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SAP S/4HANA Cloud 2208

Feature Scope Description

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Document History

⚠ Caution

Make sure you have the latest version of this document. You can find the latest version at the following location: <https://help.sap.com/s4hanacloud>

The following table provides an overview of the most important document changes.

Version	Date	Description
1.0	2022-08-01	First version
1.1	2022-08-05	Minor corrections

1 SAP S/4HANA Cloud - Feature Scope Description

With SAP S/4HANA Cloud (SAP Business Suite 4 SAP HANA Cloud), SAP is providing a new generation of business applications – simple enterprise software for big data and agility.

SAP S/4HANA Cloud is fully built on the in-memory platform SAP HANA. Using the advanced potential of SAP HANA, SAP S/4HANA Cloud is designed for business and provides an instant insight by using a single source of truth, real-time processes as well as by dynamic planning and analysis. With SAP Fiori user experience and less complex data model it is designed to run simple, and in parallel reduces the data footprint of your company. SAP S/4HANA Cloud is also already connected to business networks and company-internal collaboration networks and prepared for the Internet of things. With all these aspects, SAP is protecting your investments by facilitating next generation business applications. SAP S/4HANA Cloud is available as software-as-a-service.

2 About this document

This feature scope description shows you which features are provided with SAP S/4HANA Cloud. In addition, this feature scope description also defines the product documentation for SAP S/4HANA Cloud.

Product documentation

The following product documentation is available for SAP S/4HANA Cloud:

- This feature scope description
- Configuration information available in the configuration environment of SAP S/4HANA Cloud
- Information on security within this document

Licenses

Please note that for certain features you might need a separate subscription license. For further information, please contact your SAP Account Executive.

Integration

SAP S/4HANA Cloud supports integration with other SAP or non-SAP products. Please note the following:

- Other products mentioned in this feature scope description might have their own product lifecycle, their own localization versions, or their own language scope, and are therefore named only as an example or as currently integrated.
- Integration with other products might be subject to a change with the next release of SAP S/4HANA Cloud.
- You might need an additional license for other products.

For further information, please contact your SAP Account Executive.

Features with specific prerequisites

Some features described in this document have special prerequisites, which need to be fulfilled before you can use them.

- 3-system Landscape

SAP S/4HANA Cloud can run on different system landscapes. Features that require the 3-system landscape are indicated by a note paragraph in this document.

i Note

Please note that the 3-system landscape is in an Early Adoption phase and is not available for all customers. For further information, please contact your SAP Account Executive.

Services

If you would like to migrate data from your current SAP system or another legacy system, you can contact SAP for consulting and support. This service might be subject to a fee.

3 SAP S/4HANA Cloud

3.1 Application Platform and Infrastructure

3.1.1 Identity and Access Management

Business Background

Define the basic settings required to make the users ready to work in the systems. You assign business roles to the business users in order to assign the required UIs including the necessary authorizations to them. By doing this, you can secure the access to your solution for your business users.

Key Features

The following table explains the key features available:

Key Feature	Use
Import Employees	Refer to chapter 3.8.1.2 Employee Connectivity.
Maintain business users	Maintain user-relevant data, such as locking and unlocking of users, validity, and regional settings. You can assign business roles to business users including all UIs and authorizations they need to perform their tasks. You can update user role assignments individually, or by uploading a mass update in a CSV file.
Maintain deleted business users	Display and maintain deleted business users, and decide whether or not they can be recreated.
Display technical users	Keep track of all users that have access to your solution, that is technical users, business users, and support users. To a limited extend, you can edit settings for technical users.
Maintain business roles	Create your own business roles and define authorization restrictions to certain instances. You can assign business users to business roles including all UIs and authorizations they need to perform their tasks. SAP delivers business role templates you can use to set up your own business roles.

Key Feature	Use
Display business role templates	Display detailed information about the business role templates and the changes provided by SAP.
Manage business role changes after upgrade	Display all relevant changes to restriction types and business catalogs after an upgrade and maintain the corresponding restrictions if required.
Display usages of business roles and business users	Display detailed information about the usage of business roles, business users, and restrictions in your system.
Display business catalogs	Display detailed information about the business catalogs, their statuses, and the changes provided by SAP.
Display restriction types	Display available restriction types and how they can be used in certain business catalogs.
Display authorization trace	Display authorization trace for a business user to analyze if any authorizations are missing or are insufficient.
Create custom catalog extensions	Create your own extensions for the predelivered business catalogs to enable customization of business roles.
Define available system languages	Define the languages which are offered to the users for selection.
System Management	
Maintain user sessions	View all sessions containing locks in the current system. Display further information, such as associated business users. Delete a session if required.

3.1.2 License Compliance Digital Access

Business Background

With the introduction of the new license model for SAP S/4HANA Cloud, customers can subscribe to the SAP S/4HANA Cloud Digital Access Enablement Package for documents. This enables the creation of unique records in Cloud Services by non-SAP technologies (including bots, IoT devices and sensors, intelligent devices, third-party systems, and apps developed by customers or partners).

To provide transparency about the actual usage, the Digital Access application for License Compliance shows the number of documents that have been created in the current license period.

Key Features

This table explains the key features that are available:

Key Feature	Use
Entitlement of the license	See the entitlement of the Digital Access license for the respective license period
Consumption of the license	See the actual, real-time consumption of the license. This number is calculated for the entitlement.
	For each document type, you can see the number of created document items and the weighted count.
Metered data view	See metered data for a document created on a particular date
Detailed metered data	See active and deleted metered data instances for a document created on a particular date

3.1.3 Functions for Implementing SAP S/4HANA Cloud

Business Background

SAP S/4HANA Cloud supports an assisted way to explore, implement, and test functions and business processes.

3.1.3.1 Central Configuration

Business Background

SAP S/4HANA Cloud supports the integration with a configuration environment (currently SAP Central Business Configuration) to allow customers to scope and configure SAP S/4HANA Cloud.

Key Features

If a configuration environment (currently SAP Central Business Configuration) is integrated and supports the following features, SAP S/4HANA Cloud enables the configuration environment to provide the scoping of business processes relevant for your company and the execution of corresponding configuration activities.

i Note

Additional features of an integrated configuration environment may require additional licenses.

3.1.3.2 Business Process Testing

Business Background

SAP S/4HANA Cloud enables customers to test the business configuration.

Key Features

The following table explains the key features available:

Key Feature	Use
Test runs	Process-oriented tests run to check the correctness of the business configuration, including changing master data for test runs and documenting test runs.
Authoring of test processes	Customers can define company-specific test processes to enable more individual tests of the business configuration.

3.1.3.3 Data Migration

Business Background

SAP S/4HANA Cloud supports data migration from predecessor systems of the customer to SAP S/4HANA Cloud.

Key Features

The following table explains the key features available:

Key Feature	Use
Migration Projects	Define, execute and monitor your migration projects.
Pre-defined migration objects	Pre-defined migration objects support key users to transfer business data to SAP S/4HANA Cloud.

3.1.3.4 Feature Management

Business Background

After an upgrade, SAP S/4HANA Cloud provides selected new features in deactivated form which can be activated by customers.

Key Features

The following table explains the key features available:

Key Feature	Use
Customer-specific feature activation	Key users can view these new features and decide if one or several of these features shall be activated and used in their quality or productive system. By doing that, key users can familiarize themselves with the new features first and bring them into active use at their own pace.

3.1.4 Output Management, Print and Interactive Forms

Business Background

Automate output processes and get a quick overview of the status of email transmissions and print queues in your area. You can also streamline your email correspondence and records by creating email templates and form templates.

Key Features

The following table explains the key features available:

Key Feature	Use
Maintain print queues	Manage the printing of documents and monitor the print requests in each queue.
Maintain email templates	Streamline your email correspondence by creating custom templates based on predelivered templates. You can create language-specific variants if required.
Display email transmissions	Get a quick overview of email transmissions and check whether they were successful or issues occurred.
Maintain form templates	Streamline your records by creating form templates based on either predelivered templates or local xdp files that you can upload to the system. You can use the form templates as a basis for the documents you want to print, for example invoices.

3.1.4.1 Output Control

Business Background

SAP S/4HANA output control enables business applications to perform all output-related tasks.

Key Features

The following table explains the key features available:

Key Feature	Use
Output Channels	<ul style="list-style-type: none">• Printer - cloud-enabled using print queues/cloud printing manager• Email - allows flexible configuration of sender and recipients• EDI - Electronic Data Interchange
Attachments	Printing attachments and sending attachments via email.
Forms	Forms are using SAP Cloud Platform Forms by Adobe.
Master Form Templates	Allow flexible branding of print forms by separating static layout parts such as header, footer, or logos from the application content.
Email Templates	Allow predefining email subject and email body, including variables for dynamic content.
Output Parameter Determination	<p>Allows sending multiple messages to multiple recipients using multiple channels at the same time.</p> <p>Flexible definition of business rules without the need for implementation.</p> <p>Easily extensible with SAP standard fields and customer fields.</p>
Manage Output Items	Central overview of outputs sent via various channels and their status. View and process multiple outputs at the same time.

3.1.5 Process Management

3.1.5.1 Job Scheduling

Business Background

Reduce your workload by running regular activities as jobs in the background. View application-specific logs to check if there are any issues.

Key Features

The following table explains the key features available:

Key Feature	Use
Schedule application jobs	Monitor and schedule jobs based on the pre-defined job templates. You can save personalized job templates for later use. You can display job details. Finished jobs are deleted automatically after a certain period of time.
Display application logs	View logs created by a business application to verify if a business process step has been carried out successfully.

3.1.5.2 Download Additional Software

Business Background

Download and install additional software to better integrate your apps with other programs you need for your daily business.

Key Features

The following table explains the key features available:

Key Feature	Use
Display a list of the available additional software	Download and install additional software if required.

3.1.5.3 Responsibility Management

Business Background

This feature enables you to group responsible members, who perform specific functions in a business process, as a team. You can use teams, members, and functions in frameworks, such as workflows or situation handling

to determine responsible members to receive focus about specific circumstances or business situations. For example, end users receive a notice about upcoming deadlines, warnings about delays, or are informed about tasks that need to be completed as soon as possible.

Key Features

This table explains the available key features:

Key Feature	Use
Maintain teams	Create, edit, delete, and copy team information.
Maintain team global ID	Create a team global ID to reference a team across multiple systems.
Maintain team owners	Be responsible for the overall team definition. Team owners can create, edit, delete, and copy team information. Additionally, they are notified when their team members are unavailable as agents.
Manage team members	Add members to, or remove them from, a team.
Validate team member functions (if configured)	See if team members are authorized for the functions assigned to them.
Assign functions to team members	Add or remove functions that a team member can use.
Replace team members	Find and replace a member and associated functions with another member across teams.
Create custom responsibility definitions	Enter values for responsibility definitions created for teams and edit inherited responsibility definition values.
Create custom responsibility rules	Create or copy a responsibility rule and customize it to suit your business process requirements.
Extend responsibility contexts	Extend a standard responsibility context by creating a custom agent rule to which a custom responsibility rule is assigned.
Create custom responsibility contexts	Create your own custom responsibility contexts as per your business requirements.
Manage team categories	View standard team categories provided by SAP or create and edit your own custom team categories.
Maintain team hierarchy	Create subteams with specific responsibility definition values and assign new members based on their responsibilities to the subteams. Choose from a list of potential subteams with responsibility definition values that match the parent team.
Change log	See changes (old and new values) made to a team definition.

