inspection lot number to the document flow as well as the stock is posted to stock type quality inspection stock.

The warehouse worker triggers the creation of warehouse tasks to move the goods to the Quality Inspection Center for a physical inspection. The inspection lot is now available in the worklist of the quality technician. The technician inspects the delivered goods and records the inspection results. Based on these inspection results, the quality engineer makes a usage decision. The engineer can enter partial decisions for a partial quantity of this stock.

As a result of the quality inspection, you determine if the goods fulfill the quality standards for storage in the warehouse, or if they do not fulfill the standards, which moves them to the blocked stock area for further clarification. After the decision, handling units with either goods to be stored or goods to be moved to the blocked stock area are created in the system. The creation of warehouse tasks to move the handling units to the corresponding area in the warehouse are triggered automatically. The process ends with the confirmation of the warehouse tasks.

Key process steps

- Create purchase order
- Create EWM inbound delivery
- Process goods receipt
- Check warehouse orders (optional)
- Move handling units to quality inspection center
- Record inspection results
- Make usage decision
- Option 1: Putaway of handling units to final storage bin
- Option 2: Move handling units to blocked stock area
- Check inbound delivery (optional)

Business benefits

- Manage stock on a storage bin level
- Inspect the products received from external suppliers in a basic warehouse inbound process
- Integrate seamlessly between quality management and basic warehouse management in SAP S/4HANA
- Make use partial quantity decisions
- Enable warehouse processes with RF/mobile

Supply Chain

Basic Warehouse Outbound Processing to Customer

1G2

You can use this process to ship ordered goods to external customers. This process usually starts with the creation of a sales order and an outbound delivery, which is later used to trigger the outbound processing in the warehouse. During the creation of warehouse tasks, the system determines the location for picking the stock and allocates the stock to the warehouse task. At the same time, the system automatically makes sure that all goods for a customer are routed to the same place at the packing work center, where shipping Handling Unit labels and content lists are printed. After goods are loaded, the goods issue is posted. At the end of the process, follow-up actions (such as the creation of the billing document) are executed.

Key process steps

- Create sales order
- Create delivery
- Create warehouse tasks manually
- Check warehouse orders (optional)
- Pick warehouse orders
- Create shipping handling units and repacking
- Close shipping handling units
- Stage shipping handling units
- Display loading overview (optional)
- Load shipping handling units
- Post goods issue for outbound delivery order
- Check outbound delivery (optional)
- Create billing document (optional)

Business benefits

- Manage stock on a storage bin level
- Provides flexible variations of the outbound process for sending goods to customers
- Shows the detailed use of handover points, packing, staging, loading, and the RF/mobile environment including the corresponding RF queues that follow the physical layout of the warehouse

Supply Chain

Batch Management in Outbound Processing

1V7

This scope item describes the usage of batch-managed products in a warehouse outbound process. You manage stock on a storage bin level using basic warehouse management functionality in SAP S/4HANA. The process starts with the creation of a sales order. During sales order creation, you enter customer-specific requirements for the selection of batches. The customer-specific batch selection criteria are then considered by the system when it determines the stock to be picked. The system makes sure that only those batches that meet the customer's requirements are considered. You can continue with the basic warehouse outbound or extended warehouse outbound process to complete picking, packing, staging, and loading.

Key process steps

- Create sales order
- Create delivery
- Check simulated batch determination (optional)

Business benefits

- Manage stock on a storage bin level
- Demonstrate the capability of using batch-managed products, customer-specific batch determination criteria and the actual batch selection in the warehouse outbound process
- Enable warehouse processes with RF/mobile

Supply Chain

Decentralized EWM - Ad Hoc Goods Issue

4RQ

This scope item can be used to post unplanned goods issues without reference to outbound deliveries. It can be used for various use cases such as scrapping, goods issue to another storage location and goods issue for consumption with cost center. For scrapping, you initiate this process by creating a posting change and a warehouse tasks to move the material to be scrapped from the source bin to the scrapping zone. After the physical goods movement is completed, you post the unplanned goods issue.

Key process steps

- Create ad hoc warehouse task (for example, for ad hoc goods issue to other storage location) and print warehouse tasks lists
- Create posting change and warehouse task (for example, for scrapping) and print warehouse tasks lists
- Confirm warehouse tasks
- Post unplanned goods issue to other storage location, for consumption with cost center, or for scrapping

Business benefits

- Support various use cases of an unplanned goods issue
- Control and record movements of products and handling units in the warehouse
- Map your warehouse complex in the system down to a storage bin level
- Improve visibility and control in warehouse processes

Supply Chain

Decentralized EWM - Inbound Processing

4RO

In this process, products that are delivered with the intent to be stored in the warehouse are received and moved to a storage bin. This scope item allows different variants of inbound processing such as an inbound from supplier and inbound from other storage location. The process starts with an inbound delivery that is relevant for processing in the warehouse. Once the products arrive at the warehouse, batches can be assigned to the inbound delivery items. Afterwards, the goods receipt is posted, and warehouse tasks are created to execute the movements in the warehouse. After moving the products to the final bin or the clarification zone (exceptional case), the warehouse tasks are confirmed accordingly.

Key process steps

- Assign or create batch (optional)
- Change stock type (optional)
- Create handling unit and print label (optional)
- Post goods receipt
- Create putaway warehouse tasks and print putaway lists
- Confirm warehouse tasks
- Check material in clarification zone (optional)
- Create warehouse tasks from clarification zone to final bin and print warehouse task lists (optional)
- Confirm warehouse tasks (optional)

Business benefits

- Receive products from different sources and store them in your warehouse
- Control and record movements of products and handling units in the warehouse
- Map your warehouse complex in the system down to storage bin level
- Improve visibility and control in warehouse operations
- Handle exceptions
- Work with batches

Supply Chain

Decentralized EWM - Outbound Processing

4RP

With this process, products are picked, packed, and sent from your warehouse. This scope item supports different outbound process scenarios. For example, you can send ordered products to external customers, return products to suppliers, and supply products to other storage locations. The process starts with an outbound delivery that is relevant for processing in the warehouse. This document serves as the starting point for subsequent process steps. Warehouse tasks are created based on the outbound delivery. The physical process for picking is executed and confirmed afterwards. A warehouse worker packs the products into shipping handling units. Finally, the goods issue is posted.

Key process steps

- Assign carrier (optional)
- Create pick warehouse tasks and print picking lists
- Confirm pick warehouse tasks
- Pack goods into shipping handling units and print labels (optional)
- Print loading instruction (optional)
- Post goods issue

Business benefits

- Control and record movements of products and handling units in the warehouse
- Map your warehouse complex in the system down to storage bin level
- Improve visibility and control in warehouse operations
- Leverage shipping handling units including label printing during packing
- Handle exceptions

Supply Chain

Decentralized EWM - Physical Inventory

4RR

In this scope item, you can plan, conduct, and confirm regular counts of actual product quantities in the warehouse and compare the physical stock to the data in the system. You first create physical inventory documents for a chosen number of storage bins or products or based on cycle counting indicators. The cycle counting method is used to count products at regular intervals during a year. You can set up counting intervals based on cycle count indicators. After the documents are created and printed, you count the stock in the warehouse. You enter the count result in the system and review discrepancies in the system quantities. By posting the PI documents, you adjust the book inventory in the storage bins to align it with the physical inventory counts. The inventory may be recounted until final counts are accepted. Finally, inventory differences are posted to reconcile stocks in the Decentralized EWM based on SAP S/4HANA system.

Key process steps

- Variant 1: Create and print counting document
- Variant 2: Create and print cycle counting document
- Enter count results
- Confirm inventory count results
- Analyze and post differences

Business benefits

- Ensure an accurate accounting of the inventory in the warehouse
- Leverage several physical inventory methods
- Map your warehouse complex in the system down to a storage bin level
- Improve visibility and control in warehouse processes

Supply Chain

Decentralized EWM - Replenishment

4RS

With this process, you can plan the creation of replenishment warehouse tasks to ensure the right inventory levels for your products in the areas where picking is done. This scope item supports planned replenishment of fixed storage bins. The planned replenishment can be started interactively. The system creates replenishment warehouse tasks if the current stock is below the defined threshold for the product's fixed bin. The replenishment quantity is calculated as the difference between the maximum and the current bin quantity. At the end of the process, the warehouse operative confirms the warehouse tasks and makes sure that the stock is moved from the reserve to the picking area.

Key process steps

- Manual replenishment run
- System: Create replenishment warehouse tasks
- Check replenishment warehouse tasks (optional)
- Confirm replenishment warehouse tasks

Business benefits

- Run planned replenishment for fixed storage bins
- Setup automatic replenishment, if required
- Maintain a proper stock rotation
- Minimize the manual creation of warehouse tasks for internal movements
- Improve warehouse picking efficiency

Supply Chain

Decentralized EWM - Technical Integration ERP

4UA

With this technical scope item, you can activate the required settings to integrate your SAP S/4HANA ERP system with your decentralized EWM based on SAP S/4HANA system.

It covers the following aspects of the configuration: Customizing settings in the SAP S/4HANA system (which acts as ERP) required for integration with a decentralized EWM based on SAP S/4HANA system. This includes warehouse integration into the SAP ERP enterprise structure and additional data transfer and settings in SAP ERP.

Key process steps

- This is a technical scope item that enables other processes with decentralized EWM based on SAP S/4HANA.

Business benefits

- Accelerated integration of decentralized EWM based on SAP S/4HANA to your SAP S/4HANA ERP system

Supply Chain

Initial Stock Upload for Warehouse

1FU

You can use this process to initially provide stock to bins of the different final storage types provided with the warehouse. It gives a good example how stock upload can be done and is also a simple and quick way to set the stage for testing.

The stock data for the upload is provided via different sheets containing products and storage types. The upload creates handling units using an internal HU numbering instead of assigning Standard Shipping Container Codes (SSCC) as would be done in the basic inbound process. The upload always populates bins listed at the end of a storage type to avoid possible overlaps with bins occupied by standard processes.

Key process steps

- Upload stock to the different storage types of the warehouse
- Check the material documents (optional)

Business benefits

- Manage stock on a storage bin level
- Demonstrates stock upload capabilities
- Provides storage type, product, and process-specific stock upload data for all supported processes in the usual stock upload file format

Supply Chain

Physical Inventory in Warehouse

1FW

In this process, you create physical inventory (PI) documents for a chosen number of storage bins or products on a regular basis to distribute the workload for physical inventory over the year. You perform the counting using a radio-frequency (RF) device or paper.

By posting the PI documents, you adjust the book inventory in the storage bins to align it with the physical inventory counts. To adjust the stock accounts, the system automatically posts all differences up to a certain value with a background job. At different points in the process, tolerance checks control the count results and final postings that adjust the stock situation. Along with this process, you monitor the progress of your physical inventory within the warehouse monitor.

Key process steps

- Create physical inventory documents
- Alternative 1: Paper-Based counting
- Print physical inventory documents
- Enter count results from printout into system
- Alternative 2: RF-Based counting
- Enter count results into system (RF-device)
- Monitor recount physical inventory documents (optional)
- Post physical inventory documents
- Post physical inventory differences
- Review and post differences with difference analyzer

Business benefits

- Manage stock on a storage bin level
- Establish an inventory counting process with a periodic physical counting approach
- Support efficient examination of the stock situation in your warehouse
- Enable RF-based or paper-based counting
- Reduce inventory losses in the warehouse

Supply Chain

Production Integration - Component Consumption and Receipt in Warehouse

1VB

With this process, you can tightly integrate warehouse execution with manufacturing operations using the Advanced Production Integration functionality of basic warehouse management in SAP S/4HANA. The warehouse execution for Production Orders is based on the Production Material Request (PMR) document. The PMR contains the information of component materials and quantities, which are needed for production.

This scenario supports warehouse execution for production orders in discrete manufacturing. You can enable synchronization of the material flows between warehouse and production and can improve inventory visibility and control as material movements are posted in real time in the warehouse. You stage components from the warehouse to the production supply area as they're required for manufacturing operations and consume them from the production supply area. You receive finished goods and put them away as they arrive on a conveyor line from production into the warehouse. The finished goods are put away in the warehouse into the Bulk Storage. You get fully RF/mobile enabled process steps.

Key process steps

- Get anonymous forecast and MRP
- Convert production orders, and ATP-check
- Release production orders
- Check production material requests (optional)
- Plan staging
- Check staging warehouse orders (optional)
- Perform staging to the production supply area
- Perform crate part replenishment
- Consume material during production and post consumption
- Confirm production operations
- Check status of the production material requests (optional)
- Clear the production supply area
- Move products from the production supply area back to the warehouse
- Perform the goods receipt from production
- Putaway of finished goods to the final bins

Business benefits

- Integrate the material flows between warehouse and production
- Optimize the space usage of PSA via staging planning and PSA clearing
- Enable warehouse processes with RF/mobile

Supply Chain

Replenishment in Warehouse

1FY

With this replenishment processes, you can plan or automate the creation of replenishment warehouse tasks to maintain the right inventory levels for your products in the areas where picking is done. The replenishment process is activated per type of replenishment (such as planned replenishment or automatic replenishment) and storage type as part of the configuration. Within the automatic replenishment, the system automatically creates replenishment warehouse orders when stock falls below a predefined threshold during an outbound process. The system calculates the replenishment quantity according to the settings in the material master. Planned replenishment can be performed either interactively or in the background. The system creates replenishment warehouse tasks as a result of a planned replenishment run if the current stock is below the threshold at the time when the program is executed.

Key process steps

- Replenish stock
- Check replenishment warehouse tasks (optional)
- Process replenishment

Business benefits

- Manage stock on a storage bin level
- Use planned or automated replenishment processes
- Distribute workload with RF queues
- Use intra-aisle and cross-aisle replenishment

Supply Chain

SAP Fiori Analytical Apps for Inventory and Warehouse Management

BGG

This scope item provides overview pages for the inventory manager and warehouse clerk. The focus of the analytical apps is to ensure high throughput of the goods receipts and pickings with an uninterrupted inventory flow that creates for an optimal stock situation.

Key process steps

- View an analytical and transactional display of the overdue materials, inbound and outbound deliveries, purchase orders, and other inventory management processes
- Filter the KPIs per the different business attributes, such as plant, storage location, material and so on
- Navigate from the KPI insights to the corresponding smart apps for detailed analysis
- Share high-level KPI and process information with persons responsible for process execution in Inventory and Warehouse Management

Business benefits

- Provide a dashboard of information for the Inventory Managers and Warehouse Clerks to perform their daily activities smoothly
- Provide high-level insights for the Inventory Manager and Warehouse Clerk to understand the key numbers and drill down to action
- Provide insights into the different stages of the Inventory and Basic Warehouse Management with understanding to key requirement
- Get overview into the different inventory deliveries and warehouse management

Supply Chain
Scrapping in Warehouse

1G0

In this process, you can decide to scrap goods that are currently stored in any of the storage types in the warehouse. The scrapping process can be initiated based on the expired shelf life of a stock item, or it can be triggered by discovering damaged goods in the warehouse in daily work.

For the first approach, you can search for expired stock items in the Warehouse Monitor. You then initiate the scrapping by creating the needed warehouse orders and tasks. The system supports scrapping for all storage types. Depending on the physical layout of the warehouse, the system automatically creates the warehouse orders and tasks and assigns them to the corresponding RF queues. The actual scrapping, including the financially relevant postings, can be done manually or with a periodically scheduled program.

Key process steps

- Initiate scrapping manually by discovering damaged goods or automatically based on the expired shelf life of a stock item
- Move items from their storage to the scrapping zone
- Empty scrapping zone and post goods issue

Business benefits

- Manage stock on a storage bin level
- Provides flexible variations of the scrapping process
- Supports all storage types of the preconfigured warehouse
- Enables RF/mobile processes

Supply Chain

Warehouse Inbound Processing from Supplier with Batch Management 1V5

This scope item describes the usage of batch-managed products in a warehouse inbound process. You manage stock on a storage bin level using basic warehouse management functionality in SAP S/4HANA. In this process, you order goods from suppliers. The goods use batch management with the example of a batch – country of origin – and demonstrate how batch characteristics can be used to create and characterize batches received from a supplier. The process characteristics that are specific to batch management are the creation of a batch ID and the maintenance of a batch's country of origin during inbound delivery creation. You can continue with the basic warehouse outbound process to finish the put away process. Once characterized batches are stored in the warehouse, batch selection based on characteristics is supported in the warehouse outbound processing.

Key process steps

- Create purchase order
- Create EWM inbound delivery
- Process goods receipt

Business benefits

- Manage stock on a storage bin level
- Demonstrate the integration of batch management in the warehouse inbound process
- Enable warehouse processes with RF/mobile

Supply Chain

Advanced Warehouse Outbound Processing to Customer 1VD

This warehouse process optimizes the process of picking products and sending them to external customers by leveraging extended functionality of SAP S/4HANA Warehouse Management. It extends the basic warehouse inbound process with wave management and transportation unit handling.

The process usually starts with the creation of a sales order and an outbound delivery, which is later used to trigger the outbound processing in the warehouse. Based on defined criteria, the system automatically combines items from the outbound warehouse requests in waves. The Warehouse Clerk (EWM) releases the picking waves by using the warehouse monitor. The system determines the location for picking the stock and allocates the stock to the warehouse task. At the same time, the system automatically makes sure that all goods for a customer are routed to the same place at the packing work center, where shipping Handling Unit labels and content lists are printed. The Shipping Cockpit is used to create transportation units (TU), to check them in and to assign the TUs to a door. After goods are loaded the system posts goods issue for all stock that was loaded on the TUs. At the end of the process, follow-up actions (such as the creation of the billing document) are executed.