3.1.5.4 Business Event Handling

Business event handling enables applications, partners, and customers to consume events related to SAP S/4HANA Cloud business objects.

Business Background

Business event handling enables applications, partners, and customers to consume events related to SAP S/4HANA Cloud business objects.

i Note

The below mentioned features for Business Event Handling are only available for customers who have licensed these features before SAP S/4HANA Cloud 2208 including maintenance for these features. Comparable successor functionality is provided by Enterprise Event Enablement, which might require additional licenses. For further information, please contact your SAP Account Executive.

SAP recommends that the existing customers also use Enterprise Event Enablement to exchange events.

Key Features

The following table explains the key features that are available:

Key Feature	Use
View Subscription	You use this feature to view the existing subscriptions. A subscription is an entry that enables you to be notified about the changes that are made to the business objects.
Manage Subscription	You use this feature to create, update, and delete already subscriptions.
Read Outbound Queue	You use this feature to view the entries present in the outbound queue. New entries are created in the outbound queue when the business objects are either created or changed.
View Business Events	You use this feature to view the number of events that are raised for a particular business object.

3.1.5.5 Business Event Logging

Business Event Logging enables you to capture and log business events that are raised by SAP S/4HANA Cloud applications when business processes are executed in the local system.

Business Background

You can use business event logs to get insights on process execution in the local system. You get an overview of all the logged business events, the number of events triggered, and the types of events triggered.

Key Features

The following table explains the key features available:

Key Feature	Use
Activate Business Event Logging	You use this feature to enable the collection of business event logs raised for a particular business object.
View Business Event Logs	You use this feature to view business event logs for business objects.
Extract Business Event Logs	You use this feature to extract business event logs for external consumption.

3.1.5.6 Enterprise Event Enablement

Business Background

With enterprise event enablement, you can integrate your SAP S/4HANA Cloud system with other products to exchange events. This framework enables the exchange of events across different platforms for seamless event-driven communication.

Key Features

The following table explains the key features available:

Key Feature	Use
Check Connection	You use this feature to test the connection between SAP S/4HANA Cloud and another product (for example, SAP Event Mesh).
Maintain Event Topics	You use this feature to maintain topics to which events can be raised from business applications. You can also maintain topics for external events to which business applications in SAP S/4HANA Cloud can subscribe to.

Key Feature	Use
Exchange Events	You use this feature exchange events with another product (for example, SAP Event Mesh) to make the events available for consumption by external applications and within SAP S/4HANA Cloud.

3.1.5.7 Situation Handling

Business Background

With Situation Handling, you can increase the quality and the efficiency of your business processes by signaling exceptional circumstances and providing heads-up information. Situation Handling informs end users proactively about business situations requiring their attention. Key users get insight into the life cycle and handling of situations, which helps them to optimize business processes.

Situation Handling supports two kinds of situations:

- **Object-based situations** that indicate situations for specific business objects, such as a contract, a service order, an invoice, or a material.
- **Message-based situations** that refer to warning and error messages in system runs.

Key Features for Object-Based Situations

This table explains the key features available for object-based situations:

Key Feature	Use
Copy and adapt situation types	Create situation types that can be adapted to your requirements.
Adapt conditions	Adapt conditions based on which situations occur.
Edit texts	Edit the situation texts that are displayed to the end user.
Define recipients	Select teams, functions, and other attributes by using integrated Responsibility Management to define who is informed about situations.
Monitor status of situation instances	Monitor the handling of situation instances that occur in your company (only available for the standard framework).
Create custom situations	Define your own business scenarios, based on which you can create your own custom situations (not available for the standard framework).

Use Case Examples for Object-Based Situations

Users get a heads-up about upcoming deadlines, receive warnings about delays or exceeded thresholds, deviations, missing approvals, and so on. This enables users to quickly follow up on tasks.

Key Features for Message-Based Situations

This table explains the key features available for message-based situations:

Key Feature	Use
Create situation templates	Create use case templates from a situation scenario that is specific to a business area.
Create situation types	Create a situation type based on a situation template that can be adapted to your specific business requirements.
Manage run types and messages	Manage system messages of run types that are turned into situations.
Edit texts	Edit the situation texts that are displayed to the end user.
Define recipients	Select teams, functions, and other attributes by using integrated Responsibility Management to define who is informed about situations.

Use Case Examples for Message-Based Situations

End users can be informed about locks, deviations, or incorrectly maintained master data resulting in error messages during application runs. This enables users to quickly follow up on tasks

3.1.5.8 Machine Learning Scenario Management

Business Background

Intelligent Scenario Lifecycle Management (ISLM) integrates machine learning capabilities into business processes to provide forecasts and predictions for your use cases (for example, forecast when a buyer is likely to negotiate a new procurement contract or predict the cost of a project based on the historic data analysis).

Key Features

The following table explains the key features available:

Key Feature	Use
Develop Intelligent Scenarios	Intelligent scenarios describe a machine learning use case (analytics or deep-learning) by defining a business goal, the integration type (embedded), the type of prediction to make, and the data to use for the prediction. Intelligent scenarios are preconfigured and often pre-trained by SAP S/4HANA cloud or you can create custom-developed intelligent scenarios. The custom-developed intelligent scenarios are created in a draft mode, which can be reviewed, updated, and published.
Manage Intelligent Scenarios	You manage the published intelligent scenario activities, such as the following: <ul style="list-style-type: none">• You can train and retrain with data relevant to your enterprise.• You can review the training status and quality.• You can deploy and redeploy a trained machine learning model of type side-by-side.• You can activate or deactivate the machine learning model.• You can activate the machine learning model of type side-by-side for you and all users. Once activated, the model is used to provide the inference results to the business application..

i Note

A machine learning model can only provide good predictions when trained properly. A model needs to be trained with data where the outcome is known, for example, with historic data. You must retrain your model regularly to ensure predictions created are based on the most recent data.

3.1.5.9 Business Rule Framework plus (BRFplus)

Business Background

Business Rule Framework plus (BRFplus) provides a comprehensive application programming interface (API) and user interface (UI) for defining and processing business rules. Here are some examples of scenarios in which applications use BRFplus:

- Validation of data and detection of invalid data and states
- Matching responsibilities, suitable products, and locations
- Calculation of costs, overhead, and risks
- BRFplus as a technical configuration engine

Key Features

The following table explains the key features available:

Key Feature	Use
Create rules	A rule is the technical representation of a simple business rule to be applied to a particular business case.
Check consistency	This feature supports you in creating comprehensive and error-free rules.
Simulate the execution of the rule	You use this feature to test the rule.

3.1.6 Data Management

3.1.6.1 Data Aging

Business Background

Data not required in main memory for daily business operations is moved from main memory to the historical area of the HANA database.

Key Features

The following table explains the key features available:

Key Feature	Use
Aging of data	The system automatically moves appropriate data to the historical area of the database during the data aging process.

3.1.6.2 Customer Data Return

Business Background

Customer Data Return enables the customer to download all SAP S/4HANA business data from SAP cloud systems.

Key Features

This table explains the key features::

Key Feature	Use
Download of customer data.	This feature allows you to download your data in a compressed format. You can track the status of file downloads and repeat downloads, if necessary.

3.1.6.3 Manage Data Replication

Manage the data replication from one source system to one or several target systems.

Business Background

Key Features

The following table explains the key features available:

Key Feature	Use
Manage Data Replication	Manage data replication from a source system to one or more target systems based on application interfaces.

3.1.6.4 Operational Data Provisioning

Business Background

Monitor data extraction performed with Operational Data Provisioning. You can view delta queues with their status and detailed information, and can drill down to subscriptions, requests or units.

Key Features

The following table explains the key features available:

Key Feature	Use
Monitor delta queues	View delta queues from the Operational Data Provisioning framework. You can see detailed information at the level of delta queues, subscriptions, requests and units. You can check the data volume in the queues or check why no data is delivered to the subscriber. You can terminate subscriptions for inactive subscribers and close unconfirmed requests.

3.1.6.5 Information Lifecycle Management

Business Background

Schedule archiving and destruction runs using archiving objects and data destruction objects.

Key Features

The following table explains the key features available:

Key Feature	Use
Process ILM audit areas	View existing audit areas. You can create new audit areas and edit existing audit areas. You can copy and merge audit areas.
Manage ILM object groups	Manage Information Lifecycle Management (ILM) object groups. You can assign ILM objects to an object group. You can also create rule groups for the object groups.
Process ILM rules	Create and edit a policy, and maintain rules for the policy.

Key Feature	Use
Analyze archiving variant distribution	Create and edit the write variants and preprocessing variants to be used for archiving jobs. You can trigger archiving for the selected archiving object. You can view the size of the archived data for the existing write variants used in archiving. You can also view the empty runs and all of the variants for the selected archiving object.
Monitor archiving jobs	Monitor the status of jobs for the archiving objects. For every archiving object that has jobs associated with it, the app displays the job statuses such as failed, scheduled, in process, and completed.
Manage ILM Business Rules	Create and edit ILM business rules.

3.1.7 Master Data Maintenance

Business Background

Master data represents the business data your company requires about individuals, organizations, or products. It remains unchanged over a long period of time and supports transactional processes. You can use Master Data Maintenance to maintain master data like products or business partners.

The mass maintenance feature enables you to update multiple business partner and product master data records simultaneously.

Master data remediation provides capabilities to validate product master data and to get the result of the validation into a worklist. In this worklist, the correction of product master data with errors can be initiated.

Example: Example

You can define business partners, for example employees, contingent workers, customers and suppliers, and you can define materials or services. Additionally, you can define relationships between the business partners and the materials or services. For example, information about a specific material and the supplier of this material is stored in a purchasing info record.

3.1.8 User Experience

3.1.8.1 Enterprise Search

Business Background

Enterprise Search is a search solution that provides unified, comprehensive, and secure real-time access to enterprise data which enables users to search for structured data (business objects) and allows direct access to the associated applications and actions.

Search Capabilities are enhanced to search for different business objects and applications from the Fiori Launchpad and start the apps directly from the search results. The search results displays all the CDS-based enterprise search models. The business user can navigate and view the details of CDS views, tables, and relationships of the search model or a particular CDS view. Additionally, business users with specific roles can enable or disable tracking of user's search activities.

Key Features

The following table explains the key features available:

Key Feature	Use
Fine-Tune Ranking	Create and edit ranking factors and boosts, and test their effects immediately in a simulation. Ranking can be used to list objects higher in the search results list.
Analyze Query Log	Evaluate the log data containing the user activities collected during searches, graphically in bar charts or in tables. p>
Define Synonyms	Create a synonym dictionary so that when you search for a term, the synonyms saved in the dictionary are included in the search as well.

3.1.8.2 User Interface Adaptation for Classic Applications with Screen Personas

Business Background

Customers strive to provide a single, consistent look and feel for their users and provide tailored UIs for the tasks their users need to perform. This way they achieve better user productivity, process efficiency and solid decision-making. For some processes or process steps, SAP S/4HANA uses classic applications, and Screen Personas helps key users to create simplified versions for these applications.

Key Features

The following table explains the key features available:

Key Feature	Use
Screen editing	You use this feature to visually transform classic applications that you want to run in SAP S/4HANA and create a modern, intuitive user experience for your mission-critical software. Key users can simplify screens by hiding unneeded controls rearrange controls, as well as adjust the formatting and styles of UI elements to meet their organization's requirements.
Keystroke automation	Key users can use this feature to simplify the process flow via individually designed flavors by automating keystrokes. Data entries can be defaulted based on rules to eliminate manual user interactions and to increase end-user productivity. It eliminates input errors and thereby improves data quality in your system.
Flavor management	You use this feature to administer flavors and preparing them for the user assignment. This is done indirectly by grouping flavors in assignment categories. Assignment categories are then used in the mapping between user groups and business roles.

3.1.9 Virtual Data Model and CDS Views

3.1.9.1 Creating Custom CDS Views

Business Background

You can model data with Custom Core Data Services views (Custom CDS view) which can then be consumed by a UI, analytics or other systems.

Key Features

The following table explains the key features available:

Key Feature	Use
Create custom CDS views	You can create and maintain custom CDS views based on the virtual data model delivered by SAP. You can define projections and add associations to your custom CDS views. You can maintain parameters, filters and calculated fields. You can define custom CDS views without a scenario or as cubes, dimensions or for usage as external API.

3.1.10 Extensibility

3.1.10.1 Key User Extensibility

Business Background

Adapt business processes and standard business software by creating your own business catalog extensions, communication scenarios, field and logic implementations, business objects, CDS views, queries for reporting and analysis, or application job templates. Make your extensions available productively by transporting them to your production system. View a list of your extension items, and the dependencies between them.

Key Features

The following table explains the available key features:

Key Feature	Use
Create custom fields, data source extensions, and custom logic	<p>Create your own fields and enhancement implementations for specific business contexts of extensible applications. Enable the usage of existing fields in predelivered data sources using data source extensions. You can publish fields and enhancement implementations and thus generate them in the extensible applications in your test system. You can edit fields and enhancement implementations even after they have already been published. You can delete fields and enhancement implementations.</p> <p>Custom Fields</p> <ul style="list-style-type: none">• You can translate the fields that you created into different languages and enable field usage for UIs, reports, email templates, form templates, business scenarios, and APIs.• You can make field content relevant for free-text search.• You can choose the aggregation behavior of fields.• You can delete already transported fields. When you delete an already transported field, the contained data is saved for 18 months. <p>Data Source Extensions</p> <ul style="list-style-type: none">• You can create, edit, and delete data source extensions in order to enable the usage of existing fields in predelivered data sources. <p>Custom Logic</p> <ul style="list-style-type: none">• You can implement custom logic with ABAP for key users in your enhancement implementation.• You can create and save variants for testing custom logic with predefined parameters.• You can create and save filters to define under which conditions the logic of an enhancement implementation is used.
Create custom reusable elements	You can create reusable custom libraries for consumption in custom logic extensions or custom objects. You can create translatable custom code lists for reuse across custom business objects.
Display list of extension items	You can view a list of your extension items, and the dependencies between them.
Create traces	You can create traces to track the processing of custom logic in custom objects, custom reusable elements and enhancement implementations.

Key Feature	Use
Create custom business objects	<p>Create new custom business objects, and generate UIs and OData services based on custom business objects. You can enable associations between your custom business objects. You can add fields to and delete fields from custom business objects. You can add multiple subnodes to a custom business object, and implement custom logic with ABAP for key users. You can edit and publish a custom business object, and delete the draft of a custom business object. You can delete custom business objects.</p>
Create custom analytical queries	<p>You can create custom analytical queries for reporting and analysis. Raw data, delivered from business documents, is transformed and organized into a meaningful grid. You don't have to understand the query language or its technical details, since the process of writing structured queries is abstracted. The fields required to design a query are being provided. You select the required fields and set filters for your query. You can also preview the query results. The table below displays the tasks and the corresponding options in the query designer that you can use to perform this task:</p> <ul style="list-style-type: none"> • Create a new custom query or copy from an existing query • Display a list of all pre-delivered and custom queries • Search for a query • Modify the query • Add/remove custom fields • Create filters • Create restricted measures, calculated measures, converted measures and user input filters • Define hierarchies • Preview result sets after modifying the query • Configure the query default display via Axis view
Create custom tiles	Create your own tiles to access external applications.

Key Feature	Use
Develop and consume extensibility templates	<p>As a template provider, you can:</p> <ul style="list-style-type: none"> • Create and change extension items in a dedicated namespace for all extension items enabled for foreign namespace development and make them accessible to a template consumer. • Combine extension items to create a file and download the template file to present it to a template consumer. • Download an installation file to enable the template consumer to import extension items developed in a dedicated namespace. <p>As a template consumer, you can:</p> <ul style="list-style-type: none"> • Register foreign namespaces from a template provider with an installation file. • Import extensibility templates from a template provider and publish them to your system. • Change and adapt the imported extension items to meet your requirements. • Export imported extension items to the production system.
Export software collection	Assign transportable extension items to your software collection, check them for inconsistencies and dependencies, and export the software collection version. You can assign extension items to a hotfix collection, and export the hotfix collection independently from the regular software export process.
Import collection	Import a software collection or a customizing transport to your production system.
Display publishing processes	Monitor publishing processes for custom communication scenarios and business catalog extensions.

3.1.10.1.1 Extensibility Cockpit

Business Background

You can view extensible objects that correspond with business contexts that are mapped with or without scope items.

Key Features

The following table explains the key features that are available:

Key Feature	Use
Explore extensibility options based on solution scope and scope items	Identify the technical artifacts of a business context that are enabled for extensibility
View details of extensible objects for a business context	Create in-app extensions (custom fields and business logic) or side-by-side extensions using information from the cockpit
View the capacity usage of a business context	Identify the available capacity to carry out structural enhancements for a business context
Change the appearance of a result list on all screens	Refine and reorder extensibility data for a better display
Search for extensible objects	Select the extensible objects to be included in a search and navigate directly to an extensible object to see data that is filtered based on a search term

3.1.10.1.2 Released ABAP Artifacts

Business Background

With Released ABAP Artifacts a key user can see details about includelisted ABAP development artifacts that are released as APIs.

Key Features

This table explains the available key features:

Key Feature	Use
Details about includelisted artifacts	You use this feature to see the documentation and application components of includelisted ABAP artifacts such as classes, interfaces and structures. You can see the implemented and comprised interfaces, attributes and methods with signatures for classes and interfaces. You also see the component lists for structures with component types and data types.

3.1.10.2 Developer Extensibility

Business Background

Developer extensibility allows you to manage custom ABAP development projects on SAP S/4HANA Cloud. This allows you to build your own services and apps based on development objects released by SAP.

i Note

To use this feature, the 3-system landscape is required. For more information, see the information on the 3-system landscape in chapter 2 *About this document*.

Key Features

The following table explains the key features available:

Key Feature	Use
Manage custom developments	This feature allows you to manage and transport ABAP development projects to manage your own apps and services based on development objects released by SAP.
Custom code migration	You use this feature to configure and execute static code checks for analyzing custom ABAP code.
Repair CDS views	This feature allows you to view inconsistent CDS views and repair them.
Manage database caches	You use this feature to manage database caches and view information about existing caches.

3.1.11 Integration

3.1.11.1 Communication Management

Business Background

Define communication settings for systems, users, and solutions to facilitate communication processes.

Key Features

The following table explains the key features available:

Key Feature	Use
Maintain communication systems	Define the specification of a system that represents a communication partner. You can define technical information that is required for communication between two systems.
Maintain communication arrangements	Set up and maintain communication arrangements to enable communication between your solution and other systems.
Display connectivity trace	Analyze inbound connectivity issues, such as failed SSL handshakes, malformed HTTP requests or failed login.
Create custom communication scenarios	Create custom communication scenarios and use them as a basis for new communication arrangements.
Display communication scenarios	Display details of communication scenarios, download certificates, and create new communication arrangements based on a certain communication scenario.
Monitor bgRFC queues	Monitor bgRFC queues together with the associated destinations and units. You can also intervene in the processing by stopping or starting a queue, unit or destination if required.

3.1.12 APIs

Business Background

SAP S/4HANA Cloud provides application program interfaces (API) to further extend or integrate your system, and also allow you to implement your own applications. SAP offers a publicly available catalog where customers obtain information on the provided technical interfaces.

Key Features

The following table explains the key features available:

Key Feature	Use
Connect	Connect business processes across your system landscape
Integrate	Integrate with external systems

Key Feature	Use
Develop	Develop your own dependent extensions or custom applications

3.2 Security Features

Business Background

Define global security settings, such as certificate trust lists.

Key Features

The following table explains the key features available:

Key Feature	Use
Maintain certificate trust list	Display a list of trusted certificates. Add new trusted certificates to the list if required.
Maintain protection allowlist	Display an allowlist of trusted hosts and trusted network zones. Add new entries to the allowlist if required.
Manage Content Security Policy	Display an allowlist of trusted sources. Add new trusted sources to the allowlist if required.
Maintain Client Certificates	Upload and centrally maintain client certificates for your area to enable secure outbound certificate-based authentication.

3.3 Message Monitoring

Business Background

Monitor interfaces that transfer important data like sales master data, sales orders, or invoices between your systems. You can view and filter the messages related to the interfaces and drill down to the detailed logs and the data content. You can solve errors and restart the messages.

Key Features

The following table explains the key features available:

Key Feature	Use
Displays an overview of the messages processed through an interface	You use this feature to get an overview of all messages (with a specific status) processed through an interface.
Filters messages	You use this feature to filter for messages with the help of parameters like the status and the processing time.
Displays message details	You use this feature to display more information on an individual message such like log messages and message details, for example.
Restarts or cancels message processing	You use this feature to restart or cancel a message (only if in a certain status).
Navigates to another app	You use this feature to navigate to another app for dedicated key fields (if key field navigation is configured). If configured, you can click the content of a key field to navigate to another target application to find more details related to the associated object.

3.4 Auditing

Business Background

If an audit takes place, different kinds of information have to be made available to the auditors.

Key Features

The following table explains the key features available:

Key Feature	Use
Provides particular system information to external auditors	Evaluation of information regarding the used systems can be part of an external audit. This feature allows external auditors to access particular system information.

3.5 Analytics

3.5.1 Analytical Tool

Business Background

The Analytics framework allows the customers to report business data from different virtual data models, work with real-time data, and build reports. With these reports, customers can easily visualize, interpret the data, and convert into various visualizations which in turn will help the decision-makers for better analysis.

Key Features

The following table explains the key features available:

Key Feature	Use
KPI Visualization	<p>With this, you can:</p> <ul style="list-style-type: none">• Visualize and comprehend data from different virtual data models that represent different business areas.• Configure business metrics, interpret and interact with your data in real-time; visualize and analyze the data.• Create reports for the same KPIs.• Create stories and visualize the same.• Create tiles on the SAP Fiori Launchpad that directly launch Analytical Cloud Stories in a connected SAP Analytics Cloud tenant. <p>The data analysis will help in accurate decision-making and the reports help you to delve deeper into the business meters, performances, and further you can drill down into the areas that need improvement.</p> <p>You can create groups, KPIs, drill-downs, reports, and stories.</p>

3.5.2 Query Design

Business Background

Query Design enables you to manage the creation of analytical queries and make the results available through tiles on the SAP Fiori Launchpad.

Key Features

The following table explains the key features available:

Key Feature	Use
Manage Analytical and Non-Analytical Queries	<p>You can:</p> <ul style="list-style-type: none">• Search, browse, and tag analytical and non-analytical queries.• Maintain the queries as the prerequisite for multidimensional apps based on those queries.• View only authorized SAP released analytical queries and authorized customized analytical queries.

Key Feature	Use
Creation of Date Functions	You use this feature to create date functions that can be used by other apps to calculate single dates and date ranges.
Custom Analytical Queries	This feature enables you to maintain queries as the prerequisite for multidimensional apps based on those queries.