Key process steps

- Create sales order
- Create delivery
- Release the picking wave
- Check warehouse orders (optional)
- Pick warehouse orders
- Create shipping handling units and repacking
- Close shipping handling units
- Stage shipping handling units
- Display loading overview (optional)
- Create transportation unit and assign to door with shipping cockpit
- Load shipping handling units
- Finish loading with shipping cockpit
- Check outbound delivery (optional)
- Create billing document (optional)

Business benefits

- Manage stock on a storage bin level
- Provide flexible variations of the outbound process for sending goods to customers
- Show the detailed use of handover points, packing, staging, loading, and the RF/mobile environment including the corresponding RF queues that follow the physical layout of the warehouse
- Leverage Wave Management to optimize your warehouse outbound process
- Use the Shipping Cockpit to plan and monitor shipping activities

Supply Chain
Handling Unit Management

4MM

A handling unit is a physical unit consisting of packaging materials (load carriers or packing material) and the goods contained on or in it. A handling unit is always a combination of products and packaging materials. All the information contained in the product items (for example, about batches) is retained in the handling units and is always available.

This scope item sets up packaging of materials in outbound, inbound, inventory and production, including batches and serial numbers. Because it only includes the steps for packaging, it requires a standard process scope item to work with.

Key process steps

- Execute packing manually in Outbound Delivery
- Execute packing automatically in Outbound Delivery
- Manage handling units in inventory
- Execute packing manually in Inbound Delivery
- Execute packing automatically in Inbound Delivery
- Plan and create handling units in discrete and process manufacturing
- Confirm handling units in production (discrete and process)
- Execute Intracompany
- Execute Intercompany Stock Transfer
- Execute Intercompany Stock Transfer Return
- Execute Customer Consignment

Business benefits

- Use a unique identifier across all locations (such as GTL, SSCC, or other number formats)
- Print labels
- Reflect packing-based logistic structures across logistic unit levels - such as production and distribution, across plants, or across a plant and customer (Outbound)
- Track movements of packed goods in logistics easily

Supply Chain

Planning of External Transportation Requirements

4OZ

This scope item supports your company´s transportation planning and execution.

The sales order-based transportation demand (freight unit) is created in SAP S/4HANA Cloud considering transportation constraints. The freight unit is replicated at the same time to the connected SAP S/4HANA on-premise system.

In the SAP S/4HANA on-premise system, the transportation planner creates a freight order and assigns the freight unit received from SAP S/4HANA Cloud. Additionally, the transportation planner assigns a carrier to the freight order as the responsible party to execute the transportation of the goods.

When the transportation planner is done with the planning activities, the transportation planner saves the freight order. The freight order is automatically replicated to SAP S/4HANA Cloud for further processing.

Key process steps

- Select freight unit
- Create freight order

Business benefits

- Support your company's transportation execution and monitoring in SAP S/4HANA Cloud and transportation planning in SAP S/4HANA on-premise
- Reduce freight costs with early transportation planning capabilities based on freight orders
- Get fewer delivery changes during logistics execution with late delivery creation based on transportation plan and close to warehouse activities and goods issue

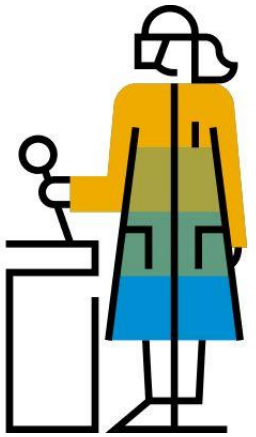
SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Asset Management

Asset Management

Maintenance Management

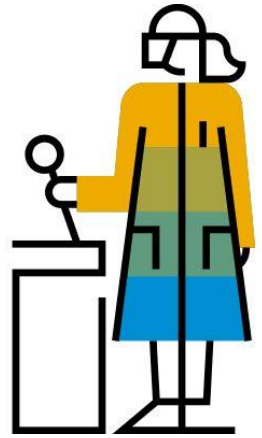
Environment, Health, and Safety



Asset Management
Corrective Maintenance

BH1

This scope item allows you to perform the corrective maintenance of technical objects whenever a breakdown or failure occurs. The plant maintenance component provides a comprehensive notification and order system to facilitate this process. You process a repair using several planning stages, such as preliminary costing, work scheduling, material provision and resource planning. You also react immediately to issues that may lead to the shutdown of production facilities. When this becomes necessary, you create the required maintenance work orders and shop papers with a minimum of entries in the shortest possible time.



Key process steps

- Create malfunction report
- Create maintenance order
- Release maintenance order
- Print job card
- Confirm maintenance order
- Show costs on maintenance order
- Technically complete maintenance order

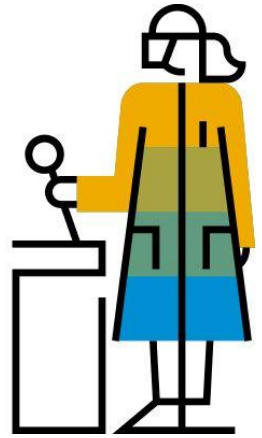
Business benefits

- Support processing of maintenance operations with internal resources
- Increase transparency of costs and time spent on individual assets for maintenance purposes
- Simplify actual order cost tracking and assignment of costs to settlement receiver for greater transparency and cost controlling
- Enable recording of working times on the cost objects for effort-tracking
- Plan stock and non-stock materials and services for repair

Asset Management
Emergency Maintenance

BH2

This scope item uses order recording after an event to log unforeseen and urgent maintenance work by creating and confirming an order in the same operation. The technician can identify an issue affecting a piece of equipment, immediately fix the issue, and later report the time spent and the material consumed. The technician can enter required data quickly. It can then be used for planning objects (such as maintenance orders) and for actual recording (order confirmation, notification data, and goods movements). Planned data does not differ from the actual data, which is the work recorded on an operation corresponding to the confirmed actual work. The order is created, released, and if required, technically completed. In addition, you can install, dismantle, or replace pieces of equipment.



Key process steps

- Report malfunction
- Repair malfunction

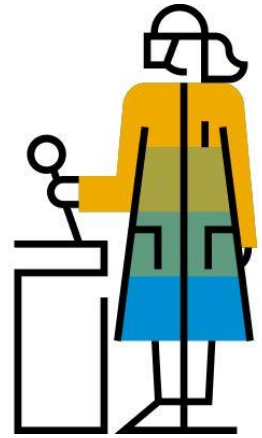
Business benefits

- Support processing of maintenance operations with internal resources
- Increases transparency of costs and time spent on individual assets for maintenance purposes
- Simplify actual order cost-tracking and assignment of costs to settlement receiver for greater transparency and control of costs
- Enable recording of working times on the cost objects for tracking effort

Asset Management
Preventive Maintenance

BJ2

This scope item describes the processes you perform to prevent system breakdowns or breakdowns of other objects that have high repair costs. Such breakdowns result in greater costs due to production downtime. Preventive maintenance support processes to plan the scope and time of maintenance work for inspections, maintenance, and repairs, in advance. The quality of products manufactured is substantially affected by the operational condition of the production plant. There is a requirement for quality assurance to be more cost effective to maintain objects regularly, and in return avoid a more expensive breakdown. You determine the data required for preventive maintenance by using previous data supplied by the system. In addition to internal company aspects for planned maintenance, you should consider external factors due to an increasing number of conditions set by legislative bodies demanding more stringent requirements on planned monitoring and maintenance of objects.



Key process steps

Preventive Maintenance - Time Based

- Maintain maintenance strategies
- Create general task list
- Create maintenance plan
- Schedule maintenance plan
- Release maintenance order For preparation
- Review maintenance backlog
- Schedule maintenance orders
- Execute maintenance order operations
- Post execute maintenance order operations
- Technically complete maintenance order

Preventive Maintenance - Performance Based

- Maintain maintenance strategies
- Create general task list
- Create maintenance plan
- Create measurement document
- Schedule maintenance plan
- Release maintenance order for preparation
- Review maintenance backlog
- Schedule maintenance orders
- Execute maintenance order operations
- Post execute maintenance order operations
- Technically complete maintenance order

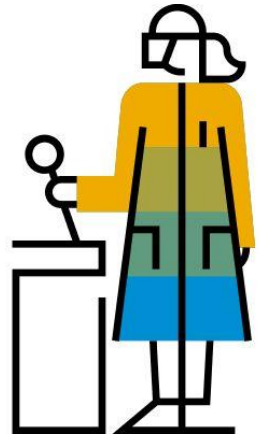
Business benefits

- Plan better by changing from reactive to proactive maintenance
- Ensure high availability of equipment and therefore better performance and utilization of assets
- Reduce total maintenance costs by reducing breakdowns
- Support external requirements, such as manufacturer recommendations, and legal and environmental requirements

Asset Management
Proactive Maintenance

4HI

You can create a maintenance schedule in the form of a maintenance plan. Maintenance plans include task lists and relevant assets. A task list contains a sequence of tasks that can be planned for resources such as material, service, capacity, and so on. Maintenance planning is carried out based on the performance of an asset or by using time-based strategy or both, which creates maintenance demand. This process supports all the phases of business cycle such as planning, approval, preparation, scheduling, execution, post execution, and completion.



Key process steps

Proactive Maintenance – Time-Based

- Maintain a maintenance strategy
- Create a task list
- Create a maintenance plan
- Schedule a maintenance plan
- Release a maintenance order for preparation
- Review maintenance backlog for readiness
- Schedule a maintenance order
- Perform time confirmation of pre- and main order operations
- Perform time confirmation of post maintenance order operations
- Complete technically

Proactive Maintenance – Performance-Based

- Maintain a maintenance strategy
- Create a task list
- Create a maintenance plan
- Create a measurement document
- Schedule a maintenance plan
- Release a maintenance order for preparation
- Review maintenance backlog for readiness
- Schedule a maintenance order
- Perform time confirmation of pre- and main order operations
- Perform time confirmation of post maintenance order operations
- Complete technically

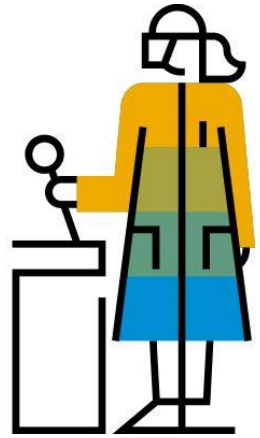
Business benefits

- Ensures high availability and utilization of assets
- Ensures optimal performance of assets
- Reduces total maintenance costs by minimizing breakdowns

Asset Management
Reactive Maintenance

4HH

This comprehensive nine-step process supports end-to-end maintenance process. First, a maintenance request is created (Initiation). Next, the maintenance request is screened and accepted (Screening). The maintenance request is converted into a maintenance order. During this phase, the required resources for processing the order are also planned (Planning). The maintenance order is then approved for execution (Approval). Next, the maintenance order is prepared for execution. Various requirements such as stock, nonstock material, purchase requisition, and capacity are reviewed (Preparation). After this, the maintenance order is scheduled for execution (Scheduling). The maintenance order is then executed to repair malfunction (Execution). Then, activities like failure data recording and other post-work activities are carried out (Post Execution). Finally, the maintenance order is reviewed and is technically completed (Completion).



Key process steps

- Create maintenance request
- Screen maintenance request
- Convert maintenance request into maintenance order
- Plan maintenance order
- Submit maintenance order approval
- Release maintenance order for preparation
- Review maintenance backlog for readiness
- Schedule maintenance orders
- Time confirmation of pre- and main order operations
- Time confirmation of post-maintenance order operations
- Record failure data
- Complete maintenance order technically

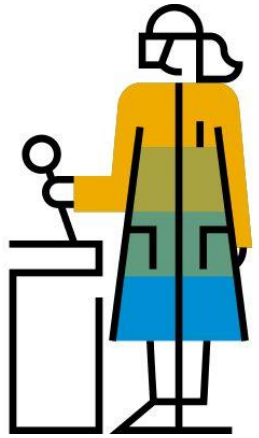
Business benefits

- Reduce an asset's downtime and increase productivity
- Enables you to save maintenance costs

Asset Management
Product Footprint Management

5IM

This scope item enables you to integrate product footprints calculated in SAP Product Footprint Management on SAP Business Technology Platform. Product footprints can be either viewed or integrated into end-to-end processes of SAP S/4HANA.



Key process steps

- Receive calculated product footprints from SAP Product Footprint Management on SAP Business Technology Platform
- View product footprints
- Integrate product footprints into end-to-end processes of SAP S/4HANA

Business benefits

- Enable the integration with SAP Product Footprint Management in SAP S/4HANA

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Sales

Sales

Sales Force Support

Sales Performance Management

Order and Contract Management

Sales
Presales Management

41V

This scope item describes how a sales employee can capture and manage tasks, leads, and opportunities to help successfully close a sales cycle.

Task management helps to organize and record all of a sales employees' activities. You can maintain types, categories, and goals for your activities. Lead management enables sales employees to create and process leads, that is, initial signs of interest in your business. An opportunity describes the sales prospect, their requested products or services, budget, potential sales volume, and the estimated sales probability. The sales cycle of a product or service begins when an opportunity for sales is recognized and the process ends with a sales quote or sales order, or a rejection from the customer.

The tight integration between tasks, leads, opportunities and sales transactions, ensures that you can track all sales activities from beginning to end and efficiently lead the sales employees through the sales cycle.

Key process steps

- Create a task for an account
- Create lead manually
- Rule-based lead distribution
- Qualify lead
- Create opportunity
- Qualify opportunity
- Create sales quotation against opportunity
- Close opportunity
- Create sales order against sales quotation

Business benefits

- Enable sales employees to efficiently run a sales force automation process
- Create and track tasks, leads, and opportunities
- Create leads and opportunities based on pre-defined parameters
- Create SAP S/4HANA sales quotation and sales orders directly from opportunities
- Run this process fully embedded in SAP S/4HANA - no other system required, have all account, product, and price data readily available without any replication

Sales

Sales Commissions - External Sales Representative

2TT

Condition contracts are used in this process to enter sales commission agreements with external sales agents. In a condition contract you specify the commission recipient, the organizational and process control parameter, the business volume selection criteria, the sales commission conditions, and the settlement calendar with the settlement dates for delta accrual, partial settlement, and final settlement. The delta accruals settlement reflects a procedure in which accruals for commissions are not posted together with transactional documents but are posted at a later date in a specific settlement run. When carrying out the partial and final settlements of a condition contract, you perform the sales commission calculation based on business volume and commission conditions and you create the settlement documents that reflect an invoice from the external sales agents for the arrangement of sales deals. This scope item supports two data sources for the business volume determination: sales and distribution (SD) billing documents that have already been paid and SD billing documents without check for payment.

Key process steps

- Check business volume (optional)
- Post accruals (optional)
- Partial settlement with reversal of accruals (optional)
- Post incoming payments (optional)
- Check business volume
- Final settlement with reversal of accruals
- Final settlement with adjustments (optional)
- Commission unlikelihood (optional)

Business benefits

- Create and administer commission agreements for external sales agents centrally
- Settle sales commissions accurately and automatically provide enhanced transparency and flexibility along the whole commission contract lifecycle
- Use different data sources for commissions: Billing documents and cleared billing documents
- Create and administer commission agreements for external sales agents centrally
- Settle sales commissions accurately and automatically
- Provide enhanced transparency and flexibility along the whole commission contract lifecycle
- Use different data sources for commissions: Billing documents and cleared billing documents

Sales
Accelerated Customer Returns

BKP

This scope item covers three customer return scenarios:

1.) Return to seller: A return order is created in reference to the original billing document or sales document. Once saved, a return delivery is automatically generated. The goods, once received, are inspected at the warehouse. The user can influence when the refunding documents are created: either directly, when releasing a return order, or after the inspection. Finally, the user can decide on the compensation type for the customer: either shipping a replacement or paying a credit memo.

2.) Return to seller with inspection at customer site: The user decides to perform the inspection at the customer site before initiating a physical return.

3.) Return to supplier via seller: After lean inspection at seller, it is requested to send goods back to supplier. The supplier decides on the refund towards the vendor, while the vendor decides on the compensation type towards the customer.

The progress of the return process can be monitored using returns overview.

Key process steps

Return to seller:

- Create return order
- Perform material inspection
- Send back to customer, book to free available stock or scrap
- Determine refund
- Create credit memo or replace material free of charge
- Display return overview

Return to seller with inspection at customer site:

- Create return order
- Change return order after inspection at customer site
- Reject return, specify compensation or initiate physical return
- Create credit memo or replace material free of charge

Return to supplier via seller:

- Create return order
- Perform lean material inspection
- Generate return purchase order: Request return to supplier
- Ship to supplier
- Seller to receive refund by supplier
- Seller to refund customer with credit memo
- Seller to ship free of charge material replacement

Business benefits

- Generate follow-up documents automatically
- Perform refund in one step
- Include goods inspection
- Reduce transportation costs and save time while performing inspection at customer site
- Return goods to supplier via seller
- Provide end-to-end support and monitoring of the return process

Sales

Accelerated Third-Party Returns

1Z3

This scope item supports the return scenario, where material is directly returned by the customer to the supplier.

The customer contacts the seller and informs the internal sales representative that they want to return goods. The sales representative decides that the materials must be returned directly to the supplier. This can be the case when materials are shipped to the customer via third-party delivery by the supplier.

The sales representative creates a returns order to initiate the return of materials directly to the supplier. Once the returns order is saved and released, a return purchase order is generated automatically. After the supplier receives the returned goods and the seller receives a credit memo from the supplier, the customer is compensated by the seller via credit memo or replacement material.

The progress of the return process can be monitored using the returns overview.

For return of third-party goods to supplier via seller, see the Accelerated Customer Returns (BKP) scope item.

Key process steps

- Create return order
- Process supplier refund based on supplier credit memo
- Determine refund
- Create credit memo or replace material free of charge

Business benefits

- Enable direct return of third goods from customer to supplier

Sales

Analytics for Sales - Central Stock with Returns

2QS

This scope item provides a prebuilt set of KPIs for the sales scenario, allowing analytics that include information from the SAP S/4HANA Cloud system. Business leaders and decision makers can monitor, simulate, and drive change that shows overview and line-item details, provides business context, and uncovers hidden insights. These KPIs can be used in different scenarios such as Two Tier and SAC stories.

Key process steps

- Increase customer satisfaction by leveraging the extensibility functionality for better customization of CDS views
- Increase visibility of costs incurred in the sales area

Business benefits

- Build analytical use case in SAP Analytics Cloud based on SAP S/4HANA Cloud data
- Create analytical reports using view browser
- Extend and create custom analytical query using CDS views
- Extend and create custom CDS views using these consumption views

Sales

Automation of Order-to-Invoice with Ariba Network

4A1

For customers who act as a seller for buyers from Ariba Network, this scope item enables the supplier integration to Ariba Network to simplify and automate exchanging sales documents and their follow-on messages.

The following documents and functions are supported in the sales process:

- Create, change, or cancel sales order (inbound message)
- Send purchase order confirmation (outbound message)
- Send advance shipping notification (ASN, outbound delivery message)
- Send supplier invoice (outbound message)

Key process steps

- Create, update, or cancel sales order from purchase order
- Display sales order (optional)
- Release or cancel sales order manually if customer-expected price check fails
- Send order (cancellation) confirmation
- Create delivery
- Execute picking
- Post goods issue
- Send advance shipping notice
- Create billing document
- Send invoice

Business benefits

- Experience greater automation in exchanging sales documents with buyers from SAP Ariba Network
- Reduce time and manual efforts in corresponding with buyers
- Increase productivity, performance, and work satisfaction of sales professionals and accounts receivable accountants
- Save costs for paper, postage, mailing, records management
- Enable greater scalability with process efficiency gains

Sales

B2B Order Fulfillment with SAP Commerce Cloud

2TY

Business customers expect the same high-level buying experience as private customers. At the same time, your organization wants to have the product data available in all channels in a consistent way without double maintenance.

The order created and stored in SAP Commerce Cloud is transferred to SAP S/4HANA for order fulfillment. The order status for the sales document is replicated from SAP S/4HANA to SAP Commerce Cloud.

In addition, relevant master data, such as products (including classification, prices, and discount), stock level, business partners, and connected contact persons are replicated from SAP S/4HANA to SAP Commerce Cloud.

Key process steps

- Create or change business partner and contact in SAP S/4HANA and replicate to SAP Commerce Cloud
- Maintain product master data in SAP S/4HANA and replicate to SAP Commerce Cloud
- Maintain prices and discounts in SAP S/4HANA and replicate to SAP Commerce Cloud
- Maintain product classification model in SAP S/4HANA and replicate to SAP Commerce Cloud
- Replicate stock level from SAP S/4HANA to SAP Commerce Cloud
- Place an order in the Web shop and send it to SAP S/4HANA for order fulfillment
- Replicate sales order status to SAP Commerce Cloud, including advanced shipping notification once order has been shipped

Business benefits

- Focus your project on customer satisfaction by providing a first-class buying experience
- Reduce cost and inconsistency with automated data replication and avoid double maintenance
- Get reliable customer-specific business data as part of your B2B customers' buying experience

Sales

Chemical Compliance in the Value Chain

31J

This scope item manages the compliance marketability checks in sales order processes and during outbound delivery.

Any material included in a sales order or sales quotation which is defined as relevant for compliance must be verified if the selling into the country and for the customer is allowed. The result of the marketability check may block the follow up documents or initiate a request for the product steward ship department.

If selling is only possible under restrictions, the internal sales representative can initiate an approval process. The product stewardship department processes the approval request and approves or rejects the selling.

The sales documents are also blocked if selling is not possible or has not yet been assessed. A request is created for the product stewardship department if the assessment for a country and customer has not yet been done.

Key process steps

- Create sales order
- Perform compliance marketability check
- Verify compliance information
- Process request for approval
- Create outbound delivery and execute compliance check

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Integrate compliance marketability checks in the selling processes
- Product steward specialists get informed about new markets
- Go through approval process to validate restrictions for selling

Sales
Convergent Billing

1MC

The Convergent Billing scope item for sales billing allows billing content sent from multiple channels (internal and external) to converge into a single customer invoice.

The billing content sent from the various channels is instantly transformed into an external billing document request object.

This scope item includes the creation of a billing document in the SAP S/4HANA system:

- Using billing data received from an external system
- Using billing data received from an external system and data from a Sell from Stock process
- Using billing data received from an external system and data from project-based services
- Combining data received from an external system, data from a Sell from Stock process, and project-based services process
- Using external data via Excel upload

Key process steps

- Create billing documents using external billing items
- Create billing documents using data from Professional Services and external billing data
- Create billing documents using data from Sell from Stock and external billing data
- Create billing documents using data from Sell from Stock, Professional Services, and external billing data

Business benefits

- Reduce administrative effort of managing billing document requests from multiple streams
- Create clear consolidated billing documents to be sent to customers
- Provide one legal billing document for all services, subscriptions, projects, products, and expenses (including external data)

Sales

Create Sales Orders from Unstructured Data

4X9

Using the Create Sales Orders - Automated Extraction app, you can automatically create sales orders. The app lets you extract relevant data from unstructured source formats (such as PDF files) and translate it into sales orders.

Key process steps

- Upload file to sales order request
- Extract data
- Map master data
- Validate result
- Create sales order

Business benefits

- Create sales orders automatically
- Reduce manual efforts

Sales

Credit Memo Processing

1EZ

A credit memo request is created with the amount to be credited and placed on a billing block for review. It is then released to become billing relevant and appear on the billing due list. The periodic billing process creates a credit memo to be sent to the customer and posts a journal entry.

Key process steps

- Create credit memo request
- Approve workflow for credit memo requests
- Remove billing block (review credit memo request)
- Create credit memo

Business benefits

- Integrate credit memo processing in the system

Sales

Customer Consignment

1IU

In this scenario, the goods are initially posted to the customer consignment stock and thus remain the property of the company (consignment fill-up).

At regular intervals, the customer reports how many articles are sold and how many articles are in the current stock (inventory). When the inventory is performed, the batch number may be entered to do a correct material posting. A corresponding sales order is entered that documents the issue from the customer consignment, meaning that the goods are no longer the property of the company (consignment issue).

Goods that are not required can be returned from the consignment stock to the central warehouse. The goods must not be defective. They are posted directly into the free stock (consignment pick-up).

In some cases, goods are returned to the customer consignment stock (by its own customer or based on erroneous consumption posting) after the consignment issue has already taken place. A return order is then created (consignment return).

Key process steps

- Fill up the consignment stock assigned to the customer (consignment fill-up)
- Issue from the consignment stock (consignment issue)
- Return materials from the external customer consignment stock to the company warehouse (consignment pick-up)
- Return order to the consignment stock (consignment return)

Business benefits

- Save costs on inventory for consignor
- Restock as it sells – beneficial for both parties
- Save time for consignor
- Use the consignment stock to generate product exposure (especially new or unknown products) for their customers

Sales

Customer Returns

BDD

The process starts with a customer request for authorization to return materials to the plant for credit, referred to as a Return Material Authorization (RMA). The request is approved, and a return sales order is created with reference to the original invoice for the goods. An RMA document is printed and forwarded to the customer to be attached to the incoming goods. The goods are shipped back, a return delivery is created with reference to the RMA, and the material is received into return stock.

The return stock location is set to be non-MRP relevant. The goods are inspected, resulting in a disposition to either return them to stock, or scrap. A credit memo is created from the billing run and posted to the customer's account.

Key process steps

- Create sales order
- Create return delivery
- Create billing document

Business benefits

- System integrated processing of customers returns and complaints

Sales

Dangerous Goods in the Value Chain

3G8

This scope item manages the dangerous goods check in sales and delivery documents. In addition, dangerous good descriptions are printed on the sales order confirmations, sales contracts and the delivery notes.

For each compliance-relevant product added to a sales order, a sales contract or sales quotation, you must verify if the product is classified as a dangerous good. If so, you check if the product can be transported.

If the product is not classified or if transport is not allowed, this check can result in a sales order block. The determination is based on the dangerous goods regulations that are applicable for the transport between departure and destination countries/regions.

If a dangerous goods assessment is not yet completed, a corresponding request to the product stewardship department or the dangerous goods specialists is created.

Key process steps

- Create sales order
- Perform dangerous goods check
- Trigger a dangerous goods assessment if it is missing
- Create outbound delivery
- Perform dangerous goods check in delivery
- Include dangerous goods information on delivery note and picking list

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Integrate dangerous goods checks in the selling and delivery processes
- Inform the product steward and dangerous goods specialists about new countries / regions where transport is required

Sales

Debit Memo Processing

1F1

A debit memo request is created with the amount to be debited and placed on a billing block for review. It is then released to become billing relevant and appear on the billing due list. Periodic billing process creates a debit memo to be sent to the customer and posts a journal entry.

Key process steps

- Create debit memo request
- Remove billing block (review debit memo request)
- Create debit memo

Business benefits

- System integrated debit memo processing

Sales

Delivery Insights enabled by IoT

4IH

SAP Internet of Things enriches your delivery processes with real-time IoT sensor data and provides you with a holistic and transparent view of the entire delivery process. The sensor data is embedded into your existing processes to guarantee a seamless user experience.

With the flexible system configuration approach, you can monitor all kinds of sensor data such as temperature, humidity, acceleration, location, or radiation. Numerous use cases are possible and can be tailored to your needs.

As soon as an unusual sensor reading is detected by SAP Internet of Things, the system triggers a notification to the relevant parties in SAP S/4HANA, providing them with direct insight to action. You can then proactively react to critical supply situations, anticipate potential quality issues, increase the on-time delivery performance, and improve the customer satisfaction.

Key process steps

- Manage sales orders
- Manage deliveries
- Manage purchase orders
- Manage and monitor IoT sensor data
- Detect and proactively react on delivery issues

Business benefits

- Get a holistic and transparent view of the entire delivery process
- Determine immediate insight to action based on IoT sensor data
- Get a seamless user experience with embedded IoT sensor data
- Receive intelligent system notification
- React to critical supply situations proactively
- Anticipate quality issues
- Increase on-time delivery performance
- Improve customer satisfaction

Sales

Delivery Processing without Order Reference

1MI

If the relevant master data has been previously maintained (for example, Business Partner for Customer), the process starts when a standard delivery is created. Based on this delivery document, picking slips are generated to stage the product for shipment to the customer.

If a delivery includes batch managed materials, a batch number can be entered for each delivery item. If the required quantity is delivered using pieces belonging to different batches, original delivery items can be split to enable proper recording of delivered quantities for each actual batch.

The delivery document can be split into two or more deliveries, for example, to accommodate late changes in transportation planning. In addition, freight costs can be added to the delivery documents to ensure that these costs are taken into account for invoicing.

After picking is complete, the shipping specialist relieves the inventory by posting a goods issue. This inventory relief is the actual recording of the physical quantity that is being shipped to the customer. The cost of goods sold is then recorded in financial accounting.

Once the inventory is relieved, the delivery can be invoiced. If the master data of the customer or ship-to party involved states that a proof-of-delivery is required, the quantity delivered must be confirmed by the customer. Once this confirmation is maintained for each delivery document, invoicing (fully based on the confirmed quantities) can be carried out. The revenue and the cost of goods sold is then also recorded in management accounting.

Key process steps

- Create delivery
- Create attachment for delivery
- Execute picking
- Enter batch number
- Split outbound delivery
- Add freight costs
- Posting goods issue
- Proof of delivery
- Create billing document

Business benefits

- Enable customers to:
- Pick goods from manufacturer’s warehouse without advance order
- Directly pick, pack, and send
- Receive goods for review without order

Sales

Digital Payments - Sales

1Z1

SAP digital payments is a payment capability for payment service providers and SAP components, solutions, or applications that process incoming credit card payments.

Payment card information available in the business partner master data can be used when creating the sales order or new payment card data (one-time payment card) can be used in the sales order. When you save the sales order, the authorization of the payment card is executed through the payment provider service.

The credit card authorization can be cancelled by deleting the authorized amount in the sales order. Then a re-authorization can be done after changing the order quantity.

Furthermore, the credit card authorization can be cancelled by rejecting the sales order which has an amount authorized for credit card payment.

Key process steps

Using credit card data maintained in business partner in sales document:

- Add and register credit card data in business partner
- Assign customer payment guarantee procedure
- Check credit card data in sales documents
- Release sales documents with payment card
- Proceed with all succeeding steps of related scope items (such as BD9) until billing document is created
- Check credit card data in billing document

Using one-time credit card data in sales document:

- Check credit card data in sales documents
- Release sales documents with payment card
- Check credit card data in billing document

Using electronic payment provider (for example, PayPal) as payment service provider in sales documents:

- Process sales documents with successful authorization
- Process sales documents with unsuccessful authorization

Business benefits

- Provide cloud customers the option of using electronic payments using an integration with the payment hub for authorization when creating sales documents
- Use electronic payment securely and simply

Sales
External Billing

1Z6

This scope item enables the use of the external billing interface to create billing documents, without predecessor documents calling an external system (SAP or non-SAP).

The scope item encompasses the necessary Customizing to run business application programming interfaces (BAPIs) for exchanging billing data between your SAP or non-SAP on-premise system and your SAP S/4HANA system.

Key process steps

- Check that an invoice is created via the external billing interface in target system
- Check invoice cancellation executed via the external billing interface in target system

Business benefits

- Save time and effort with this automated creation of billing documents
- Reduce number of documents in the system because sales documents are not necessary
- Offers an automated lean process for invoice creation

Sales
Free Goods Processing

BKA

The process starts with the creation of a customer standard sales order using a material for which a free goods condition record is maintained. Depending of the ordered quantities, customers receive free goods.

After the completion of picking, the shipping specialist relieves the inventory. This inventory relief is the actual recording of the physical quantity that is being shipped to the customer.

With the goods issue posting revenue is recognized and cost of goods sold is recorded in Financial Accounting.

Once goods are delivered, you can invoice the delivery.

For details on bundling functionalities for IFRS 15, see note 2524569.

Key process steps

- Create sales order
- Print order confirmation
- Create delivery
- Execute picking
- Post goods issue
- Create billing document

Business benefits

- Perform availability check upon order entry
- Determine shipping point automatically
- Determine inclusive free goods automatically
- Create a billing document
- Make postings to FI and CO

Sales
Free of Charge Delivery

BDA

A unique sales order type is created that allows free of charge orders. The order is confirmed based on the availability of goods. A delivery is created. The goods are then picked, confirmed, and delivered to the customer. The process supports creation of billing documents at the end even it is a free of charge process. This assures hand over of data to FI/CO area.

Key process steps

- Create sales order with free of charge items
- Execute picking post goods issue
- Execute picking
- Post goods issue
- Create invoice (regular invoice or proforma invoice)

Business benefits

- System integrated Free of Charge sales order processing
- The process allows regular invoice with zero value or proforma invoice with values

Sales

Invoice Correction Process with Credit Memo

BKL

A credit memo request is created with the amount to be credited and placed on a billing block for review. The amount to be credited is calculated as the difference between the original amount and the correct amount entered manually in the credit memo request. It must then be released to become billing-relevant and to appear in the billing due list. The credit memo can be created manually. Alternatively, the periodic billing process automatically creates a credit memo to be sent to the customer and posts a journal entry.

Key process steps

- Create credit memo request
- Approve workflow for credit memo requests
- Remove billing block (review credit memo request)
- Create credit memo

Business benefits

- Integrate credit memo processing in the system

Sales

Invoice Correction Process with Debit Memo

BDQ

This scope item makes it possible to make corrections to errors in pricing or sales tax calculations. If errors are detected, debit memo requests can be created with a correction of the amount to be debited. This is then placed on a billing block for review. The amount to be debited is calculated as the difference between the original amount and the correct amount. This is entered manually into the debit memo request. Once checked, it is released and becomes relevant for billing. The amount then appears in the billing due list. The credit memo can be created manually. Alternatively, the automatic periodic billing process creates a debit memo to be sent to the customer and posts a journal entry.

Key process steps

- Create debit memo request
- Remove billing block (review debit memo request)
- Create debit memo

Business benefits

- Integrate debit memo processing in the system

Sales

Order-to-Cash Performance Monitoring

BKN

For order-to-cash process performance scenarios, this scope item provides key figures about the duration of certain process steps and event occurrences that were triggered during process execution. With these key figures, you can easily determine the performance and conformity of your sales processes and quickly discover trends and potential areas of improvement. An SAP Fiori overview page is also provided to analyze the order-to-process performance based on some of the key sales order KPIs and so on. The findings can be shared with the person responsible for process execution in a sales organization or the relevant manager. Detailed process information helps them to identify internal sales representatives who can help to resolve issues.