3.5.3 Analysis Path Framework

Business Background

Analysis Path Framework provides business users and managers an intuitive, easy to use analytical tool to perform interactive data explorations and drill-down analyses for root cause investigations.

Key Features

The following table explains the key features available:

Key Feature	Description
Configure APF-based apps	You can use this feature to build and enhance interactive analytical web applications.
Execute APF-based apps	APF-based apps enable the user to view and analyze the data of several Key Performance Indicators (KPIs) from different data sources. You can flexibly explore KPIs and their influencing factors step-by-step by drilling down into multidimensional visualizations of data, such as charts or tables.

3.5.4 Predictive Analytics integrator (PAi)

Business Background

Predictive Analytics integrator (PAi) integrates predictive capabilities into business processes. PAi uses algorithms to predict an unknown outcome, for example, using a predictive model you can forecast when a buyer is likely to negotiate a new procurement contract.

Business cases requiring a predictive measure are described as predictive scenarios, which manage the lifecycle of the predictive models included within them.

i Note

Predictive models can only provide good predictions when trained properly. The models need to be trained with data where the outcome is known, for example, with historic data. You must retrain your model regularly to ensure predictions created are based on the most recent data.

Key Features

The following table explains the key features available:

Key Feature	Use
Predictive models	<ul style="list-style-type: none">• You can train the predictive models with data relevant for your enterprise.• You can review training status and quality.• You can activate or deactivate model versions. The active model version is the one used to create predictions for consumption in relevant apps.• You can delete any inactive model versions that have never been set active.
Predictive scenarios	<p>Predictive scenarios describe a predictive use case by defining a business goal, the type of prediction to make, for example, regression or classification, and the data to use for the prediction.</p> <p>Predictive scenarios are preconfigured by SAP S/4HANA Cloud. SAP S/4HANA Cloud provides an interface through which you can also integrate predictive use cases from another system, currently SAP Analytics Cloud Smart Predict.</p>

3.6 Asset Management

3.6.1 Maintenance Management

Business Background

Plant Maintenance enables you to plan and perform the maintenance of operational systems, such as machines or production installations. It comprises the inspection, maintenance, and repair measures that need to be taken to keep your assets in working order. These activities are typically performed by maintenance planners and maintenance workers.

Key Features

The following table explains the key features available:

Key Feature	Use
Technical Asset Management	<p>This feature allows you to manage data throughout the entire lifecycle of your technical assets. You can maintain the functional location structure and all of the data required to perform effective maintenance on your pieces of equipment, including:</p> <ul style="list-style-type: none">• Technical objects and their location• Technical documentation• Maintenance task lists describing activities that need to be performed regularly• Maintenance plans listing the maintenance and inspection tasks to be performed on an asset• Measuring points for entering measurement readings <p>Optionally, you can also maintain additional information, such as partners, risks, and warranty data.</p>
Maintenance Execution	<p>This feature allows you to perform planned and unplanned maintenance tasks. It provides easy access to all maintenance-related information and increases both the efficiency and productivity of maintenance workers.</p> <p>Maintenance workers can review jobs assigned to them and carry out the required maintenance work based on the tasks and operations in the order. While confirming that they have finished the job, they can enter measurement readings, which the system records in measurement documents.</p>

Key Feature	Use
Maintenance Planning, Scheduling, and Dispatching	<p>This feature allows you to perform accurate planning and scheduling to ensure that there are minimum disruptions to the operation of an asset. This means that maintenance work can be executed such that downtime is kept at a minimum.</p> <p>A maintenance planner or worker can create a maintenance notification that defines why the maintenance is needed, what type of work needs to be done, its priority, and when it should be completed. Maintenance orders describe the tasks and steps to be performed, for example:</p> <ul style="list-style-type: none"> • You can plan the maintenance by assigning the required resources to an order so that a task can be performed. Resources include crews, individual workers, contractors, materials, and tools. • You can schedule maintenance work that needs to be done on a regular basis by using maintenance plans. You can include task lists in the maintenance items, where it is defined when the work should start, by when it should be completed, and the sequence in which the operations are to be performed. • You can dispatch the resources by assigning a crew or individual to perform a specific task of the scheduled and planned orders. Once the orders are dispatched, you can print job cards. <p>A maintenance planner can monitor and evaluate actual costs resulting from current maintenance orders and analyze critical costs using data visualization and business intelligence.</p>
Asset Information System	<p>This feature allows you to analyze the performance of assets and asset management systems.</p> <ul style="list-style-type: none"> • You can analyze breakdowns. You can examine their causes, the duration of the breakdowns, and the period between two consecutive breakdowns. • You can analyze damages. You can see the number of damages and the related causes, activities, technical object parts, and maintenance notifications.

3.6.2 Mobile Admin Monitoring

Business Background

A user with the mobile admin role monitors aspects of mobile application users and client states.

Key Features

The following table explains the key features available:

Key Feature	Use
Monitor Mobile Users	An administrator can search for and view the connectivity details of specific users of a mobile application.
Client State Monitoring	An administrator can monitor the client state queue of the mobile application. If Client State Tracking is enabled, the following items are captured: <ul style="list-style-type: none">• List of calculated object keys sent to the mobile client for the entity set read requests• Data distribution rules used for the calculation• Time of calculation By enabling client state management, the system has a record of the objects distributed to the mobile client. Enabling client state management allows the system to calculate the list of objects to be removed from the mobile client via tombstones.
Monitor Dependent Object Queues	An administrator can monitor the dependent object queue of the mobile application to ensure integrity of the data on the mobile client. When mobile users synchronize their devices, the lead objects are downloaded and the dependent object (keys) are put in the dependent object queue to be synchronized during the same session. This is also to ensure the data can be streamed if there is a network disruption.
Monitor Push Instances	An administrator can monitor the push instance queue to search for and view details of push instances.

3.7 Finance

3.7.1 Management Accounting and Margin Analysis

3.7.1.1 Divisional Accounting

Business Background

This application area enables you to maintain division master data, manage allocations between profit centers, analyze actual and plan data for profit centers, and reassign organizational entities.

Key Features

The following table explains the key features available:

Key Feature	Use
Master Data	You can use this feature to manage master data for profit centers, profit center groups, and hierarchies.
	You can use profit centers as an organizational structure to generate management reports.
Allocation between profit centers	You can use this feature to redistribute different items to different profit centers. This feature includes allocation rules maintenance, allocation runs, and allocation reporting.
Reporting	You can use this feature to analyze actual and plan data for selected periods for a specific profit center.
Organizational Changes in Accounting	You can use this feature to change the assignment of organizational entities, such as profit centers, for objects, such as WBS elements.

3.7.1.2 Overhead Accounting

Business Background

This application area involves planning, allocation, and monitoring of overhead costs to provide cost transparency in management accounting. It captures costs by cost center and defines the output of the cost center in terms of activity types. It allows you to enter statistical key figures as a basis for your allocations at period close.

Key Features

The following features support you with this process:

Key Feature	Use
Master data in cost accounting	Managing various types of master data, such as <ul style="list-style-type: none">• Cost centers• Profit centers• Cost elements• Cost rates• Activity types• Statistical key figures
Cost rates	Defining cost rates for any combination of cost center and activity type. Cost rates are needed to provide the charge basis for internal activities.
Statistical key figures	Statistical key figures serve as a basis for internal allocations.
Overhead allocation between cost centers	Allocation of costs between cost centers, which is a typical task during the monthly closing process. To perform closing tasks in parallel using different accounting principles, you can use separate ledgers that have different accounting principles assigned.
Reporting	Analyzing actual and plan data for a selected ledger and selected periods for the following objects: <ul style="list-style-type: none">• Cost centers• Market segments• P&L statements• Functional areas• Profit centers• Projects
Budget Availability Control	Control budgets in projects and cost centers. The available budget is checked with each expense posting to determine whether the budget consumption has reached a defined limit.

3.7.1.3 Inventory Accounting

Business Background

Inventory Accounting enables you to value and monitor your material and work-in-process inventories according to legal regulations and management accounting requirements. All goods movements are valued in the Material Ledger which supports parallel, event-based valuation of inventories in multiple currencies. A special focus lies on high throughput of logistics data that allows for managing mass data volumes.

You can choose to value your material inventories at standard cost or moving average automatically. In addition, you may make manual adjustments to material costs and inventory values. You may also use periodic valuation of material inventories according to product cost management requirements or statutory requirements such as Lowest Value or FIFO, or actual costing.

To value inventories in parallel using different accounting principles, you can use separate ledgers that have different accounting principles assigned.

Key Features

Key Feature	Use
Automatic valuation of material inventories	Valuation of material inventories in multiple currencies in parallel
Valuation methods for materials	Perpetual valuation of material inventories and goods movements at standard cost or moving average
High throughput of logistics data	Manage high logistics data volumes
Manual adjustments to material costs and inventory values	Adjust material costs and inventory values manually
Periodic valuation of material inventories	Valuation of material inventories according to statutory or product cost management requirements
Analyze inventory values	Event-based line item reports aggregated to inventory positions on the fly, with drilldown capabilities

3.7.1.4 Production Accounting

This application area enables you to analyze the cost of goods manufactured for your products. It shows production costs and offers detailed views for further analysis.

Key Feature	Use
Product Cost Analysis by Period	Enables periodic analysis of costs at the product level. You can collect the costs on a cost object over an extended period of time and analyze them in each period.
Product Cost Analysis by Order	Enables analysis of costs at production and process order level. Event-based production cost posting enables you to analyze event-based production costs, and supports event-based WIP analysis during the production process. With event-based production cost posting, you can post the costs for production orders and process orders to separate ledgers that have different accounting principles assigned.
Production Closing	The work in process function valuates unfinished products, and business objects are settled by allocating the planned or actual costs incurred, in whole or in part, to one or more receivers.
Event-Based WIP	Enables Event-Based WIP posting. WIP is posted during goods issue and confirmation, and cleared during goods receipt rather than at period-end.
Event-Based Variance Posting	Enables Event-Based variance posting. Variances are posted during final goods receipt or during technically complete orders rather than at period-end.

3.7.1.5 Sales Accounting

Business Background

This application area enables you to analyze the profitability of your market segments and single cost objects. It shows event-based contribution margins and offers detailed views for further analysis.

You can analyze market segments by product, product group, customer, customer group, and sales organization.

Key Features

Key Feature	Use
Event-Based profitability	<p>We provide event-based profitability analysis for customer projects and sales order items. The profitability data is taken from event-based revenue recognition based on market segment attributes such as Customer, Customer Group, Product, Product Group, or Sales Organization.</p> <p>You can use this information to support your internal accounting and decision-making.</p>
Profitability reporting based on journal entries	<p>Market segment attributes are part of journal entries. For every posting on a project, we add the market segment attributes of the assigned sales order item to the G/L line items. This makes it possible to provide the margin not only for the customer project but also for a market segment such as Customer.</p> <p>The market segment attributes are also available for balance sheet line items, which allows you to drill down by market segment in your WIP reporting.</p>
Event-based revenue recognition	<p>Event-based revenue recognition posts recognized revenue for every cost posting on customer projects and sell-from-stock orders.</p> <p>Event-based revenue recognition can be enabled to support multiple-element arrangements. The transaction price for a multiple-element arrangement is allocated to the performance obligations based on standalone selling prices.</p>
Enhanced reporting for customer projects	<p>Additional attributes are available for margin drilldown for customer projects:</p> <ul style="list-style-type: none"> • The Origin Profit Center describes the supporting profit center. • The Resource indicates whether the assigned employee is from your company, an affiliated company, or a subcontractor. <p>You can analyze the work in process resulting from revenue recognition by project and market segment.</p>
Overhead allocation to profitability	You can allocate your overhead costs from cost centers to market segments using a periodic run.