Key process steps

- Display average order-to-cash lead times (such as the order to invoice lead time, or unblocking time of sales orders) for the current time period (pre-configured 28 days) and time series for the last 12 months
- Display totals for the order-to-cash process (such as number of critical field changes) for the current time period (pre-configured 28 days) and time series for the last 12 months
- Drill down the KPIs according to business attributes, such as sales organization, distribution channel, division, customer, and material. Drill down to sales orders and display the processing history of the sales order
- Display aggregated process flows according to business attributes
- Share process KPI and process information with person responsible for process execution in a sales organization

Business benefits

- Strategic and operational control over end-to-end performance of order-to-cash processes
- Current status and trends in the performance of your sales process for different phases of the sales processes: order processing, order delivery, and order billing
- Benchmarking across a number of business attributes, such as sales organization, distribution channel, division, customer, and material
- Identification of bottlenecks and areas of improvement by comparing aggregated views of your current and past processes

Sales

Planning Apps for Sales

1O0

For sales and distribution scenarios, this scope item provides key information that a sales manager needs regarding the creation and maintenance of Sales planning apps, effectively handling the different stages in sales planning. The Sales Manager can also select some existing sales plans to compare with actual data. In addition to this, they can navigate to the corresponding app for further analysis.

Key process steps

- Create sales plan
- Update a sales plan
- Copy sales plan
- Release and search for a sales plan
- Compare plan and actual data
- Navigate to the corresponding apps for further analysis

Business benefits

- Flexibility for the sales manager to handle the sales planning effectively
- Create, manage, update and copy a sales plan to enable easier access to a sales manager
- Access various sales plans at the click of a link
- Ability to export master data for the sales managers to use customer or customer group as a dimension
- Compare the planning data and actual data in the sales plans

Sales

Predictive Analytics Model Training - Sales

2YJ

With this scope item, you can utilize the embedded predictive analytics functionality in the SAP S/4HANA sales business processes.

The scope item provides the following functionalities in different business scenarios:

The Quotation Conversion Rates scenario provides reliable predictions for the sales manager or sales representative to monitor the probability of a sales quotation being converted to a sales order, assisting the sales manager to plan more reliably.

The Sales Performance app allows the sales manager to forecast the achievable sales volumes and develop the sales plans periodically.

With the SAP Fiori app Predicted Delivery Delay, a sales representative can monitor the current delivery performance situation, and instantly recognize the effect of the delivered-as-requested ratio of sales orders, to prevent a critical delay of delivered goods, and thus increase customer satisfaction.

Key process steps

- Train an embedded predictive model from the released predictive scenarios
- Leverage embedded predictive analytics functionalities

Business benefits

- Decrease manual effort for sales planning and deliver more accurate sales forecasts
- Provide reliable predictions for achievable sales volume
- Increase customer satisfaction by achieving a better delivery performance
- Increase working efficiency by providing better insight to sales manager for decision making

Sales

Return Order Processing for Non-Stock Material

3TE

A non-stock material can be used in the return order. Non-stock materials are not included in inventory management. With creation of a return delivery, the goods receipt is reflected by a confirmation posting. Non-stock items can be handled along with stock items on one return order.

The user can influence when the refunding documents are created: either directly when releasing a return order, or after materials are received physically. Finally the user can decide on the compensation type for the customer: either paying a credit memo or shipping a replacement.

Key process steps

- Create return order
- Generate return delivery
- Post goods receive (statistical confirmation)
- Determine refund
- Create credit memo or replace material free of charge

Business benefits

- Take back items from your customer that do not need maintenance in inventory, simplifying data entry for the items
- Integrate return of non-stock items fully in return order processing
- Decide immediate on compensation options

Sales

Return Order Processing for Sales Kits

5CX

Companies often want to return individual products that are bundled into a sales kit (for example selling a PC together with monitor, keyboard, mouse, license, and so on). In such cases, sales kits are commonly used to sell or return individual products independently from the bundled product.

The customer returns process in accelerated returns management supports BOMs. The process starts with customer returns order creation. The sales kit material is then received into the plant logistically. Subsequently, a credit memo or replacement material is provided to customer as compensation.

Once you've entered a bill of material in a customer returns order, the system runs pricing and logistics execution at the following levels:

- Header level: (ERLA) usually used when product is assembled
- Item level: (LUMF) usually used when product is not assembled
- Both Levels: (CPFH) pricing happens on header and logistics (goods movements) on item level

Key process steps

- Create customer returns order
- Perform material inspection
- Send back to customer, move to free available stock or scrap
- Determine refund
- Create credit memo or replace material free of charge
- Display return overview

Business benefits

- Increase process flexibility within returns order processing
- Enhance efficiency in the comprehensive returns process

Sales
Returnables Processing

BDW

This scope item enables the shipping of standard pallets and their return. When you create a standard sales order, the delivery is automatically created based on this sales order. During the picking and shipping steps of this process, a pallet (returnable packaging) is added to the delivery. During the billing process, pallets can also be returned to manufacturers using a pallet return order with pallet return delivery and goods receipt, or a pallet return delivery without reference and goods receipt.

If customers do not return pallets, you can issue debit memo requests. Triggered by billing, the system issues debit memos based on such debit memo requests. Once this has been carried out, you can synchronize the consignment stock quantity and value, and then post a manual goods issue for the unreturned pallet.

Key process steps

- Create sales order
- Create delivery
- Execute picking
- Add returnable packaging to deliveries
- Create returnable packaging return order
- Post goods receipt for returnable packaging
- Debit unreturned packaging
- Post goods issue for unreturned packaging

Business benefits

- Consists of the management of returnables using the ERP returnable packaging logistics function
- Track returnables

Sales

SAP Fiori Analytical Apps for Sales

1BS

For sales and distribution scenarios, this scope item provides key information required for a sales manager or internal sales representative about the different stages of a sales order. The analytical apps provided highlights back orders, demand fulfillment, sales order fulfillment and delivery performance in the sales process. An SAP Fiori overview page is also available that provides the different insight to actions about sales quotations, customer returns, sales order fulfillment and more.

Key process steps

- Analytical and transactional display of the sales order processes such as sales quotations, sales order fulfillments, customer returns, back orders, demand fulfillment, delivery performance and so on
- Filter KPIs for the different business attributes, such as sales organization, sales document type, sold-to-party and so on
- Navigate from KPI insights to the corresponding smart apps for detailed analysis
- Share high-level process KPIs and other high-level process information with the people responsible for process execution in a sales organization

Business benefits

- Perform daily activities smoothly using a dashboard of information for the internal sales representative or sales manager from the SAP Fiori Overview Pages
- View delivery performance and sales order fulfillment as a mix of the table and chart visuals on the sales order process in the Analytical List Pages
- Understand the key numbers with high-level insights for the sales manager to drill down to action
- Provide status of the sales orders, sales quotations, back orders, unconfirmed orders and more
- View a strategic and operational overview for the end-to-end sales order processes

Sales

Safety Data Sheets in the Value Chain

3VQ

This scope item covers the main process steps for the maintenance of safety data sheets for products during sales processes.

Products flagged as relevant for compliance must have a completed safety data sheet assessment by the product steward. A missing assessment results in a country-specific automatic block of sales order fulfillment that can be resolved by the product steward, typically by assigning a relevant safety data sheet to the products.

Key process steps

- Flag products as relevant for compliance
- Determine and assign markets to your products
- Derive relevant compliance purposes from the assigned markets for your products
- Use dedicated compliance requirements to manage, version, and store safety data sheets
- Assess product requirements for safety data sheets in specific countries and language variants and maintain the status and documents

Business benefits

- Mitigate compliance risks with up-to-date information integrated into the value chain
- Inform product steward specialists about new markets
- Integrate the safety data sheet requirements and management into the general product compliance management processes, providing an integrated view on the status
- Integrate the safety data sheet processes of a product with your logistic processes
- Integrate the product stewardship department via a release cycle into sales and distribution processes

Sales
Sale of Services

2EQ

A service product is used in the sales order. It allows the sales of services without delivery and direct (order-related) billing.

Key process steps

- Create sales inquiry
- Create sales quotation
- Create sales order – including a service item (Material Type: SERV)
- Manage credit – set customer credit/Review of blocked sales orders
- Bill service items

Business benefits

- Integrate sales of services into sales order processing in a flexible manner

Sales

Sales Contract Management

I9I

This scope item addresses the following scenarios:

Sales quantity or sales value contract: The quantity contract contains basic quantity and price information. A value contract is a legal agreement with a customer that contains the materials and services that the customer receives within a specified time period, and for a value up to a specified target value. In this scope item, the internal sales representative creates a sales quantity or value contract. Following this, a call-off order is created against the contract.

Quantity-contract-based down payments: For the sales quantity contract, down payments can be requested via a billing plan. Upon call-off order creation, a delivery block is assigned to the call-off order schedule lines. Once the down payments are received, the delivery block is removed automatically. In the delivery-related final invoice of the call-off order, the received down payments for the quantity contract is deducted.

Key process steps

Sales quantity or sales value contract

- Post goods receipt
- Create quantity or value contract
- Create call-off sales order with reference to contract
- List sales contracts

Sales quantity contract-based down payments

- Create sales quantity contract with billing plan to request down payments
- Create down payment request
- Create call-off order with delivery block
- Post down payment
- Remove the call-off order delivery block automatically once contract down payment is received
- Deliver the call-off order
- Provide delivery-related invoice of the call-off order, with deduction of contract-based down payments

Business benefits

- Provide secure planning with the use of quantity and value contracts: the customer can only call off the quantity or value for a certain price that is defined in the quantity or value contract
- Provide a detailed monitoring of contract call-offs
- Request down payments from a quantity contract
- Create call-off orders with a derived delivery block on schedule lines
- Reduce manual steps through automatic delivery block removal in the call-off order upon down payment receipt

Sales

Sales Inquiry

1IQ

This scope item describes the process for a standard sales inquiry. It allows you to create, edit, and reject an inquiry. You can then create a quotation or sales order based on the inquiry.

Key process steps

- Create sales inquiry
- Change sales inquiry
- Reject sales inquiry

Business benefits

- Collect data on what your customers request about your products and services
- Determine reasons for inquiry rejection
- Improve your products and services

Sales

Sales Order Entry with One-Time Customer

BDH

In this scope item, you process sales order documents having a customer master record with CPD (One-time Customer) account group at the beginning of the order process. This one-time customer is used for customers doing only rare business and therefore it doesn’t make sense to create an own master record. The sales order is saved using this one-time customer by entering the address manually each time when creating a sales order.

Key process steps

- Create sales order
- Create attachment for sales order (optional)
- Create delivery
- Create attachment for delivery (optional)
- Execute picking
- Check batches (optional)
- Post goods issue
- Create billing document
- Create attachment for billing (optional)

Business benefits

- Process sales orders without the customer’s account number
- Enter sales orders with material determination

Sales

Sales Order Fulfillment Monitoring and Operations

BKK

As an internal sales representative, you use the Sales Order Fulfillment Monitor to address problems that occur during the sales order fulfillment process. You can then directly execute follow-up steps from the monitor to resolve these issues. Examples of issues are missing documents, missing or unconfirmed information, and various types of blocks as well as product and trade compliance issues. You can use the application to search for specific sales orders. You can also filter the list of issues according to the stage at which they occur (such as in order, supply, delivery, invoice, or accounting).

As an internal sales representative you use the Sales Order Cockpit to manage mass changes of different types of sales documents on the header and item levels. Flexible filter capabilities help to prepare the list of documents and items to be changed. The change jobs can be scheduled for background processing and monitoring.

Further productivity enhancements are provided for managing duplicate sales orders. The Manage Duplicate Sales Document app can be used to analyze and clear your system of duplicate sales documents. After identifying duplicates, the internal sales representative can reject them to avoid the redundant processing of duplicate sales documents.

Key process steps

Monitor, resolve and collaborate:

- Incomplete data
- Unconfirmed quantities
- Credit blocks
- Issues in supply, in purchase orders and manufacturing orders
- Delivery blocks in sales orders and other delivery issues
- Shipping blocks in deliveries and other shipping issues
- Billing blocks, invoice issues, and accounting issues for invoices
- Product compliance (product marketability status, dangerous goods status, safety data sheet status) and trade compliance issues

Support the following types of sales documents for mass changes:

- Sales contracts
- Sales scheduling agreements
- Sales orders
- Debit and credit memo requests
- Customer returns

Support the following types of documents when analyzing and clearing your system of duplicates:

- Sales quotations
- Sales contracts
- Sales orders
- Customer returns

Business benefits

- Increase productivity in sales order processing
- Provide a quick overview of the sales order processing status: all issues in the context of the various business objects can be displayed
- Get a quick glance to see if products are partially delivered and not invoiced and reasons why this might be the case
- Execute follow-up steps directly from the monitor to resolve these issues
- Increase efficiency in making mass changes at a header and item level of sales documents through user-friendly capabilities to filter and prepare them
- Process jobs transparently, and get efficient post processing
- Lower your costs by reducing the number of redundant documents avoiding unnecessary handling time, shipping costs and return fees

Sales

Sales Order Processing - SEPA Direct Debit Handling

BKX

This business process encompasses the check of the SEPA mandate during sales order processing including exception handling if the SEPA mandate does not exist.

During the SEPA implementation phase, the internal sales representative regularly checks sales orders with missing SEPA mandates and coordinates the exception handling. If the SEPA mandate is received before delivery creation, the relevant SEPA mandate is maintained. Alternatively, payment terms that are not SEPA-relevant can be agreed upon with the customer for this particular order. In this case, the internal sales representative changes the sales order accordingly. After performance of exception handling, delivery documents can be created. The billing document is then created. On the invoice form, the SEPA prenotification is displayed to inform the customer about the debit memo. The incoming customer payment is handled within accounts receivables.

Key process steps

- Create and check sales orders if SEPA mandate exists
- Handle exceptions for missing SEPA mandate
- Create delivery
- Execute picking
- Post goods issue
- Create billing document including SEPA prenotification

Business benefits

- Enforce definition of SEPA mandate for SEPA-relevant customer sales orders when using SEPA payment terms

Sales

Sales Order Processing for Non-Stock Material

2ET

A non-stock material can be used in the Sales Order. Non-stock materials are not included in inventory management. With creation of a delivery, the goods issue is reflected by a confirmation posting. Non-stock items can be handled along with stock items on one sales order.

Key process steps

- Create sales inquiry
- Create sales quotation
- Create sales order - including a non-stock item (Material type: NLAG)
- Manage credit - Set customer credit / review of blocked sales orders
- Perform outbound delivery
- Add freight costs
- Post goods issue (statistical confirmation)
- Proof of delivery
- Billing of non-stock items

Business benefits

- Offer items to your customer that do not need maintenance in inventory, simplifying data entry for the items
- Integrate sales of non-stock items fully in sales order processing

Sales

Sales Order Processing for Sales Kits

31Q

Companies often want to sell single products bundled into a sales kit (example selling a PC together with monitor, keyboard, computer mouse, and so on). Sales kits are commonly used when the products being part of the sales kits can also be sold independently as single products.

Customers want to have an easy way to use sales kits during order taking and follow up processes without a need to use production BOMs, variant configuration, or other functions that don't fit or are too complex for this use case.

There are two ways to process a bill of material in sales. Once you've entered a bill of material in a sales order, the system runs pricing and execution at:

- Header level: (ERLA) usually used when product is assembled
- Item level: (LUMF) usually used when product isn't assembled

Key process steps

- Process sales orders
- Execute delivery (for example, picking, GI postings)
- Perform billing
- Supports an integration to other E2E processes (currently, sales kits are also supported in free of charge, inquiries, quotations, debit/credit processing, contract management, sales rebates management)

Business benefits

- Supports sales kits where pricing and logistics is on the header level or the item level of the sales kits
- Use sales kits within other scope items

Sales

Sales Order Processing with Customer Down Payment

BKJ

In this process, you create requests for down payment, record the receipt of the down payment, and create a final invoice after the deduction of the received down payment and a receipt of the final amount due on the invoice. The process uses the billing plan functionality in Sales and Distribution. The integrated process allows the maintenance of proper document flow between the sales and financial transactions.

Key process steps

- Create sales order and assign billing plan
- Remove billing block
- Create billing document
- Post down payment
- Create delivery
- Execute picking
- Post goods issue
- Create billing document and down payment clearing

Business benefits

- System integrated sales order processing with customer down payment

Sales

Sales Order Processing with Invoice List and Collective Billing

BKZ

With invoice lists, you can send a list that involves several billing documents to a central payer with special discount applicable at specific time intervals. The process starts with the creation of several standard sales orders for different sold-to parties that share the same payer. After individual billing documents are generated and forwarded to Financial Accounting, invoice lists can be created with reference to multiple billing documents for the central payer. Factoring discount and possible taxes are posted to FI.

This scope item describes the usage of standard sales processing for mass-processing billing. For optimization of shipping costs, all sales orders that are delivered to the same customer are packed into one delivery document. For cost optimization, all deliveries due to be invoiced to the same customer are packed into one invoice document. The revenue is posted to accounting accordingly.

Key process steps

Sales order processing with invoice lists:

- Create sales orders
- Create deliveries
- Create invoice lists

Sales order processing with collective billing:

- Create sales orders
- Create deliveries via collective run
- Create billing documents via collective run

Business benefits

- Optimize cost by collecting customer orders due to be delivered to the same customer in one delivery via a collective run
- Optimize costs by collecting deliveries to the same customer within one invoice via a collective run

Sales

Sales Processing using Third-Party with Shipping Notification

BD3

This scope item enables you to forward orders to third-party vendors who ship the goods directly to customers and then bill you directly. The standard sales order automatically creates a purchase requisition for the materials to be delivered by third-party vendors. Once vendors have sent a shipping notification, a statistical goods receipt can be posted. Once this has taken place, invoices can be created and issued based on the goods receipt quantities.

Key process steps

- Create third-party sales order
- Convert purchase requisitions to purchase order
- Approve purchase orders
- Post statistical goods receipt
- Create billing document
- Enter vendor invoice

Business benefits

- Reduces stock and cost, thus increasing efficiency
- Transfer customer requirements directly to external suppliers
- Invoice from trader to customer, based on quantities from supplier invoices
- Fulfill customer requirements despite material shortage

Sales

Sales Processing using Third-Party with Variant Configuration

4R6

With this process, the standard sales order automatically creates a purchase requisition for the materials to be delivered by third-party vendors.

The purchase requisition is transferred into a purchase order and sent to the vendor.

Once vendors have sent a shipping notification, a statistical goods receipt can be posted. Once this has taken place, customer invoices can be created and issued based on the goods receipt quantities.

After the shipping notification, the invoice receipt is posted based on the invoice sent from vendor.

You can also run the process without shipping notifications. In that case, you can create the customer billing document based on the invoice from the vendor.

Key process steps

- Create third-party sales order with configurable material
- Convert purchase requisitions to purchase order
- Post statistical goods receipt
- Create billing document
- Enter vendor invoice

Business benefits

- Reduce stock and cost, thus increasing efficiency
- Transfer customer requirements directly to external suppliers
- Send invoice from trader to customer, based on quantities from supplier invoices
- Fulfill customer requirements despite material shortage

Sales

Sales Processing using Third-Party without Shipping Notification

BDK

This scope item enables you to automatically create a purchase requisition for the materials to be delivered by the third-party vendor. The incoming invoice from the vendor updates the billing quantity. You can only create the customer billing document after entering the invoice from the vendor.

Key process steps

- Create third-party sales order
- Convert purchase requisition to purchase order
- Approve purchase order
- Enter vendor invoice

Business benefits

- Reduce stock and cost, increasing efficiency
- Transfer customer requirements directly to external supplier
- Base invoice from trader to customer on quantities from supplier invoice
- Fulfill customer requirements despite material shortage

Sales
Sales Quotation

BDG

This scope item starts when requests for quotations are received from customers. Quotations are created in the system and can be either accepted or rejected by customers.

Key process steps

- Create quotation
- Send quotation to customer

Business benefits

- Assure your business partners that you will deliver a certain product configuration and quantity at a specific time and price
- During sales order processing, sales employees can use a variety of sales functions and special quotation functions

Sales

Sales Rebate Processing

1B6

This scope item covers the subsequent settlement of rebate conditions agreed upon with customers. You use condition contracts to enter the rebate conditions, together with the process control parameters, business volume selection criteria, and settlement dates for partial and final settlement. You can create condition contracts for one customer or multiple customers.

Customer invoices are used to determine the business volume. In the case of multiple customers, the individual revenue of each customer assigned is used to calculate the settlement values. To pay out rebates to customers, you create settlement documents.

Settlement documents are usually immediately released to accounting. You can also create a two-step condition contract to collect and post settlement documents of different condition contracts in one journal entry to accounting.

Furthermore, you can choose how the system determines the taxation for the settlement items.

Key process steps

- Create condition contract for one customer or multiple customers
- Check business volume (optional)
- Post accruals (optional)
- Run partial settlement with reversal of accruals (optional)
- Run a Sell from Stock process
- Check business volume
- Run final settlement with reversal of accruals

Business benefits

- Administer sales rebate agreements centrally
- Create condition contracts for one or multiple customers
- Create and settle different types of sales rebate agreements flexibly
- Derive taxes flexibly
- Settle customer rebates automatically
- Provide enhanced transparency and flexibility along the whole contract lifecycle
- Implement Sales Rebate Processing to cash processes, such as Sell from Stock

Sales

Sales Scheduling Agreement with Consignment

4LZ

Customer Consignment is a specific logistics business where the supplier maintains a stock of material at a customer's location. Consignment goods are stored at the customer location but owned by your company. The customer isn't obliged to pay for these goods until they remove them from consignment stock. Otherwise, the customer can return consignment goods that aren't required.

Consignment offers the partners several advantages. Customers store the consignment goods at their own warehouses. Customers can access the goods in the consignment warehouse at any time. They're billed for the actual quantity taken when they're removed from the warehouse.

Goods that aren't required can be returned from the consignment stock to the central warehouse.

In some cases, goods are returned to the customer consignment stock after the consignment issue has already taken place.

This scope item uses scheduling agreements that can be run with or without an external service provider.

Key process steps

Fill up:

- Create scheduling agreements for consignment
- Monitor inbound forecast delivery schedule
- Monitor material coverage
- Order schedule lines due for delivery
- Pick outbound delivery
- Pack outbound deliveries
- Post goods receipt

Issue:

- Create consignment issue order
- Post goods issue
- Create billing documents

Pick-up:

- Create consignment pick-up order with reference to scheduling agreement
- Receive goods from ESP/customer
- Post goods receipt

Return:

- Create consignment return order
- Post goods receipt
- Create billing documents

Business benefits

- Save costs on inventory for consignor
- Restock as inventory sells – beneficial for both parties
- Save time for consignor
- Use the consignment stock to generate product exposure (especially new or unknown products) for their customers

Sales

Sales Scheduling Agreements

3NR

The sales scheduling agreement is an outline agreement between the buyer and supplier. Forecast and JIT (Just-in-Time) delivery schedules are sent via EDI. These delivery schedules contain the delivery dates and quantities. The whole communication is based on cumulative quantities between buyer and supplier.

Planning delivery schedules can be generated to smooth the demand handed over to production.

The shipping specialist creates deliveries based on open quantities in the delivery outbound monitor.

After the completion of picking, the shipping specialist posts goods issue. This posting is the actual recording of the physical quantity that is being shipped to the customer.

With the goods issue posting, revenue is recognized and cost of goods sold is recorded in Financial Accounting.

Advanced shipping notifications are sent via EDI to the buyer.

Once goods are delivered, you can invoice the delivery. An EDI invoice message is sent to the buyer.

Key process steps

- Create, change, and display sales scheduling agreements for component manufacturers
- Manage cumulative quantities via electronic data interchange (EDI) or manually
- Manage forecast, Just-in-Time (JIT), and planning delivery schedules
- Monitor material coverage
- Create delivery, execute picking, post goods issue, and send advanced shipping notification via EDI to buyer
- Create invoice and send invoice via EDI to buyer

Business benefits

- Use sales scheduling agreements to reduce processing times and paperwork within your enterprise
- Manage various types of delivery schedules (forecast, Just-in-Time (JIT), and planning delivery schedules)
- Automate receipt and processing of delivery schedules per EDI
- Update release history
- Monitor changes
- Use cumulative quantities between buyer and supplier
- Search and access scheduling agreements via new Manage Scheduling Agreements app
- Enable analytical capabilities to manage product demand

Sales

Sales of Non-Stock Item with Order-Specific Procurement

BDN

This scope item enables customers to order goods that may not be in stock. In this case, goods are procured from an external supplier. During sales order creation, a purchase requisition is generated and then converted into a purchase order for the supplier. Goods receipt is created for customer and special stock. After delivery and the creation of a customer invoice, the vendor invoice for the goods receipt can be created.

Key process steps

- Create sales order
- Convert purchase requisitions to purchase order
- Approve purchase orders
- Post goods receipt
- Enter vendor invoice
- Process outbound delivery
- Post goods issue
- Create billing document

Business benefits

- Transfer customer requirements directly to external suppliers
- Send goods from external suppliers to trader. The trader stays in charge for the entire delivery process
- Fulfills customer requirements despite material shortage

Sales
Self-Billing

4H2

In many sell-from-stock processes (for example, described in the Sell from Stock (BD9) and Sales Scheduling Agreements (3NR) scope items), the financial settlement is done using a self-billing process with the customer. Instead of sending the invoice to the customer, the supplier receives self-billing information from the customer. This self-billing information contains the reference document number, the received quantity, and the value to be credited to the supplier (as well as other information).

This scope item relates to the self-billing processes on the sales side of the supplier. In the processes, the supplier validates the self-billing message received from the customer and simulates results. If there are differences, credit and debit memos are created respectively to settle the account.

If the differences exceed the defined tolerances, credit and debit memos are created to show the open amounts. The existing invoices and accounting documents are updated with the transferred self-billing reference number. This ensures that the financial settlement can be automated once the payment advice from the customer is received.

To enable this scope item's processes, activate this scope item and integrate your SAP S/4HANA system with SAP Self-Billing Cockpit. SAP Self-Billing Cockpit is licensed in the SAP Store. You can find it by searching for SAP Self-Billing Cockpit in the SAP Store. You can also find more details about this product by searching for SAP Self-Billing Cockpit on SAP Help Portal.

Key process steps

- Receive self-billing information from customers
- Simulate incoming information to detect, any differences and correct internal reference documents
- Update existing documents
- Create billing documents (Invoice and credit debit memos) and related journal entries in finance

Business benefits

- Receive self-billing information from customers
- Simulate incoming information to detect any differences and correct internal reference documents
- Update existing documents
- Create billing documents (Invoice and credit debit memos) and related journal entries in finance

Sales
Sell from Stock

BD9

The process starts with the creation of a customer and standard sales order. Depending on the customer and the process starts with the creation of a customer standard sales order.

After the completion of picking, the shipping specialist relieves the inventory. This inventory relief is the actual recording of the physical quantity that is being shipped to the customer.

With the goods issue posting revenue is recognized and cost of goods sold is recorded in Financial Accounting.

Once goods are delivered, you can invoice the delivery.

For details on bundling functionalities for IFRS 15, see note 2524569.

A preliminary billing document can be created from the billing due list items as an optional step. You can show it to customers to align on exact details and change if necessary. The final billing documents are created that customers are expected to settle.

Key process steps

- Create sales order
- Print order confirmation
- Create delivery
- Execute picking
- Post goods issue
- Create billing document

Business benefits

- Perform an availability check when order is entered
- Determine shipping point automatically
- Create billing document
- Make postings to FI and CO

Sales
Solution Quotation

4Q5

Solution quotation processing. You can create and edit solution quotations and include various types of items in solution quotations according to your business requirements. When released solution quotations are accepted, the creation of follow-up transactions is automatically triggered. The type of the follow-up transaction is determined by the item types that the solution quotation contains. Product bundles: You can add product bundles as individual items to solution quotations to sell a combination of products together, as a package. You can display product bundles in a hierarchical view (bundle products as main items and bundle components as sub-items). Depending on how the product bundle is configured, you can choose between alternative bundle components within one bundle component group and select (or deselect) optional bundle components.

Key process steps

- Create Solution Quotation
- Accept Solution Quotation
- Process Follow-up documents

Business benefits

- Upsell with ease by combining tangible products and services in a single offering as a package
- Help ensure that packages include all required components by defining rules and dependencies
- Simplify the processing of all related sales and service order items by leveraging a packaged view on customers’ deliverables

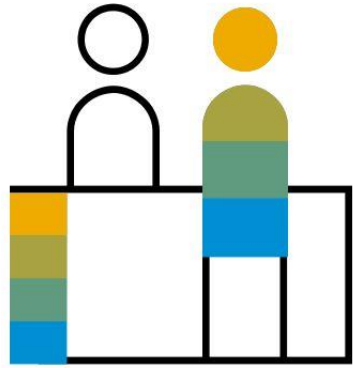
SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Service

Service

Service Master Data & Agreement Management

Service Operations & Processes



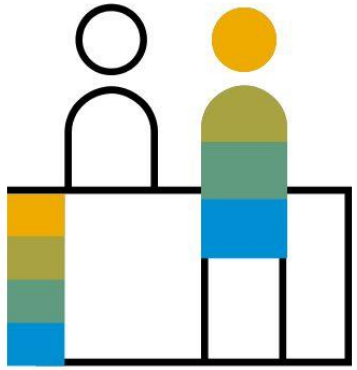
Service
Recurring Services

4X5

This scope item covers the creation of maintenance plans in SAP S/4HANA, as well as scheduling and service order creation. Maintenance plans can be set up to release the service order automatically when you create the service order or let the user release the order manually afterwards. Service order items are copied from the service order templates that are assigned to maintenance items in the maintenance plan. A released Service contract item (scope item 426) is the prerequisite for this scope item.

The Service Order Management (41Z) scope item is the follow-on process for further processing the Service order such as planning, releasing, time and material confirmation, billing, and order completion.

The completion date is updated automatically in the maintenance plan either upon completion of service order or manually by the user. Updating the measuring counter reading is an optional step during confirmation.



Key process steps

- Create maintenance plan
- Schedule maintenance plan (individual/mass)
- Create a service order
- Assign service team (optional)
- Release service order line items (optional)
- Change service order (optional)
- Release service order
- Receive confirmation against the service order
- Post the time sheet against the service technician and expenses incurred automatically based on the confirmation
- Cancel the confirmation along with the follow-up documents (optional)
- Release the service order (for fixed-price services) or confirmation (for time and material services) for billing and automatic creation of billing document request
- Copy procurement costs automatically in the confirmation, based on posted supplier invoice or purchase order for billing to the customer for time and material services
- Create a billing document from the billing document request for invoicing the customer
- Analyze service order fulfillment (optional)
- Update measuring counter reading (optional)

Business benefits

- Provide the functionality for regular maintenance planning and scheduling
- Cover single cycle time and counter-based and multiple counter plans
- Support individual scheduling and mass scheduling via background jobs to trigger service orders with or without release
- Provide the functionality for planning and execution of services
- Post timesheet and expenses automatically based on the confirmation

Service

Service Contract Management

426

This scope item covers the management of service contracts in SAP S/4HANA Service. Service contracts are outline agreements that define services offered for a particular period and represent long-term service agreements with customers. Service contracts are billed on periodic billing plan. Via price adaptations for service contract, different prices within the contract periods are possible. Optionally, customers can choose ad-hoc billing, a structured method of service contract billing that allows you to define billing values and billing dates manually.

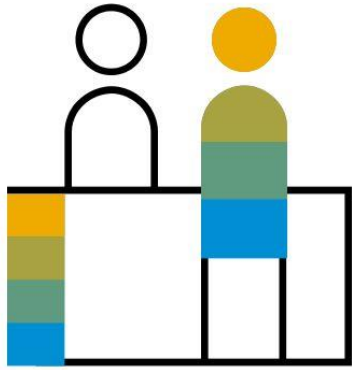
Customer-specific price agreements can be defined and handled within service contracts. Service contract determination is enabled for service orders that correspond with the service contract in predefined criteria – in this case, contract and price details from determined service contract are considered.

Customers can define service level agreements and maintain service/response profiles in service contracts.

It's possible to renew an expiring service contract automatically for a predefined period at a predefined date. If needed, you can also manually renew service contracts and items. As part of the change process, you can change the sold-to party of a service contract and a new service contract is automatically created.

Furthermore, you can create and configure a configurable service contract item.

This scope item includes situation handling for service contracts. Situation handling is SAP S/4HANA functionality that lets you bring certain circumstances (situations) to the attention of a relevant group of business users.



Key process steps

- Create Service Contract and Add Service Contract Items with Periodic and/or Ad-Hoc Billing Plan
- Maintain Product List and Create Price Agreements for Service Product
- Create Service Contract Item with Configurable Product
- Adapt Service Contract Prices
- Release Service Contract and Service Contract Items
- Schedule and Manage Billing Document Requests
- Create Billing Request Lines (Only valid for Ad-hoc Billing)
- Create Invoice
- The following service contract change processes are possible:
  - Change Sold-to-Party in Service Contract (Optional)
  - Manually Renew Entire Service Contract (Optional)
  - Manually Renew Service Contract Item (Optional)
  - Auto Renewal of Service Contract Item (Optional)
  - Cancel Service Contract or Service Contract item (Optional)

Business benefits

- Flexible and powerful service contracts that reflect your customers' needs
- Enable flexible pricing with price adaptation or manual prices
- Use full integration into SAP S/4 billing

Service

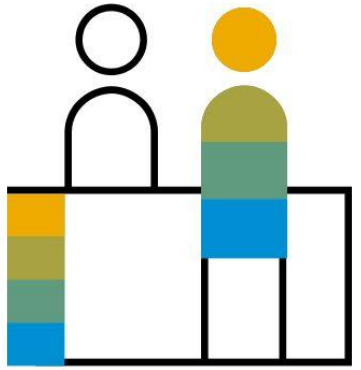
Service Monitoring and Analytics

43B

This scope item helps the customer service manager ensure on-time service delivery by monitoring incomplete or overdue service orders. This scope item also helps to compare the average repair time per product.

The customer service manager must also know the number of service contracts with upcoming expiration dates as well as those that already expired. The customer service manager can compare and view the service contracts from various dimensions, such as total contract value and profit margin. The customer service manager can also trigger actions to renew them.

This scope item helps to display and monitor a variety of issues in service contracts and service orders. It supports a detailed analysis of the issues by displaying the results by issue, service transaction, country, region, and sales organization. You can use various chart types, mini charts, and filters for analysis, monitoring, discovering additional information, and focusing on certain data, such as service transactions.