Key Feature	Use
Realignment with master data	The market segment attributes for postings related to customer projects are usually event-based, including revenue recognition data. If changes are made to master data after posting, the data may need to be reassigned using the realignment function. Realignment can also be used to enrich profitability data with information that was not known at the time of the original posting.
Plan data import	You can import financial plan data including assigned profitability attributes. You can perform plan/actual analyses based on these data.
Journal Entries for Statistical Sales Conditions	Journal entries for statistical pricing conditions in customer invoices can be posted to an extension ledger in Financial Accounting to enhance information relevant for management reporting in Finance

3.7.1.6 Predictive Accounting

Business Background

Predictive accounting helps you to predict future results using the data from documents, such as sales orders, before actual journal entries are created for them in Finance. You can use the predictive journal entries for these source documents in your analysis and reporting to get a better understanding of what your financial results might look like, at the end of the current period or quarter, and why.

Key Features

The following table explains the key features available:

Key Feature	Use
Predictive analysis of incoming sales orders	<p>You can use this feature to perform an analysis of the predicted margins for incoming sales orders. This analysis is based on predictive journal entries for goods issues and billing documents using the most up-to-date sales order data in SAP S/4HANA Cloud or from an external system.</p> <p>Predictive accounting then allows you to analyze presumed profits, based on incoming sales orders. In addition, it considers actual values and their effects on reducing the respective predicted values.</p>

Key Feature	Use
Predictive analysis of travel requests	<p>SAP S/4HANA Cloud supports the integration with a travel management system (currently SAP Concur) to calculate predictions based on travel request data.</p> <p>When a travel management system (for example, SAP Concur) is integrated and provides travel request data, you can use this feature to perform an analysis of the impact of travel expenses on your planned budget. This analysis is based on predictive journal entries for travel requests and expense reports.</p>
Predictive analysis of service contracts	<p>You can use this feature to perform an analysis of predicted revenue for service contracts. This analysis is based on predictive journal entries for revenue recognition and billing using the most up-to-date service contract data in SAP S/4HANA Cloud.</p> <p>Predictive accounting then allows you to analyze presumed revenue recognition. In addition, it considers actual values and their effects on reducing the respective predicted values.</p>
Predictive management of commitments	<p>You can use this feature to predict the impact of a current purchase on your current budget and future expenses, starting when a purchase requisition or purchase order that is assigned to a cost center or WBS element is created in SAP S/4HANA Cloud.</p> <p>You can then analyze the impact of the commitments in accounting and the effects of actual values from follow-on documents.</p>

3.7.2 Accounting and Financial Close

3.7.2.1 Financial Accounting

3.7.2.1.1 General Ledger Accounting

Business Background

You use General Ledger Accounting to perform external accounting tasks.

Features

As a general ledger accountant, you can use the following functions:

Function	Use
Master Data	<p>You can manage master data for profit centers, profit center groups and G/L accounts.</p> <p>If you specify profit centers in postings, you can create a profit and loss statement (P&L) for profit centers and a financial statement for internal purposes.</p> <p>G/L account master data defines how business transactions are posted on G/L accounts and how the posting data is processed. The directory of all G/L accounts is the chart of accounts.</p>
Postings and Journal Entries	<p>You use journal entries to reflect business transactions.</p> <p>You can manage open items by reversing or clearing open items for example. You can also reset a clearing.</p> <p>You can create recurring entries for journal entries that are repeated regularly.</p>

Function	Use
Closing Operations and Reporting	<p>For closing operations at period-end closing, you can use the programs available for analyzing, valuating, and reclassifying journal entries.</p> <p>To perform valuation runs and other closing tasks in parallel using different accounting principles, you can use separate ledgers that have different accounting principles assigned.</p> <p>Using Accruals Management, you can post expenses in the period in which they are incurred or probably will be incurred.</p> <p>With these closing operations, you create a balance sheet and a profit and loss statement (P&L).</p> <p>Audit functions provide access to various reports and transactions you need for the audit process.</p> <p>There are different programs available for sales/purchases tax declarations and tax payable postings. For certain countries/regions, time-dependent tax calculation is available.</p> <p>SAP recommends using only certified providers for the external tax calculation process.</p> <p>i Note</p> <p>The internal tax calculation in SAP S/4HANA Cloud, and any reporting based on this calculation, may not meet all of the reporting requirements in your jurisdiction due to the specifics of the tax law system in the United States. You must check with your accounting or tax experts in order to make sure that the results generated by this report are fully compliant with your relevant jurisdictions' specific sales and use tax reporting requirements.</p> <p>i Note</p> <p>Customers using the external tax calculation in SAP S/4HANA Cloud and using the partner integration are responsible for aligning directly with their chosen tax partner on matters such as pricing and on deciding the scope of services that they require of their tax partner. Customers must license the tax partner solution directly and then deploy the necessary integration flows on the SAP CPI before using the external tax solution in SAP S/4HANA Cloud. Under this arrangement, tax calculation and tax reporting are performed by your tax partner.</p>

3.7.2.1.2 Asset Accounting

Business Background

You use Asset Accounting to manage and monitor tangible fixed assets. It provides detailed information about the transactions relating to tangible fixed assets.

Prerequisites

To be able to use Asset Accounting, you have to also use General Ledger Accounting.

For more information, see [Accounting and Financial Close \[page 51\]](#).

Key Features

As an asset accountant, you can use the following functions:

Key Feature	Use
Master Data	Using the asset master record, you can create, edit, and manage the master data of Asset Accounting.
Asset Acquisitions and Asset Retirements	<p>You can post asset acquisitions integrated with accounts payable accounting or not integrated.</p> <p>Analog to this, you can post asset retirements integrated with accounts receivable accounting or not integrated.</p> <p>In addition to this, there are more functions available for asset acquisitions and retirements.</p>
Depreciation	With depreciation you map impairments incurred or impairments that are due to tax law requirements.
More Transactions, Reversal	<p>More transactions, for example post-capitalizations are available.</p> <p>You can reverse documents that are posted in Asset Accounting.</p>
Closing Operations and Reporting	<p>You post the depreciation amounts periodically, directly in General Ledger Accounting.</p> <p>Create an asset history sheet to represent the development of the fixed asset from the opening balance through to the closing balance.</p> <p>More tools for the reporting and analysis of asset portfolios, asset transactions, and depreciation are also available.</p>

3.7.2.1.3 Inventory Accounting

Business Background

Inventory Accounting enables you to value and monitor your material and work-in-process inventories according to legal regulations and management accounting requirements. All goods movements are valued in the Material Ledger which supports parallel, event-based valuation of inventories in multiple currencies. A special focus lies on high throughput of logistics data that allows for managing mass data volumes.

You can choose to value your material inventories at standard cost or moving average automatically. In addition, you may make manual adjustments to material costs and inventory values. You may also use periodic valuation of material inventories according to product cost management requirements or statutory requirements such as Lowest Value or FIFO, or actual costing.

To value inventories in parallel using different accounting principles, you can use separate ledgers that have different accounting principles assigned.

Key Features

Key Feature	Use
Automatic valuation of material inventories	Valuation of material inventories in multiple currencies in parallel
Valuation methods for materials	Perpetual valuation of material inventories and goods movements at standard cost or moving average
High throughput of logistics data	Manage high logistics data volumes
Manual adjustments to material costs and inventory values	Adjust material costs and inventory values manually
Periodic valuation of material inventories	Valuation of material inventories according to statutory or product cost management requirements
Analyze inventory values	Event-based line item reports aggregated to inventory positions on the fly, with drilldown capabilities

3.7.2.1.4 Revenue and Cost Accounting

Business Background

You use Revenue and Cost Accounting to recognize revenues and calculate contract liabilities and contract assets.

Key Features

The following table explains the key features available:

Key Feature	Use
Event-Based Revenue Recognition	<p>Event-based revenue recognition posts recognized revenue for every cost posting on customer projects and sell-from-stock orders.</p> <p>Event-based revenue recognition can be enabled to support multiple-element arrangements. The transaction price for a multiple-element arrangement is allocated to the performance obligations based on standalone selling prices.</p>
Contract-Based Revenue Recognition	<p>Contract-based revenue recognition creates revenue contracts corresponding to provider contracts, that are created in Contract Accounting and Invoicing.</p> <p>The system identifies the performance obligations included in each revenue contract based on the items in the provider contract.</p> <p>The system determines the total price by aggregating the pricing conditions and then allocating the total price among the performance obligations based on the standalone selling price.</p> <p>The revenue for performance obligations is recognized as they are fulfilled over time.</p> <p>The system calculates contract liability and contract asset values and makes postings to the general ledger to reflect revenue-related recognition transactions.</p>

3.7.2.1.5 Intercompany Matching and Reconciliation

Business Background

Intercompany matching and reconciliation allows you to match transaction data according to the predefined rules and reconcile balances for paired accounts. You can check the matching and reconciliation results and perform follow-up activities such as adding notes, triggering workflows, or making auto-adjustment postings.

Key Features

The following table explains the key features available:

Key Feature	Use
Define matching rules and reconciliation cases	You use this feature to define the criteria for selecting documents from data source and the filters for aggregating and comparing balance amounts for paired accounts. In addition, you can define matching rules to matching transaction documents.
Manage document assignments	This feature enables you to: <ul style="list-style-type: none">Run auto-matching for documents based on predefined rules.Manually process document assignments.Trigger follow-up activities.Display detailed lists of documents and items and their assignment status.
Reconciliation reports	This feature provides overall reconciliation status and detailed reconciliation balances reports.

3.7.2.2 Compliance Formats - Preparation Support

Business Background

You can create, process, and monitor electronic documents and statutory reports.

Please note that not all features are provided for each and every country/region. For more information about the available features for a country/region, please check the country/region-specific documentation on the SAP Help Portal.

Key Features

The following table explains the key features available:

Key Feature	Use
Setup of reporting entities	You can define reporting entities you need to fulfill compliance requirements for your organization. You can also configure the relevant attributes.

Key Feature	Use
Generation, display, and download of electronic documents and reports	<p>You can generate electronic documents or reports in certain formats. Where legally required, you can also generate correction, additional correction, and clarification runs for reports and business correspondence for electronic documents and reports.</p> <p>You can display and download electronic documents and reports.</p> <p>You can choose to generate statutory reports immediately, or schedule the report generation for a later point in time. You can also cancel the report runs that are in process.</p> <p>Where supported, you can generate ad-hoc reports.</p>
Display	Where supported, you can display the electronic document or report in its raw file format. For some scenarios, a human readable version of the electronic document is provided.
Basic monitoring and audit log	<p>You can monitor the compliance status and due dates of the supported reports.</p> <p>You can view and process the activities that are relevant for completing your compliance reporting scenario.</p> <p>A basic audit log is provided.</p> <p>You can upload complementary compliance attachments to your reports, supporting your audit needs.</p>
Status tracking of manual submissions	Depending on local requirements, submission to authorities can be achieved by downloading the ready to use format and manually submitting it to the authorities or entering the data in the tax portal based on ready to use reporting data.

3.7.3 Treasury Management

3.7.3.1 Cash and Liquidity Management

Business Background

To preside over the cash assets of a company, cash managers need to closely monitor cash positions and centrally manage banks and bank accounts for the organization.