Key process steps

- Review service contracts for expiry or renewal
- Review service contracts by contract value and profit margin
- Review overdue service orders
- Review incomplete service orders
- Monitor average repair time by product
- Analyze service order and contract issues

Business benefits

- Provide a graphical overview of key service process data to gain insights into the current service situation
- Display detailed information that helps to examine and analyze data across various dimensions
- Provide an overview of service order or contract related issues

Sales
Accelerated Customer Returns

BKP

This scope item covers three customer return scenarios:

1.) Return to seller: A return order is created in reference to the original billing document or sales document. Once saved, a return delivery is automatically generated. The goods, once received, are inspected at the warehouse. The user can influence when the refunding documents are created: either directly, when releasing a return order, or after the inspection. Finally, the user can decide on the compensation type for the customer: either shipping a replacement or paying a credit memo.

2.) Return to seller with inspection at customer site: The user decides to perform the inspection at the customer site before initiating a physical return.

3.) Return to supplier via seller: After lean inspection at seller, it is requested to send goods back to supplier. The supplier decides on the refund towards the vendor, while the vendor decides on the compensation type towards the customer.

The progress of the return process can be monitored using returns overview.

Key process steps

Return to seller:

- Create return order
- Perform material inspection
- Send back to customer, book to free available stock or scrap
- Determine refund
- Create credit memo or replace material free of charge
- Display return overview

Return to seller with inspection at customer site:

- Create return order
- Change return order after inspection at customer site
- Reject return, specify compensation or initiate physical return
- Create credit memo or replace material free of charge

Return to supplier via seller:

- Create return order
- Perform lean material inspection
- Generate return purchase order: Request return to supplier
- Ship to supplier
- Seller to receive refund by supplier
- Seller to refund customer with credit memo
- Seller to ship free of charge material replacement

Business benefits

- Generate follow-up documents automatically
- Perform refund in one step
- Include goods inspection
- Reduce transportation costs and save time while performing inspection at customer site
- Return goods to supplier via seller
- Provide end-to-end support and monitoring of the return process

Service
Accelerated Third-Party Returns

1Z3

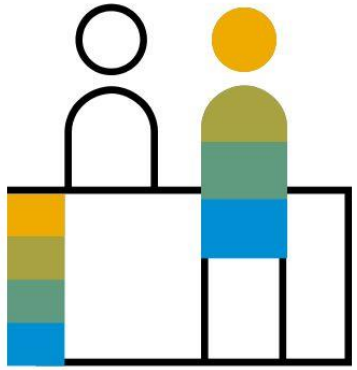
This scope item supports the return scenario, where material is directly returned by the customer to the supplier.

The customer contacts the seller and informs the internal sales representative that they want to return goods. The sales representative decides that the materials must be returned directly to the supplier. This can be the case when materials are shipped to the customer via third-party delivery by the supplier.

The sales representative creates a returns order to initiate the return of materials directly to the supplier. Once the returns order is saved and released, a return purchase order is generated automatically. After the supplier receives the returned goods and the seller receives a credit memo from the supplier, the customer is compensated by the seller via credit memo or replacement material.

The progress of the return process can be monitored using the returns overview.

For return of third-party goods to supplier via seller, see the Accelerated Customer Returns (BKP) scope item.



Key process steps

- Create return order
- Process supplier refund based on supplier credit memo
- Determine refund
- Create credit memo or replace material free of charge

Business benefits

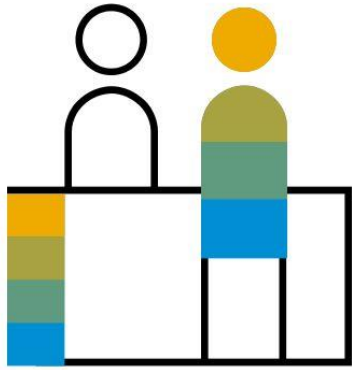
- Enable direct return of third goods from customer to supplier

Service
Customer Returns

BDD

The process starts with a customer request for authorization to return materials to the plant for credit, referred to as a Return Material Authorization (RMA). The request is approved, and a return sales order is created with reference to the original invoice for the goods. An RMA document is printed and forwarded to the customer to be attached to the incoming goods. The goods are shipped back, a return delivery is created with reference to the RMA, and the material is received into return stock.

The return stock location is set to be non-MRP relevant. The goods are inspected, resulting in a disposition to either return them to stock, or scrap. A credit memo is created from the billing run and posted to the customer's account.



Key process steps

- Create sales order
- Create return delivery
- Create billing document

Business benefits

- System integrated processing of customers returns and complaints

Service

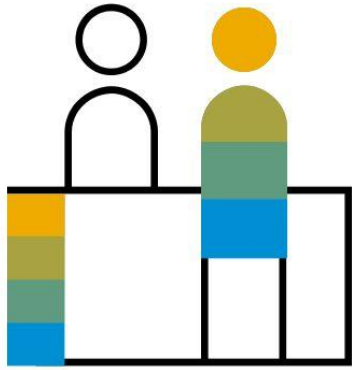
Interaction Center Service Request Management

41W

This scope item enables Interaction Center (IC) capabilities to help ensure efficient and consistent customer service by collaborating and communicating with customers using various communication channels.

IC agents can handle inbound and outbound customer interactions by telephone, e-mail, fax, chat, and letter communication channels. They can process business transactions such as service requests and enhance their productivity by using alerts and a knowledge search. All relevant account information is available to them in the IC, for example, account data, service order status, and product-related information.

The scope item covers the account identification of a customer calling the service desk. To process the customer's request, a service request is created and dispatched to another service team. Optionally e-mail exchange between the service desk and the customer can be used. Once a solution for the request is available, the service request is completed.



Key process steps

- Identify Account and Equipment
- Create Service Request
- Search for Solution
- Dispatch Service Request
- Process Service Request from Inbox
- Provide Solution via E-mail
- Complete Service Request

Business benefits

- A multi-channel Customer Interaction Center embedded in S/4HANA: no separate system, readily use S/4HANA master data, for example, account and material
- Use any S/4HANA application or transaction in the Customer Interaction Center
- Automatic account identification and comprehensive account history
- End-to-end Service Request management with defined SLAs, categorization, etc.

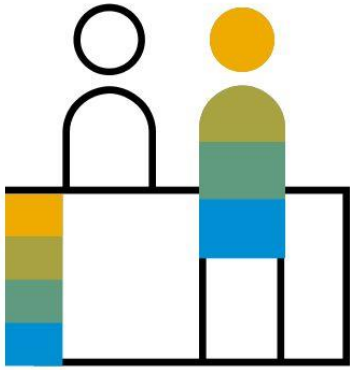
Service

Return Order Processing for Non-Stock Material

3TE

A non-stock material can be used in the return order. Non-stock materials are not included in inventory management. With creation of a return delivery, the goods receipt is reflected by a confirmation posting. Non-stock items can be handled along with stock items on one return order.

The user can influence when the refunding documents are created: either directly when releasing a return order, or after materials are received physically. Finally the user can decide on the compensation type for the customer: either paying a credit memo or shipping a replacement.



Key process steps

- Create return order
- Generate return delivery
- Post goods receive (statistical confirmation)
- Determine refund
- Create credit memo or replace material free of charge

Business benefits

- Take back items from your customer that do not need maintenance in inventory, simplifying data entry for the items
- Integrate return of non-stock items fully in return order processing
- Decide immediate on compensation options

Service

Return Order Processing for Sales Kits

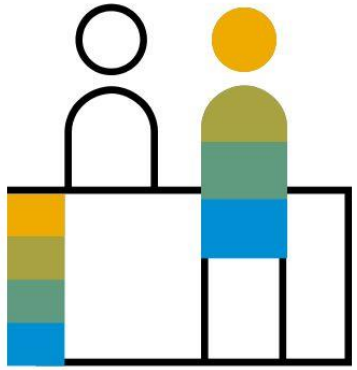
5CX

Companies often want to return individual products that are bundled into a sales kit (for example selling a PC together with monitor, keyboard, mouse, license, and so on). In such cases, sales kits are commonly used to sell or return individual products independently from the bundled product.

The customer returns process in accelerated returns management supports BOMs. The process starts with customer returns order creation. The sales kit material is then received into the plant logistically. Subsequently, a credit memo or replacement material is provided to customer as compensation.

Once you've entered a bill of material in a customer returns order, the system runs pricing and logistics execution at the following levels:

- Header level: (ERLA) usually used when product is assembled
- Item level: (LUMF) usually used when product is not assembled
- Both Levels: (CPFH) pricing happens on header and logistics (goods movements) on item level



Key process steps

- Create customer returns order
- Perform material inspection
- Send back to customer, move to free available stock or scrap
- Determine refund
- Create credit memo or replace material free of charge
- Display return overview

Business benefits

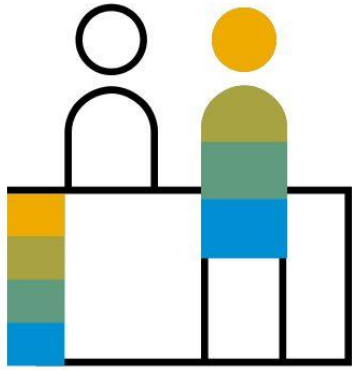
- Increase process flexibility within returns order processing
- Enhance efficiency in the comprehensive returns process

Service
Returnables Processing

BDW

This scope item enables the shipping of standard pallets and their return. When you create a standard sales order, the delivery is automatically created based on this sales order. During the picking and shipping steps of this process, a pallet (returnable packaging) is added to the delivery. During the billing process, pallets can also be returned to manufacturers using a pallet return order with pallet return delivery and goods receipt, or a pallet return delivery without reference and goods receipt.

If customers do not return pallets, you can issue debit memo requests. Triggered by billing, the system issues debit memos based on such debit memo requests. Once this has been carried out, you can synchronize the consignment stock quantity and value, and then post a manual goods issue for the unreturned pallet.



Key process steps

- Create sales order
- Create delivery
- Execute picking
- Add returnable packaging to deliveries
- Create returnable packaging return order
- Post goods receipt for returnable packaging
- Debit unreturned packaging
- Post goods issue for unreturned packaging

Business benefits

- Consists of the management of returnables using the ERP returnable packaging logistics function
- Track returnables

Service

Service Order Management

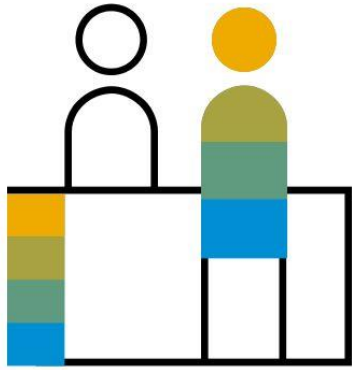
41Z

Service orders record the details of a one-off service agreed upon by a service provider and a service recipient.

You can do the following:

- Create a service order as a follow-up transaction of another transaction (for example, a service request)
- Create follow-up transactions from a service order (for example, a service confirmation)
- Create a service order as a follow-up transaction of a service order template

This scope item covers the creation of service orders in which diverse services and service parts can be planned. Service technicians execute the services and optionally use related service parts. After the service order is confirmed and completed, an invoice is created.



Key process steps

- Create Service Quotation
- Create Service Order
- Create Service Confirmation
- Create Billing Document Request
- Create Billing Document

Business benefits

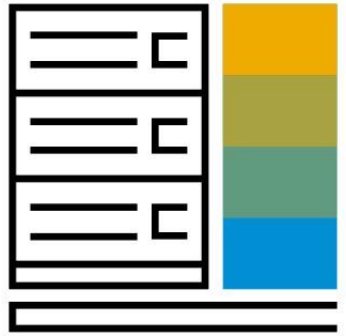
- An end-to-end process for Service management, from quote to order to billing
- Create Service orders from Service Quotations
- Flexibly combine service tasks and materials in one Service Order
- Conduct automatic contract determination if Service Contracts are enabled
- Full integration in S/4HANA Procurement and Billing

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Application Platform and Infrastructure

Application Platform and Infrastructure

Process Management and Integration



Application Platform and Infrastructure

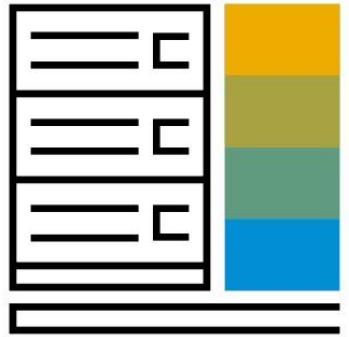
Business Event Handling

1NN

With a standardized event mechanism, you can provision the event catalog for all business objects across the SAP S/4HANA Cloud application, to enable applications, partners, and customers to consume events related to all SAP S/4HANA business objects.

With event activation management, you can propagate only subscribed events to the messaging infrastructure and to those subscribers or receivers.

Side-by-side extensions provide a powerful way of extending SAP S/4HANA Cloud applications on SAP Business Technology Platform for customers and partners without impacting the digital core, by building decoupled extension applications running side-by-side with SAP S/4HANA Cloud.



Business benefits

- Consume events based on business objects
- Use front-end application to maintain subscription
- Manage all the active, in-active subscriptions in one place
- Manage event handling subscriptions effectively

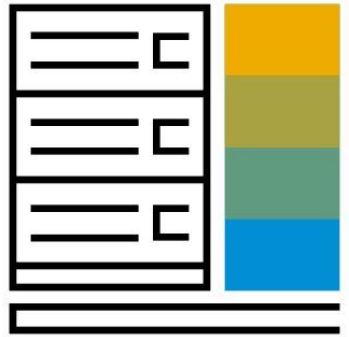
Application Platform and Infrastructure

Predictive Analytics Model Training - Finance

30K

A model describes and explains the relationships that exist between the dataset and the target to allow predictions. One model can contain several model versions, but only one version can be active at a time. The active version is used to do the predictions.

In the detail steps of training a model, as an example, we use the Check Assigned Liquidity Items predictive scenario. For other predictive scenarios, the procedures are similar, but you can use our example and adapt it to other scenarios.



Business benefits

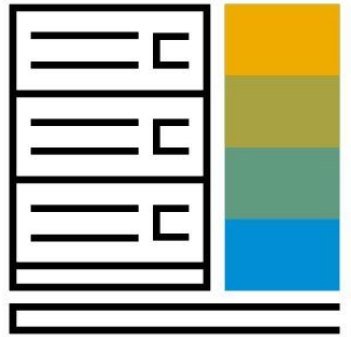
- Enables you to activate predictive models for financial use cases

Application Platform and Infrastructure

Responsibility Management

1NJ

As we move toward an intelligent enterprise, intelligent systems need to determine agents who are automatically notified about events and who are responsible for business processes and objects. It is essential to define and manage these responsibilities, including authorizations for various contexts, and retrieve the correct contacts who can react to tasks and activities. Responsibility Management provides the Teams concept through which you can group responsible members with appropriate definitions for responsibilities. These members are assigned functions that uniquely describe the nature of their work. Functions and responsibility definitions help as a selection criterion for refining agent determination. With this scope item you can configure function, function profile, custom responsibility definitions, and team types for Responsibility Management.



Key process steps

- Create a team
- Maintain hierarchy across teams
- Create rules
- Extend context and map rules

Business benefits

- Simplify approval processes for business scenarios that need to determine responsible people in complex organizational structures
- Enable application scenarios in determining the people responsible for tasks, activities, and business situations
- Save time and cost of changing an existing organizational structure when adopting dynamic approval processes
- Achieve task management with teams, roles, rules and responsibilities

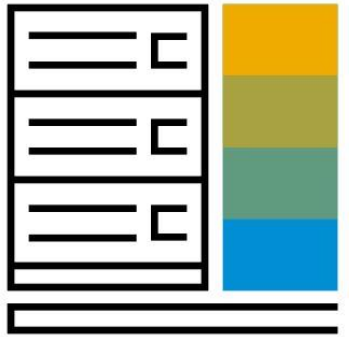
Application Platform and Infrastructure

Situation Handling

31N

Professional users need the rich functionality of SAP software that reflects the increasing business complexity. At the same time, they ask for simplified UIs and an amazing user experience. If we know how the users behave and what their actual requirements are in a concrete situation, we can provide the right information on the spot.

Situation and context awareness allows users to focus on data and functionality that is relevant for the user in the current situation.



Key process steps

- Create/enable situation type based on standard situation templates (Classic) or scenario (Message-based) provided by SAP LoB
- Leverage Responsibility Management to determine notification recipient(s) based on responsibility definition and/or business functions
- Notification recipients can navigate from a notification to the (classic) affected object to resolve underlying issue or log detail (message-based)
- optional for selected situation types: Inform users about their new situations via e-mail. From the e-mail, end users can navigate to the SIT notification for details
- View open situations using:
  - my. situations app
  - in-app (Fiori reuse component)
  - notifications area of the FLP

Business benefits

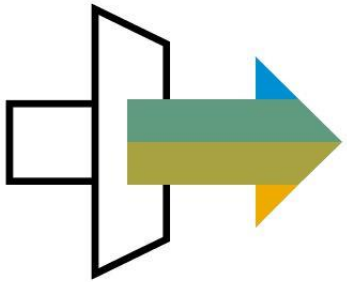
- Direct users to situations requiring their attention
- Provide users with contextual information and proposed actions in one place
- Adapt the system to the business requirements by defining and modifying situation types
- Monitor and improve situation handling via tracking and analysis of issues
- Leverage situations in SAP S/4HANA to make machine learning intelligent process automation consumable and scalable

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: Database and Data Management

Database and Data Management

Enterprise Information Management



Database and Data Management

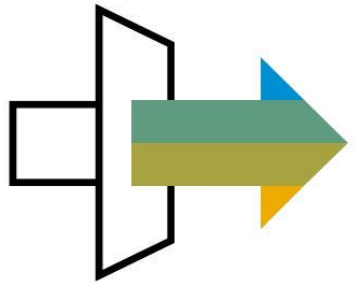
Data Migration to SAP S/4HANA from Staging

2Q2

SAP S/4HANA Cloud customers can use the included SAP S/4HANA migration cockpit to migrate data. If the customer chooses to use the Migrate Data Using Staging Tables approach, the SAP S/4HANA migration cockpit creates staging tables for the migration objects that are relevant for your project and migrates data from these staging tables to the target SAP S/4HANA Cloud system.