Key Features

Key Feature	Use
Cash Positions	You can use this feature to check the actual and forecasted cash positions to assist cash allocation decision-making.
Banks and House Banks	You can use this feature to display, create, and change data about the banks that your company, your customers, and your suppliers use to transact business.
Bank Account Master Data	You can use this feature to centrally manage the master data of your company's corporate or business bank accounts, as well as house bank accounts.
Memo Record	You can use this feature to create memo records manually and edit memo records in a list.

3.7.4 Financial Operations

3.7.4.1 Receivables Management

3.7.4.1.1 Accounts Receivable Accounting

Business Background

You use accounts receivable accounting to process open customer invoices and monitor incoming payments.

Key Features

For this purpose, you can use the following features:

Key Feature	Use
Monitoring of receivables	You can manage receivables, display customer balances, and process individual customer items.
Clearing of open items	You can post incoming payments, manage down payment requests, clear open items manually, and reprocess bank statement items.

3.7.4.1.2 Integration with Machine Learning Intelligence SAP Cash Application

Business Background

Financial Operations supports the integration with the machine learning system SAP Cash Application to allow users to optimize their banking processes.

Key Features

If SAP Cash Application is integrated, it supports the features listed below. SAP Cash Application enables you to use the following services:

Key Features	Use
Receivables Line-Item Matching	Provides proposals for matching receivables with incoming bank statement items and automatically clears them.
Receivables Line-Item Matching for Lockbox	Provides proposals for matching receivables with incoming lockbox files and automatically clears them.
Payables Line-Item Matching	Matching payables (supplier invoices) are proposed for the supplier-initiated payments (bank statement items) and can be automatically cleared based on configured thresholds.
Customer Account Identification	Provides proposals for customer accounts to identify the payer of a bank statement item.
Payment Advice Extraction	This service extracts information about payments from unstructured payment advices in PDF format, and uses this information to automate the clearing process.

3.7.4.1.3 Credit Management

Business Background

The creditworthiness and payment behavior of your business partners affect the business results of your company immediately.

Key Features

Key Feature	Use
Credit Check	You can assign credit limits to credit accounts. The system can automatically check incoming sales orders against these credit limits.

3.7.4.2 Invoice Management

3.7.4.2.1 Accounts Payable Accounting

Business Background

Invoices are created in purchasing and submitted to accounts payable. As an accounts payable accountant, when you receive an invoice, you can view key performance indicators (KPIs) for the invoice and process the invoice.

Key Features

The following features support you with this process:

Key Feature	Use
Import of supplier invoices	You use this feature to import multiple supplier invoices all at once.
Management of recurring supplier invoices	You use this feature to create and edit recurring supplier invoices and post supplier invoices.
Analysis of payments to suppliers	You use this feature to view information about payments to suppliers. You can check the overdue payable amount and the future payable amount. If you identify negative trends in the payable amount, you can notify the responsible persons to take action.
Management of cash discounts	You use this feature to forecast the available cash discounts and to monitor the cash discount utilization in your responsible area. You can find out where you need to make better use of cash discounts in order to avoid cash discount loss in the future.

Key Feature	Use
Clearing of open items	You can post outgoing payments, manage down payment requests, and clear open items manually.
Reviewing of cleared overdue invoices	You use this feature to get details and statistical facts about cleared overdue invoices.
Evaluation of days payable outstanding	You use this feature to identify suppliers with the highest or the lowest days payable outstanding.
Management of payments	You use this feature to create, post, and, if necessary, reverse payments.
Management of payment blocks	You use this feature to set and remove payment blocks on invoices or supplier accounts.
Management of payment proposals	You use this feature to revise and release payment proposals. Journal entries are then generated in the finance system.
Reviewing of checks	You use this feature to display a check from a payment run as a PDF. You can then view the check details.
Management of payment media	You use this feature to transfer the data required for electronic payment transactions to banks via a data medium. A payment medium is created with each successful payment run.

Related Features

For information about invoice processing in *Sourcing and Procurement*, choose  *Sourcing and Procurement*  *Invoice Management*  *Invoice Processing* .

3.7.4.2.2 Discount Collaboration (Business Network Integration)

Business Background

SAP S/4HANA Cloud supports the integration with business networks or external systems (currently the Ariba Network) to enable you to collaborate on discount management with your suppliers. You can do this by exchanging invoice-related messages between SAP S/4HANA Cloud and the business network.

If the business network or external system (for example, Ariba Network) is integrated and supports the features listed below, SAP S/4HANA Cloud enables you to manage cash discounts from initial offer through to

agreement. This optimization of cash discounts can increase your company's profits, and gives your suppliers the opportunity to receive their payments earlier.

Key Features

Key Feature	Use
Open payables	Send information about open payables to the business network or external system.
Updates to open payables	Send updates to information already sent about open payables if there are changes that impact the negotiations about early payment.
Adjustments to open payables	Receive information from the business network or external system about adjusted cash discounts and due dates of open payables.
Monitoring	Monitor, troubleshoot, resend, and cancel outbound messages.

3.7.4.2.3 Payment Advice Collaboration (Business Network Integration)

Business Background

SAP S/4HANA Cloud supports the integration with business networks or external systems (currently the Ariba Network) to enable you to collaborate on payment advices with your suppliers. You can do this by exchanging messages between SAP S/4HANA Cloud and the business network or external system.

If the business network or external system (for example, the Ariba Network) is integrated and supports the features listed below, SAP S/4HANA Cloud enables you to collaborate with your suppliers by sending them payment advices via the business network or external system.

Key Features

Key Feature	Use
Payment advices	Send payment advices to suppliers via the business network or external system.

Key Feature	Use
Monitoring	Monitor, troubleshoot, resend, and cancel outbound messages.

3.7.4.3 Electronic Bill Presentment and Payment

Business Background

Electronic bill presentment and payment enables presenting bills on the Web, thus allowing your customers to pay their bills online.

Key Features

The following table explains the key features available:

Key Feature	Use
Invoice processing	<p>You avoid accounting and settlement errors and delays thanks to immediate access to invoice copies.</p> <p>The following features are available:</p> <ul style="list-style-type: none"> • View, download, and fully or partially clear invoices. • Add and download attachments for invoices. • View note to payee. • Create and view disputes on invoices and leave comments on the disputes. • Leave comments on invoices.
Secure payments	<p>You can better control the time of payment and manage cash flow thanks to simplified and secure processing of electronic payments.</p> <p>The following features are available:</p> <ul style="list-style-type: none"> • Create and manage payment advices. • Make full or partials payments using credits, direct debits, or credit cards.
Master data management	You manage the master data of your accounts, including contact information, bank information, and credit cards.
Account statement monitoring	You view the statements for your accounts.
Account assignment	You define the accounts that should be assigned to each user.

Key Feature	Use
Custom fields	You can add custom fields to meet your business needs.
Table layout customization	You can customize the layout of the tables to view only the columns that you need.

3.7.4.4 Settlement Management

Business Background

Settlement management provides the *sales rebate processing*, *purchasing rebate processing* and *sales commission settlement* including core business functions that are fully integrated in the order-to-cash cycle.

Rebate processing and commission settlement is used to settle subsequent rebates and commissions based on business volume or quantity. Settlement can take place at document item level. Due to the high volume of documents involved, settlement is usually based on cumulative key figures, like business volume, derived from transactional data in documents.

Key Features

The following table explains the key features available:

Key Feature	Use
Condition contract management	<ul style="list-style-type: none"> • Create, process, extend and display rebate agreements in the form of a condition contract. • Use condition contracts to grant rebate payments based on different criteria, such as whether a specific sales business volume has been reached. • Create condition contracts with multiple customers, suppliers or external sales agents as settlement recipients. • Create 2-step condition contracts to collect and post settlement documents of different condition contracts in one journal entry to accounting. • Create condition contracts with contract type "Goods Related" in case the taxation of the settlement items should be the same like in the related billing items. • Use condition type "Rebate Unlikelihood" in case that the minimum sales turnover will not be reached and therefore no accruals should be created or existing accruals should be reversed. • Facilitate your business processes by configuring workflows for the release of condition contracts.

Key Feature	Use
Accruals processing	<ul style="list-style-type: none"> Post accruals based on relevant invoices to update the bonus entitlements for future customer settlements in accounting. Reverse accruals when settlement documents are created. Reverse accruals together with the posting of the revenues when the collective settlement documents of 2-step condition contracts are created.
Business volume processing	<ul style="list-style-type: none"> Check the business volumes for condition contracts. Verify that existing invoices are considered in condition contracts.
Condition contract settlement	<ul style="list-style-type: none"> Get a compact overview of settlement documents that enables the user to display settlement document information and navigate directly to the documents. Create credit memos (settlement documents) to the customers, suppliers and external sales agents for the business volume already reached and to reverse the accruals. Create settlement documents for each customer, supplier or external sales agent with the contract relevant revenues for condition contracts with multiple customers. Create collective settlement documents for 2-step condition contracts. Execute partial settlements. Execute a final settlement. Reverse and correct settlement documents. Get support from notifications for scheduled jobs. Facilitate your business processes by configuring workflows for the approval of settlement documents.
Integration of Settlement Management	<ul style="list-style-type: none"> SAP S/4HANA Cloud supports the integration with an external commissions management system (currently SAP Commissions on SAP Sales Cloud) to allow the import of commissions data into SAP S/4HANA Cloud. SAP S/4HANA Cloud supports the integration with an external HR system (for example, SAP SuccessFactors Employee Central) to initiate the payroll processing of commissions by providing personnel settlement documents.

3.7.5 Governance, Risk, and Compliance for Finance

3.7.5.1 International Trade

International Trade supports you in the following areas:

International Trade Classification

- Classification of products with commodity codes, Intrastat service codes and customs tariff numbers.
- Classification of products with control classes and control groupings for legal control.
- Loading of classification data from external data providers (commodity codes, customs tariff numbers and control classes).

International Trade Compliance

- Control of statutory regulations for import and export.
- Managing of licenses in accordance with legal control for export and import processes.
- Managing and release of blocked legal control documents.
- Managing countries/regions under embargo situations.

Intrastat

- Managing Intrastat declarations and their master data.

Integration with SAP Global Trade Services

- Transfer of master and movement data from the S/4HANA Cloud to your SAP Global Trade Services system.

Integration with SAP Watch List Screening

- Integration allows to screen names and addresses in specific transactional documents during import and export processes.

3.7.5.1.1 International Trade Classification

Business Background

You use classification to manage commodity codes, Intrastat service codes, control classes, control groupings and their assignment to products. The Intrastat service codes are only relevant for Italy.

Key Features

The following table explains the key features available:

Key Feature	
Manage Commodity Codes	You can manage the commodity codes that you require for your Intrastat declarations.
Classify Products with Commodity Codes	You can find products to which no commodity code has yet been assigned, and assign a commodity code for a specific period to these products.
Reclassify Products with Commodity Codes	You can find products to which a commodity code has been assigned, and assign a new commodity code for a specific period to these products.
Manage Intrastat Service Codes	You can manage Intrastat service codes that you require for your Intrastat declarations.
Classify Products with Intrastat Service Codes	You can find products to which no Intrastat service code has yet been assigned, and assign an Intrastat service code for a specific period to these products.
Reclassify Products with Intrastat Service Codes	You can find products to which an Intrastat service code has been assigned, and assign a new Intrastat service code for a specific period to these products.
Classify Products - Legal Control	You can assign control classes and control groupings time-dependently to products that have not yet been classified for legal control.
Reclassify Products - Legal Control	You can re-assign another control class or control grouping time-dependently to products that have already been classified for legal control.
Manage Control Classes	<p>You can manage control classes to classify products for legal control later.</p> <p>You can add a description to a control class and specify its validity.</p>
Manage Control Groupings	You can manage control groupings to classify products for legal control later.

Manage Customs Tariff Numbers	You can manage the customs tariff numbers that you require for your Intrastat declarations.
Classify Products - Customs Tariff Numbers	You can find products to which no customs tariff number has yet been assigned, and assign a customs tariff number for a specific period to these products.
Reclassify Products - Customs Tariff Numbers	You can find products to which a customs tariff number has been assigned, and assign a new customs tariff number for a specific period to these products.
Manage Content from Data Provider - Commodity Codes	You can activate data from external data providers.
Schedule Content Request to Data Provider - Commodity Codes	You can schedule regular requests to your external data providers to receive updated and new versions.
Manage Content from Data Provider - Customs Tariff Numbers	You can activate data from external data providers.
Schedule Content Request to Data Provider - Customs Tariff Numbers	You can schedule regular requests to your external data providers to receive updated and new versions.
Manage Content from Data Provider - Control Classes	You can activate data from external data providers.
Schedule Content Request to Data Provider - Control Classes	You can schedule regular requests to your external data providers to receive updated and new versions.
Display Classified Products - International Trade	You can display products which have been classified with a code number, such as commodity codes, customs tariff numbers, legal control relevant attributes, or intrastat service codes.
Display International Trade Classification	You can display classification information for all active numbering schemes and legal regulations currently valid for the selected product. The information can be called up via the <i>Manage Product Master Data</i> app.

3.7.5.1.2 International Trade Compliance

Business Background

You use International Trade Compliance to manage licenses and trade compliance documents.

Trade compliance checks are based on the following document types:

Document Category	Legal Control	Embargo	SAP Watch List Screening
Sales Orders	X	X	X
Sales Orders without Charge	X	X	X
Sales Contracts		X	X
Sales Scheduling Agreements	X	X	X
Sales Quotation		X	X
Outbound Deliveries	X	X	X
Inbound Deliveries	X	X	X
Purchase Orders	X	X	X
Stock Transfer Order	X		
Purchasing Scheduling Agreements	X	X	X
Purchasing Contracts		X	X
Purchase Requisitions	X	X	X

Key Features

The following table explains the key features available:

Key Feature	Use
Manage Licenses	You can manage licenses to comply with bans and restrictions against specific product /product groups for authorities.
Manage Documents – Trade Compliance	You can display the legal control status of documents and confirm or release embargo blocks.
Resolve Blocked Documents – Trade Compliance	You can resolve legal control blocks of documents, if they are missing classification and/or licenses.
Manage Countries/Regions under Embargo	You can manage countries/regions for which there is an embargo situation.

Key Feature	Use
Manage Rules for Legal Control	You can manage legal control rules to determine blocklisting, allowlisting, or license terms in a specific order. You can define these rules yourself to consider your specific requirements or specific legal requirements.
Display License Assignments - Trade Compliance	You can display assigned documents to licenses and get an overview of open depreciation values and quantities.
Schedule Recheck Documents - Trade Compliance	You can mass recheck for blocked trade compliance documents to regularly check and release blocked trade compliance documents via the job scheduling framework.
Analyze and Resolve Blocked Documents – Trade Compliance	You can use the analytical list page to graphically display blocked documents and analyze them. You can resolve legal control blocks of documents, if they are missing classification and/or licenses.

3.7.5.1.3 Intrastat

Business Background

You use Intrastat declarations to record goods movements that cross national borders between member states of the European Union. In Italy, services must be declared in addition.

Key Features

The following table explains the key features available:

Key Feature	Use
Manage Providers of Information	<p>The statistics authority of your country requires that you, as a company, provide Intrastat-relevant data to the authority in the form of Intrastat declarations.</p> <p>To be able to create Intrastat declarations, you have to enter the provider-of-information data of your company.</p>
Manage Intrastat Declarations	<p>You can enter the required statistical data of a month in Intrastat declarations for the following transactions:</p> <ul style="list-style-type: none"> • Receipts to your company from other member states of the European Union • Dispatches from your company to other member states of the European Union

Key Feature	Use
Select Dispatches and Customer Returns for Intrastat Declarations	You can select dispatches and customer returns based on billing documents to generate data for Intrastat declarations.
Select Receipts and Returns to Supplier for Intrastat Declarations	You can select receipts and returns to supplier based on purchase orders and intercompany billing documents to generate data for Intrastat declarations.

You can create Intrastat declarations for the following countries:

- AT (Austria)
- BE (Belgium)
- BG (Bulgaria)
- CZ (Czech Republic)
- DE (Germany)
- DK (Denmark)
- ES (Spain)
- FI (Finland)
- FR (France)
- GB (United Kingdom)
- HU (Hungary)
- IE (Ireland)
- IT (Italy)
- LU (Luxembourg)
- NL (The Netherlands)
- PL (Poland)
- PT (Portugal)
- RO (Romania)
- SE (Sweden)
- SK (Slovakia)

3.7.5.1.4 Integration with SAP Global Trade Services

Business Background

Through integration with SAP Global Trade Services, you can transfer master data and transactional data from the S/4HANA Cloud to your SAP GTS system.

Key Features

The following table explains the key features available:

Key Feature	Use
Integration with SAP Global Trade Services for Compliance Management.	<p>With integration, you can use Compliance Management in your SAP GTS system.</p> <p>It contains import and export controls, as well as embargoes and sanctioned party list screening for business partners and contact persons.</p>
Integration with SAP Global Trade Services for Customs Management	<p>With integration, you can use Customs Management in your SAP GTS system.</p> <p>It contains the customs declaration before and after goods receipt during import and the customs declaration during export. The integration of Customs Management supports customs processes with economic impact.</p>
Integration with SAP Global Trade Services for Preference Management	<p>With the integration, you can use Preference Management in your SAP GTS system.</p> <p>This includes the management of supplier-based long term vendor declaration and customer-based long term vendor declarations, as well as the preference determination for fixed bills of products.</p>
Schedule Transfer of Master Data	<p>You can schedule the transfer of the following master data for SAP Global Trade Services:</p> <ul style="list-style-type: none">• Suppliers• Customers• Products• Contact Persons• Bill of Materials• Procurement Indicators• Product Prices• Min./Max. Product Prices• Customer Product Name• Supplier Product Name
Assignment of Customs Offices	<p>You can assign customs offices for use in SAP Global Trade Services to the following attributes:</p> <ul style="list-style-type: none">• Routes• Countries/Regions

3.7.5.1.5 Integration with SAP Watch List Screening

Business Background

SAP S/4HANA Cloud supports the integration with SAP Watch List Screening (needs to be licensed separately).

Key Features

The following table explains the key features available:

Key Feature	Use
Schedule Postprocessing – Watch List Screening	You can schedule the postprocessing of Watch List Screening-relevant documents

3.7.6 Integration with other SAP products in Finance

3.7.6.1 Integration with Concur Solutions

Business Background

SAP S/4HANA Cloud currently supports the integration with Concur solutions to simplify your expense processes in the areas of master data export and the financial posting of your Concur documents.

Key Features

The following key features are supported:

Key Feature	Use
Export of master data	Transfer of cost objects from your SAP S/4HANA Cloud system to your Concur system for expense assignment.
Import of financial data	Import of documents from your Concur system into your SAP S/4HANA Cloud.

3.7.6.2 Integration with Digital Payment Hub

Business Background

SAP S/4HANA Cloud supports integration with a digital payment hub (currently the SAP digital payments add-on) to process payment card payments and other digital payments, such as in the areas of Accounts Receivable, Sales, Business Partner, or Contract Accounting.

i Note

If you want to process payment card payments and other digital payments with SAP S/4HANA Cloud, integration with a digital payment hub (currently the SAP digital payments add-on) is mandatory to assure compliance with the Payment Card Industry Data Security Standard (PCI DSS).

If SAP S/4HANA Cloud is integrated with a digital payment hub (currently the SAP digital payments add-on), you can use this feature to connect SAP S/4HANA Cloud with your payment service providers so that you can run digital payment processes, such as authorizations, charges (captures), refunds, and digital advices.

If you want to use this feature, you might require additional licenses. For further information, please contact your SAP Account Executive.

3.8 Human Resources

3.8.1 Core HR and Time Recording

3.8.1.1 Timesheet

Business Background

Timesheet can be used to perform activity-based time recording for accounting objects. Time recording activities can be performed by internal employees and contingent workers.

Key Features

The following features are available:

Key Features	Use
Record time	You can navigate to the timesheet app and create, edit, and delete time entries against a relevant task.

Key Features	Use
View availability data	You can view the availability data of employees along with the recorded time. This feature is active only if availability data exists for the employee.
Define a task	You can create a task within the timesheet app. You can also modify or delete a user defined task.
View monthly staffed effort and recorded effort	You can view the details of the monthly staffed effort and recorded effort for a particular task in the task list.
Add a note	You can add a note for a particular time entry, to specify any additional information related to the recorded time.
Define first day of the week	Set any day as the first day of the week for your time recording.
Define interval of time recording	You can define the minimum interval of time recording (minimum 1 minute).
Define time format	You can modify the display format of the time.
Copy time entries	You can copy time entries from source day/week(s) to target day/weeks(s).
Use configuration settings	You can enable different features of the timesheet app, using the configuration settings. You can enable features like: <ul style="list-style-type: none"> Work location: Allows you to add work location details while creating or modifying a time entry. Overtime: Allows you to maintain the overtime hours that you have worked on a project.
Use extensibility	You can use the extensibility feature to add custom fields to your timesheet.
Use adaptability	You can use the adaptability feature to add, rename, remove, or delete fields from the timesheet app.
Group tasks	You can group tasks for better classification and to support easier search, while recording time.
Record time without staffing	You can maintain your time entries for projects that you are not staffed to. To allow this, the relevant project must have this feature enabled.
Approve timesheets	You, as a manager, can approve or reject time entries created by the workforce, that are sent for approval.

Key Features	Use
Work with time entries that are pending approval	You, as an overhead accountant, can schedule a job for a fixed or flexible period, to send emails to the timesheet approvers who have time entries on which they need to take action.
Work with missing time	<p>You, as an overhead accountant, can schedule a job for a fixed or flexible period, to send emails to the workforce with missing time. For any unposted time entries, the overhead accountant can generate a timesheet postings report for a particular period.</p> <p>You, as a manager, can send reminder emails to employees and contingent workers who have not recorded adequate time as planned for a project.</p>
Work with team utilization	You, as a manager, can view the average utilization of your team and take actions like modify the timesheet on behalf of an employee or contingent worker.
Record time on behalf	<p>You, as a manager, can record time on behalf of an internal employee or contingent worker.</p> <p>You can modify existing time entries or create new time entries in the timesheet app on behalf of inactive employees during their last active employment period.</p>
Configure task types	You can add new task types for time recording using the configuration settings.
View timesheet records that changed after approval	You can see the timesheet entries, that changed after approval.
View deleted time entry	You can view deleted time entries that have been saved, submitted for approval, or has been rejected by the manager.
Record time for multiple active employments (concurrent employments)	As an employee, if you have more than one active employment contract for the current period, you will be able to select one of your active employments and record time against that employment contract.