If you use the Local SAP S/4HANA Database Schema option, the SAP S/4HANA migration cockpit generates the staging tables in the local ABAP schema of the SAP S/4HANA Cloud system. We recommend using this option if you want to populate the staging tables using the XML template files provided by SAP.

If you use the Remote SAP HANA Database Schema option, you specify the relevant connection to a remote SAP HANA system. The SAP S/4HANA migration cockpit generates the staging tables there.



Key process steps

- Create a project
- Select the migration objects that are relevant for your migration project
- Fill the staging tables with data using SAP or third-party ETL tools or by using the XML template files provided by SAP
- Process any open mapping tasks to ensure correct source data mapping
- Simulate the migration of data
- Rework data and repeat mapping tasks (if required)
- Repeat the simulation process (if required)
- Migrate the data to SAP S/4HANA Cloud

Business benefits

- Deliver migration projects on time and within budget
- Provide trusted data to users
- Increase data load performance by changing to table read rather than file upload
- Ensure quality master data for your core business processes
- Validate the data against specific customer business rules
- Load data into your SAP S/4HANA Cloud system

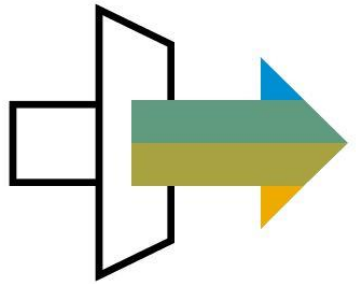
Database and Data Management

Employee Integration - SAP S/4HANA Enablement

1FD

This scope item enables SAP S/4HANA for the employee master data integration to SAP SuccessFactors Employee Central. It can also support the integration of a third-party human resources system. Required tables and data fields can store transferred employees and employee-related data, including organizational data and assigned cost centers.

This scope item does not cover business configuration for HR processes, and does not set up integration.



Key process steps

- Create and store employee data in SAP S/4HANA out of transferred data from SAP SuccessFactors Employee Central or a non-SAP HCM system

Business benefits

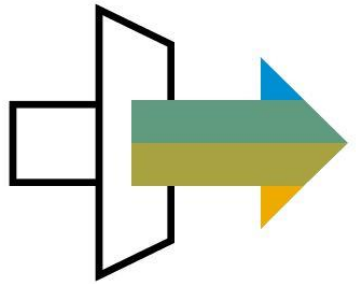
- Automate the configuration of SAP S/4HANA HCM tables to store employee and employee-related data transferred from SAP SuccessFactors Employee Central or a non-SAP HCM system

Database and Data Management
Enablement of SAP Excise Tax Management

4LO

This integration scenario deals with integration of SAP S/4HANA APIs with SAP Excise Tax Management. The APIs are in the areas of master data (business partners, materials, organizational data), materials management (material documents), logistics execution (delivery for EMCS (Excise Movement and Control System)), sales (pricing in sales order and billing), financials (posting of excise taxes to accounting).

Country- and customer-specific details aren't covered and must be implemented on an individual basis to meet both legal and customer requirements.



Key process steps

- Replicate organizational data - storage locations and plants
- Replicate master data - material master and business partners
- Replicate material documents
- Replicate financial documents for tax accruals (optional)

Business benefits

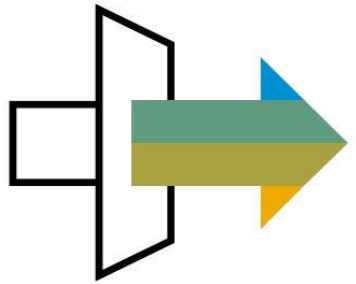
- Enable SAP Excise Tax Management

Database and Data Management

Inbound Service for Predictive Analytics Integrator

2V2

This scope item provides the information on the additional steps customers must perform to activate the integration between SAP S/4HANA Cloud and SAP Predictive Factory. Because these steps are customer specific, they cannot be delivered by SAP, and must be performed by the customer.



Key process steps

- Establish the connection between SAP S/4HANA cloud and SAP Predictive factory to enable PAI services
- Train a predictive model for different forecasting scenarios with available data

Business benefits

- Get a high-level overview of the SAP Predictive Analytics Integrator services that can be used for different forecasting scenarios
- Helps create predictive models and generate predictions at runtime

Database and Data Management

Integration to SAP Enterprise Contract Assembly

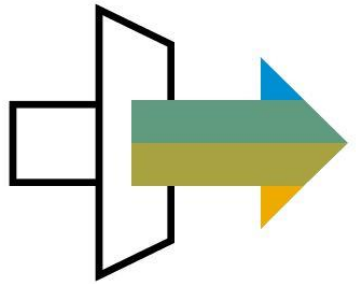
2OQ

The SAP S/4HANA for enterprise contract management application enables digitization of legal transactions within an organization. This application facilitates creation and management of legal content in enterprises in alignment with core business processes and provides an integrated platform to run enterprise-wide legal process more efficiently.

SAP Enterprise Contract Assembly is an SAP BTP application that enables the authoring and assembly of the following legal content:

- Templates and text blocks as elements to reuse content
- Virtual documents as a result of the assembly of a template based on and specific business context

The integration of SAP Enterprise Contract Assembly with SAP S/4HANA for enterprise contract management enables enterprises to integrate with all core business processes, assemble all types of documents based on templates, text blocks, rules, and simultaneously store all documents in a central online repository.



Key process steps

- Author or edit legal templates and documents
- Assemble legal templates and documents
- Generate legal documents
- Manage legal documents

Business benefits

- Increase transparency on lifecycle of legal content creation and assembly
- Experience efficient and faster provisioning of legal content
- Get faster reaction times, lower risks, and improve compliance

Database and Data Management

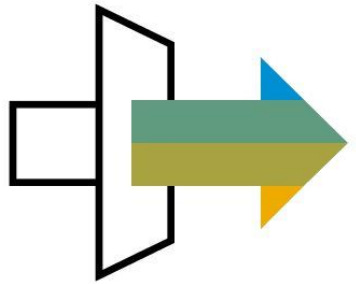
Intelligent Content Processing for Document Classification

2YC

Classification of documents having written language (unstructured text) requires huge manual effort.

Recent advances in the field of machine learning (ML) and natural language processing (NLP) allow for very precise and fully automated classification of documents based on their textual content.

The prerequisite for such an automation is the training data containing examples that represent correctly classified documents to allow a machine to use this history data to correctly classify a document.



Key process steps

- Create new document (as part of Manage Documents)
- Retrieve auto-classification
- Validate auto-classification

Business benefits

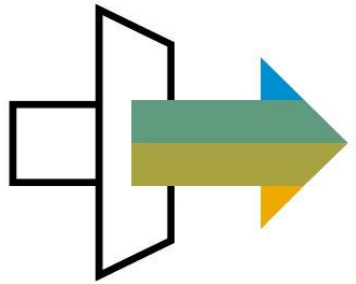
- Save costs and increase efficiency
- Replace manual work through automatic document classification
- Reduce human error during increasing volume of documents

Database and Data Management

Master Data Catalog for SAP S/4HANA - On-premise

1I9

The list of individual master data objects shows all objects that are relevant for SAP S/4HANA, regardless of the scope you choose to implement.



Key process steps

- Customer master
- Supplier master
- Product master for Trading Good
- Product master for Raw Material
- Product master for Semi-Finished Good
- Product master for Finished Good
- G/L account
- Cost element
- Profit center
- Asset
- Production work center
- Production bill of material
- Routing
- Cost center
- Cost center group
- Activity type
- Activity type group
- Cost element group
- Costing run
- SEPA Mandate
- New open MM posting period

Business benefits

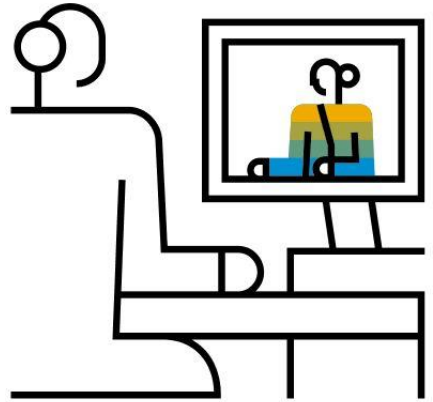
- Enable key users and implementation teams on best practices for master data maintenance
- Lowers and accelerates the implementation effort

SAP Best Practices for SAP S/4HANA (on premise)

Business Area in Line of Business: IT Management

IT Management

Administration and Usability



IT Management
Output Management

1LQ

This scope item provides best practice information for SAP S/4HANA output management that can be used to implement business scenarios that include output-related tasks. This focuses on the reuse of SAP S/4HANA output control service that is available for different business applications (such as billing document or purchase order). The reuse service offers different capabilities for output of business documents to business receivers. The features that are available in the context of the application are specific to that business application.

Within SAP S/4HANA output management, Adobe Forms (XFA) are the standard technology for rendering application objects (such as purchase orders, contracts, or invoices) into PDF. Output management provides the necessary framework for form template development and maintenance, data assembly, rendering, and output determination for forms.

Key process steps

- Document output management requirements
- Document required communication channels (Print, Email, EDI)
- Document required document templates (email, forms)
- Output management setup (printers, email)
- Customize form templates (add custom fields)
- Customize master form template (apply corporate branding)
- Customize email templates
- Define business rules for output determination
- Output with attachments

Business benefits

- Get ready-to-use output scenarios (predelivered configuration)
- Integrate into SAP Fiori apps natively
- Configure sender and recipients for email output flexibly
- Use templates for email subject and email body (including variables for dynamic content) for email output
- Print and send attachments via email
- Define business rules to allow sending multiple messages to multiple recipients using multiple channels at the same time
- Extend the rules with SAP standard fields and customer fields
- Perform batch Output with generic sorting for initial output and reprocessing (retry after error and creating duplicates)
- Reduce total cost of ownership (TCO) by enabling key users (nontechnical users) to add more business fields to configuration settings and Adobe forms

Agenda

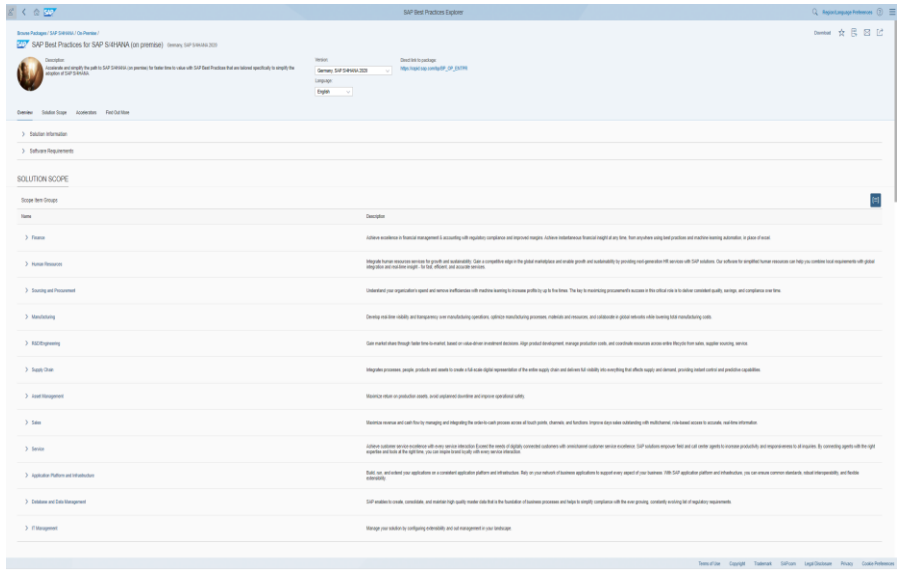
- Overview & Scope
- Scope in detail
- More information

Software Requirements

- SAP S/4HANA 2021, SAP S/4HANA Server, FPS00
- SAP S/4HANA 2021, Adobe Document Services, FPS00
- SAP FIORI FRONT-END SERVER 2021 for SAP S/4HANA, SAP Frontend Server 7.56, FPS00
- SAP FIORI FOR SAP S/4HANA 2021, UI for SAP S/4HANA, FPS00
- SAP S/4HANA 2021, SAP Web Dispatcher, FPS00

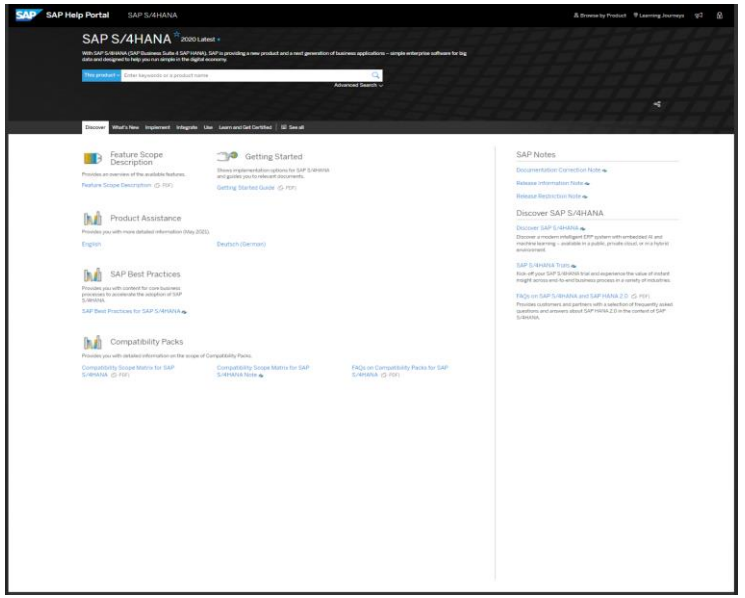
Where to go for more information?

SAP Best Practices Explorer



https://rapid.sap.com/bp/BP_OP_ENTPR

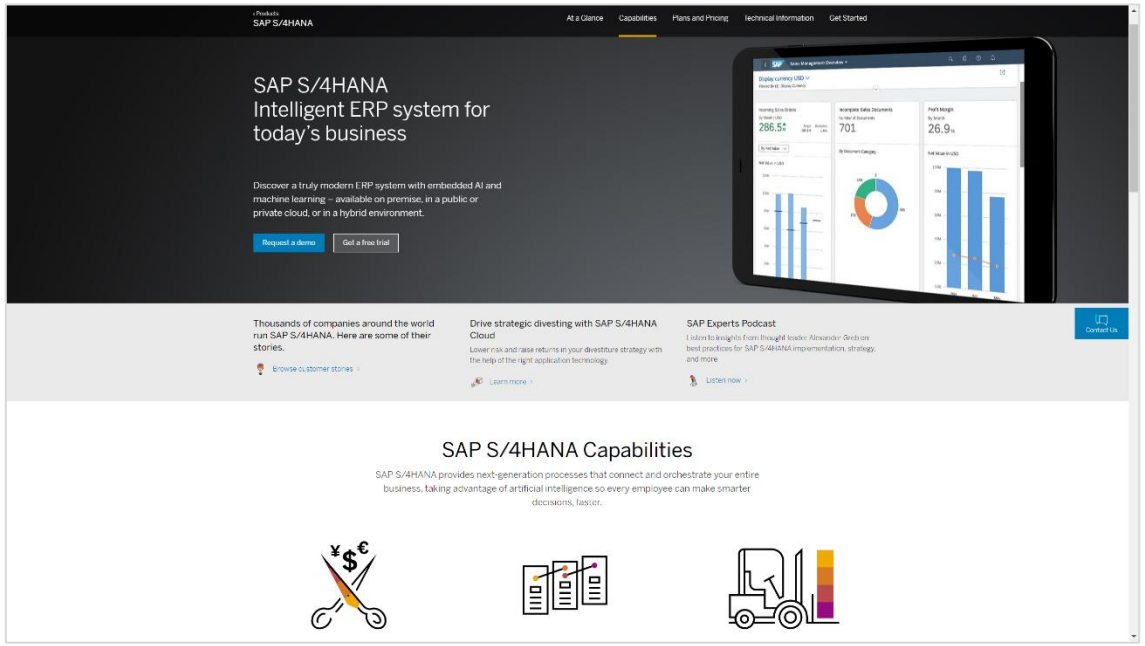
SAP Help Portal



https://help.sap.com/viewer/product/SAP_S4HANA_ON-PREMISE/2020/en-US?task=discover_task

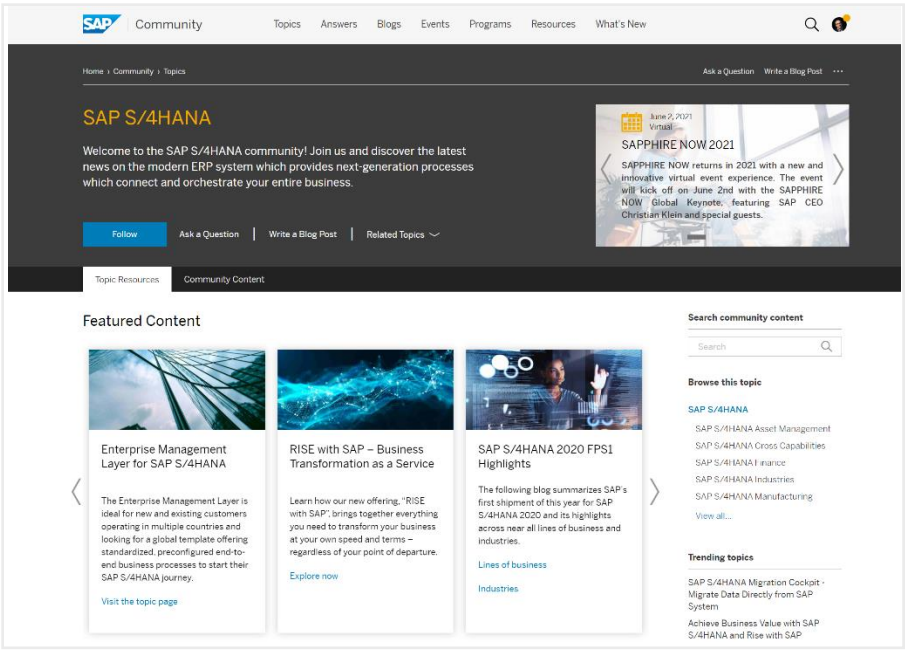
Where to go for more information?

SAP S/4HANA Release Info



https://www.sap.com/products/s4hana-erp.html

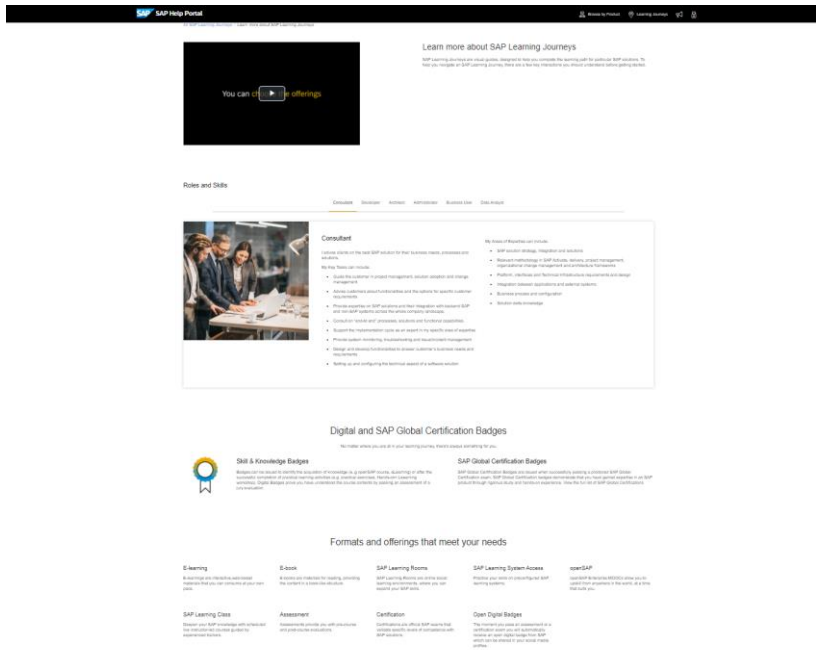
Join the SAP S/4HANA Community



https://community.sap.com/topics/s4hana

Where to go for more information?

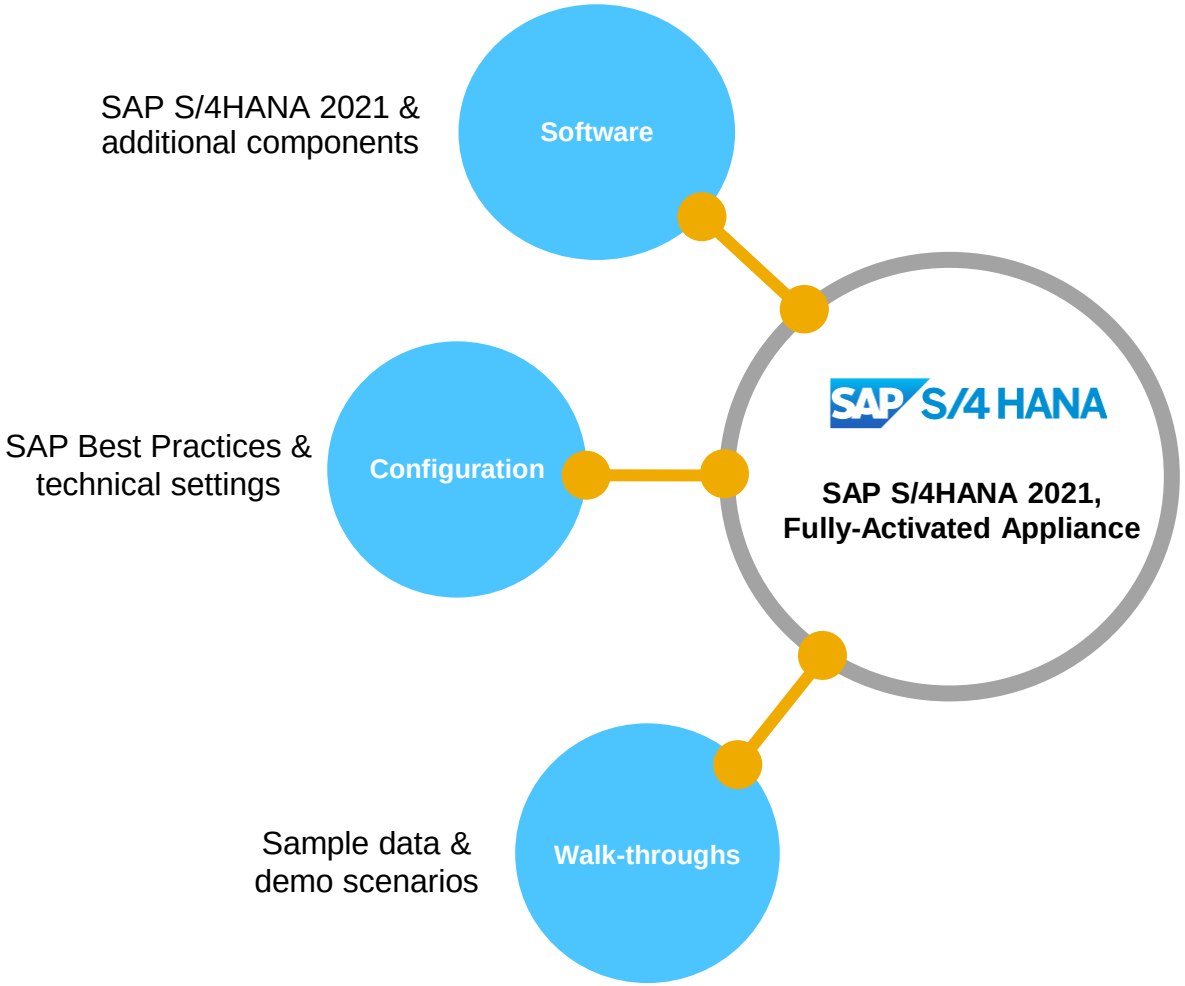
Training and Adoption



https://help.sap.com/learning-journeys/learn-more

SAP S/4HANA 2021 Fully Activated Appliance:

Do you need your own pre-configured system for trying out things in SAP S/4HANA 2021 ?



Create your own pre-configured system in a fraction of the usual setup time

In 1-2 hours via SAP Cloud Appliance Library (SAP CAL), hosted in AWS / MS Azure / GCP

In 2-3 days when deploying on own physical hardware

Use cases:
Trial / Sandbox / PoC / Scoping

Open to customers, partners, public users, and SAP employees

More information:

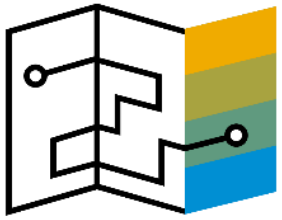
- Overview blog
- Demo scenarios
- Try out as S/4HANA 30-day trial
- Detailed How-To videos

Lab preview - the SAP S/4HANA 2021 SP00 version is planned for end of Q4 2021.
Until then the most recent appliance release (SAP S/4HANA 2020 FPS02) can be used.

Official SAP Road Maps webpage: sap.com/roadmaps

To view all SAP Road Map documents, visit www.sap.com/products/roadmaps/finder-all.html

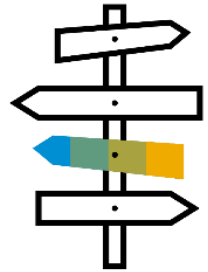
SAP ROAD MAPS describe recent and upcoming highlights in SAP's portfolio to help you plan and implement your IT landscape.



INTERACTIVE ROAD MAPS PLATFORM

SAP INTERACTIVE ROAD MAPS connect thought leadership with solution capabilities, business value, and innovations. This digital platform is the future of Road Maps, with more content being added regularly.

https://roadmaps.sap.com



CUSTOM ROADMAPPING TOOL

SAP TRANSFORMATION NAVIGATOR brings together industry trends with the customer's business and IT priorities to create a custom road map to SAP S/4HANA.

https://support.sap.com/stn

SAP S/4HANA MOVE Planning Tools

Process Discovery

For Project Leaders

The Process Discovery for SAP S/4HANA Transformation is the evolution of SAP Business Scenario Recommendations and helps customers and partners to drive innovation adoption and to consume maintenance services.

Identify SAP S/4HANA Innovation & Improvement potential based on your system data.

SAP Transformation Navigator

For Business and IT Leaders

This tool analyzes the goals and builds a technical business case including a roadmap on where to go in the future with SAP S/4HANA. It's a web-based and free self-service road-mapping tool. It uses the information about the existing SAP system landscape to create a recommendation for a new SAP S/4HANA-centric landscape with the latest SAP solutions.

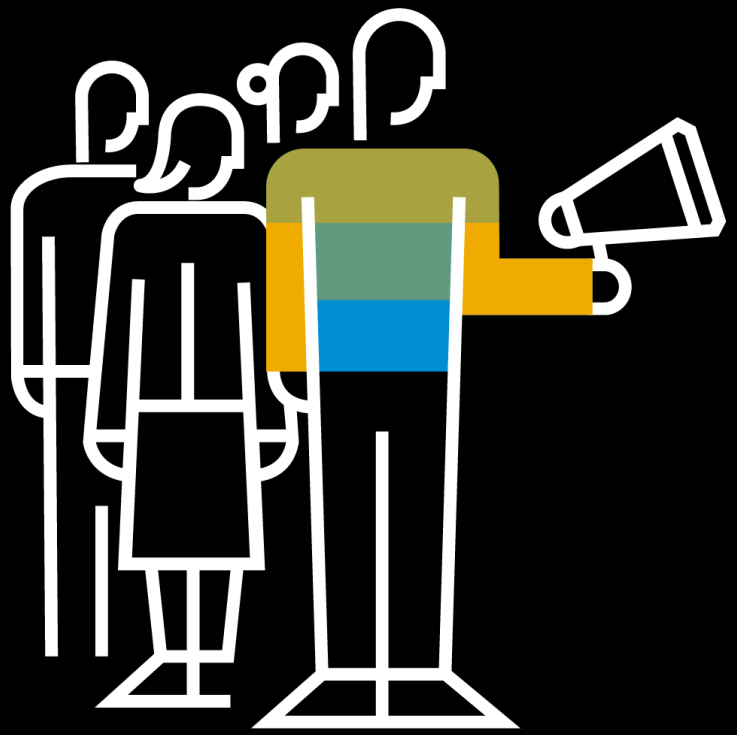
SAP S/4HANA Readiness Check

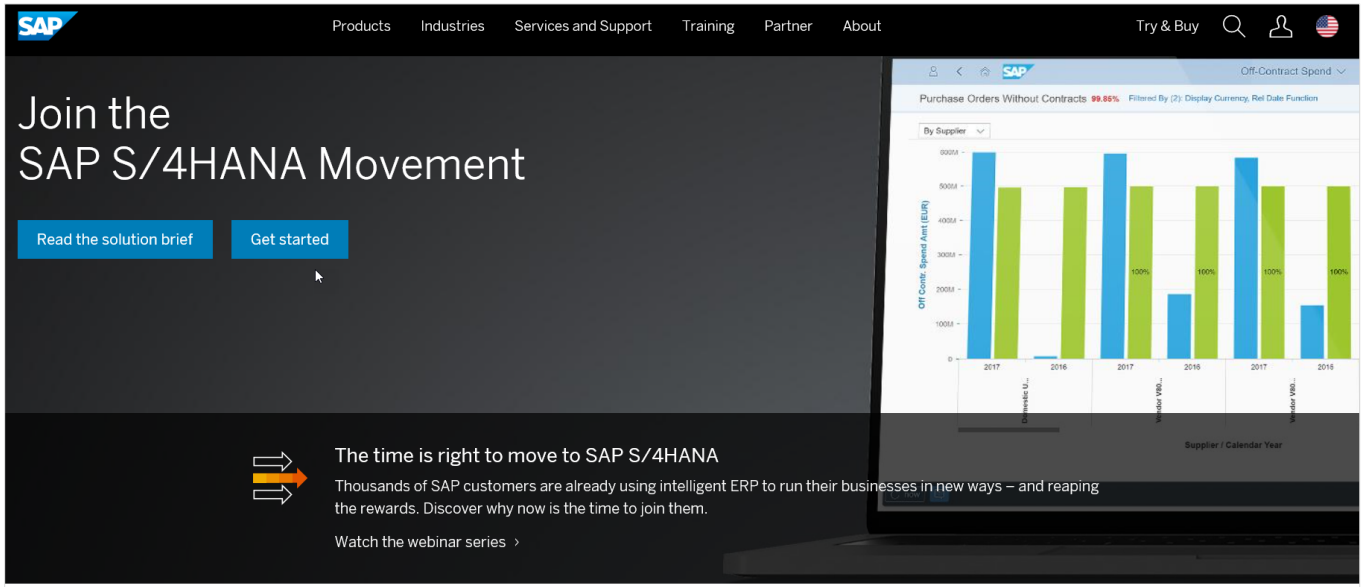
For IT Leaders

It checks the readiness of multiple aspects of the running SAP ERP 6.x system to migrate to SAP S/4HANA. The tool assesses the functional and technical aspects of an implementation of SAP ERP, including: Custom-code compatibility, System sizing and data volume management, Add-on and extractor compatibility and other items

Small / Midsized Business | Large Customers | Strategic Customers

www.sap.com/jointhemovement



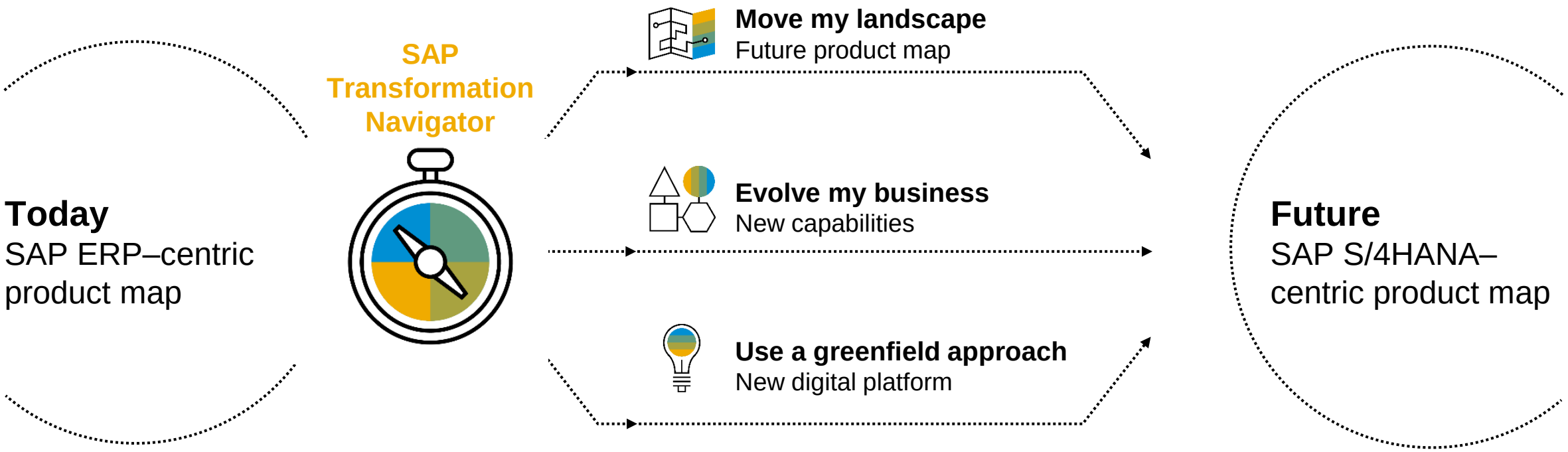


Transition to intelligent ERP with the SAP S/4HANA Movement program

Businesses that move to an intelligent platform gain critical momentum over their competitors. Learn how you can unlock new business value with our intelligent ERP – and transition seamlessly with packaged tools and services.

SAP Transformation Navigator

Supporting your digital transformation



SAP Transformation Navigator provides you with clear guidance to chart the Intelligent Enterprise:

- Based on your currently used products, this free self-service produces an individualized report highlighting business value, detailing integration to SAP S/4HANA and other cloud products, and explaining transformation services and license information.
- With the new time-slider feature, you can even identify the best point in time to engage in your journey to becoming an intelligent enterprise.

Discover the tool and your transformation path at https://support.sap.com/stn.

Thank you