Key Features	Use
Block time posting	<p>You cannot create a task using a blocked work package or WBS element. This is applicable if:</p> <ul style="list-style-type: none"> • Blocking of time recording is enabled for any work package in the customer project • Blocking of time recording is enabled for any work package in WBS element, in an enterprise project. <p>An indicator is displayed for any blocked task, in the timesheet app.</p> <p>You will also be unable to modify existing approved timesheet entries for tasks that are blocked.</p>
Work with rejected time entries	<p>You, as an overhead accountant, can schedule a job for a fixed or flexible period, to send emails to the workforce with rejected time entries. Email notifications are sent to the workforce when their timesheet entries are rejected by their manager.</p>
View rejected time entry details	<p>You can view the rejected time entry details of past, present, and future weeks.</p>
Work with notifications for rejected time entries	<p>You can view notifications for the rejected time entries. You can also navigate to the timesheet by clicking on the notification.</p>

3.8.1.2 Employee Connectivity

Key Features

The following features are available:

Key Features	Use
Manage workforce data	<p>Create and update workforce-related data. For example, you can edit personal or employment details, create work agreements, and assign company codes and cost centers.</p>
Employee Replication	<p>You can replicate employees and/or contingent workers along with their employment data.</p>

Key Features	Use
Display log	You can view the logs that are created while replicating employees.
Search	You can search for employees or contingent workers and lookup for employee or contingent worker details.
Delete Employment Data	You can delete an employee's employment data.

3.8.2 Integration with External HR System

Business Background

SAP S/4HANA Cloud supports the integration with an external HR system (currently SAP SuccessFactors Employee Central) to enable you to replicate employee, organizational, and cost center data.

Key Features

When an external HR system (for example, SAP SuccessFactors Employee Central) is integrated and supports the below named features, SAP S/4HANA Cloud enables the external HR system to provide the following key features:

Key Feature	Use
Employee data and contingent worker data integration	You can integrate employee and contingent worker data like basic data and contact details from SAP SuccessFactors Employee Central to SAP S/4HANA Cloud system.
Employment data integration	You can integrate employment data like job title, job information, employment status from SAP SuccessFactors Employee Central to SAP S/4HANA Cloud system.
Financial data integration	You can also integrate financial data such as company code and cost center.
Employee photo integration	You can integrate employee photo from SAP SuccessFactors Employee Central to SAP S/4HANA Cloud system.
Availability integration	You can integrate the work schedule of an employee thus enabling you to access the up-to-date time information like your target hours, absences, holidays, and so on for time recording.

3.9 Manufacturing

3.9.1 Production Engineering

3.9.1.1 Production BOM Management

Business Background

During the product engineering phase, you design and develop products. You design new products or product lines to take advantage of current process technology and to improve quality and reliability. Or, you have to change an existing product due to changing market or customer requirements. The result of this product phase is drawings and a list of all the parts required to produce the product. This list is the bill of material.

Key Features

The following features are available:

Key Feature	Use
Manage bills of material	You can create a complete, formally structured list of the components that make up a product or assembly. A bill of material contains essential master data for integrated materials management and production control. In the design department, a new product is designed so that it is suitable for production and for its intended purpose. The result of this product phase is drawings and a list of all the parts required to produce the product. This list is the bill of material which is the basis for the production process (in discrete manufacturing, repetitive manufacturing, and in the process industry).
Assign BOMs to plants	You can extend the area of validity of a BOM that you defined when you first created it. This means, for example, that you can assign the same BOM to a material in different plants - avoiding data redundancy and multiple data entry.
Monitor multilevel BOM assignment	You can use a reporting function that determines all components (assemblies and individual parts) in a product and displays them per low-level code.

Key Feature	Use
Find BOM for component	<p>You can use a reporting function that determines where an object (for example, material) is used and the quantity that is required. This is necessary, for example, if objects are used in more than one context. You can use this information to:</p> <ul style="list-style-type: none"> • Determine requirements for a specific material. • Select all products that are affected by a change to an individual part. • Find assemblies that will be delayed if there is a delay in the delivery of a raw material, for example. • Calculate the effect on the cost of a product if the price of a raw material is increased.

3.9.1.2 Master Recipe/Routing Management

Business Background

During the process engineering phase, you design and continuously improve manufacturing equipment and production facilities. This process enables you to model the capabilities of the manufacturing equipment and to monitor its performance.

Key Features

The following features are available:

Key Features	Use
Manage the objects and persons involved in the production process	<p>You use work centers/resources to represent machines, production lines, employees, or groups of employees, for example. Together with the bills of material and routings/recipes, work centers/resources belong to the most important master data in the production planning and control system and are used for scheduling, costing, capacity planning, and for simplifying operation maintenance.</p> <ul style="list-style-type: none"> • Discrete manufacturing: Model work centers • Process industry: Model resources
Group work centers for capacity evaluation	<p>You can group work centers based on the same line or on the alternate work centers, to carry out the same work. This gives the capability to assess aggregated capacities across work centers and enables easy decision making.</p>

Key Features	Use
Monitor bills of material	<p>You can display and monitor the following:</p> <ul style="list-style-type: none"> • Bills of material created by the product engineers • Assignment of bills of material to plants • Multilevel BOM explosion • Where an object is used and the quantity that is required (Find BOM for component) <p>You use this information as a reference when determining the process steps for production in the routing/recipe.</p>
Model the production process	<p>A routing/recipe is a description of the operations/process steps that have to be carried out and the order in which they have to be carried out to produce a material. In addition, a routing/recipe contains details about the work centers/resources at which the operations/process steps are carried out and the BOM components that are required.</p> <p>In discrete manufacturing, the routing is used as the basis for creating production orders and in the process industry, the recipe is used as the basis for creating process orders.</p>
Model production versions	<p>The production version determines the production techniques according to which a material is to be manufactured.</p> <p>A material may have several bills of material (BOMs) that determine the components used in its production. The production process can also be described in various routings/recipes. You define which BOM and which routing/recipe is to be used for production in the production version that you assign to a material.</p>

3.9.2 Production Planning

3.9.2.1 Material Requirements Planning

Business Background

This process enables you to ensure the availability of materials. It is typically performed by the MRP controller who monitors the material shortage situation and solves any issues on time. Another main task is to ensure that sufficient supplies have been planned to cover requirements — whether from sales orders, stock transfer orders, or from production, for example. The goal is to ensure that both customer and production demand are fulfilled on time and to avoid any disruptions due to missing parts.

Key Features

The following features are available:

Key Feature	Use
Manage planned independent requirements	You can create and change planned independent requirements.
Perform material requirements planning	<p>You can automate the planning of the procurement process. You can schedule your MRP runs to be executed automatically on a regular basis.</p> <p>The main function of the planning run is to guarantee material availability to avoid delays in order fulfillment. To do this, the system checks the availability of each material in the planning run and creates purchase requisitions or planned orders if it detects shortages.</p>
Monitor and manage supply and demand	<p>You can monitor and adjust the current supply and demand situation for your area of responsibility using a selection of tools.</p> <p>You have system support in detecting material shortages, uncovered requirements as well as any issues regarding process orders or production orders. You are provided with further automated support for solving issues to avoid delays or disruptions due to missing items. Tools are also available for communicating with your vendor if solving the issues requires changing a purchase order or stock transport order.</p> <p>The stock/requirements list displays all supply and demand elements for a material in the form of a table and enables you to gain a quick overview of the stock/requirements situation for the material. You can also branch into the editing function for the MRP elements for this material.</p> <p>Planned orders are created automatically during a planning run. However, you can also create new planned orders or adapt existing ones manually to optimize the replenishment situation.</p>

Key Feature	Use
Convert planned orders	<p>You can convert planned orders into production orders, process orders, or purchase orders.</p> <p>Planned orders are internal planning elements that are only used for planning purposes and do not trigger any procurement (with the exception of repetitive manufacturing). The system only triggers procurement once the planned orders are converted into fixed receipt elements:</p> <ul style="list-style-type: none"> • Discrete Manufacturing <ul style="list-style-type: none"> ◦ You can convert planned orders for materials that are to be produced in-house to production orders. You can convert your planned orders manually or automatically using an order conversion run. The material components required for production are contained as items in the planned order and are copied directly when the planned order is converted to a production order. The dependent requirements for the components are converted into reservations. With the conversion to production orders, the responsibility is passed on from the MRP controller to the production supervisor. • Process Industry <ul style="list-style-type: none"> ◦ In this case, you convert planned orders into process orders. Again, you can convert your planned orders manually or automatically using an order conversion run. The material to be produced, the order quantity, and the order dates are copied from the planned order to the process order and the dependent requirements for the components are converted into reservations. With the conversion to process orders, the responsibility is passed on from the MRP controller to the production supervisor. • Repetitive Manufacturing <ul style="list-style-type: none"> ◦ In repetitive manufacturing, planned orders can be used to trigger production. In this case, the planned orders do not have to be converted into production or process orders. <p>You convert planned orders for materials that are to be purchased externally into purchase requisitions or purchase orders. Purchase requisitions created automatically during the MRP run can be locked first for checking. A subsequent handover passes on the responsibility of these purchase requisitions to the purchasing department for converting them into purchase orders.</p>

3.9.2.2 Production Scheduling

Business Background

Material Requirements Planning (MRP) addresses the coverage of demand by supply elements (for example, inhouse production orders) without considering the available capacity. Capacity planning supports the MRP planner in changing the production plan in such a way that the capacity constraints are considered while keeping the demands in time and quantity in mind.

Key Features

The following table explains the key features available:

Key Feature	Use
Maintain Capacity	You can review when and how much capacity is available for a work center. This is called the capacity definition.
	You can manage this definition for instance, by reducing the work time or by including additional work time.
Evaluate Capacity	You can review the capacity load on your work centers.
	You can compare the available and required capacities, thereby identifying the issues that needs to be resolved.
Create Detailed Plans	You can filter and select the orders to be planned by using different search criteria.
	You can decide where (the source) and when (the dates) the orders need to be planned.

3.9.2.3 Demand-Driven Replenishment

Business Background

Demand-Driven Replenishment enables you to plan and manage supply chains based on customer demand, rather than through traditional MRP procedures. You can create the basis for a reliable material flow by defining buffers at strategically important points along a supply chain and by regularly adjusting the buffers' limits.

Key Features

The following table explains the key features available:

Key Feature	Use
Analyze and classify products	You can analyze and classify your products based on certain criteria to identify products which can act as decoupling points. You can automate the classification process by scheduling classification runs to be executed on a regular basis.
Select products relevant to Demand-Driven Replenishment	You can define which products are relevant to Demand-Driven Replenishment using classification information.
Generate buffer level proposals	You can generate buffer (stock) level proposals for your products that are relevant to demand-driven replenishment (DD-relevant products). You can automate the generation of buffer level proposals by scheduling runs to be executed on a regular basis.
Manage buffer levels	You can manage the buffer levels, and in turn, the safety stock, reorder point, and maximum stock for your products based on the buffer level proposals.
Manage replenishment planning	You can manage the planning status of buffers using their planning priority.
Manage replenishment execution	You can manage the execution status of buffers using their on-hand stock status.
Manage Projected On-Hand Alerts	You can manage the projected stock alerts of buffers using projected status.

3.9.2.4 Predictive Material and Resource Planning (pMRP)

Business Background

Predictive material and resource planning (pMRP) enables production planners to identify capacity issues related to demand-driven materials and to solve them early in the planning process. They work with simulations based on simplified data to detect the issues and to simulate counter measures.

As a result of processing the simulation, planners are prepared to take decisions on changed conditions, for example with regard to requirement planning.

Key Features

The following table explains the key features available:

Key Feature	Use
Schedule the creation of pMRP simulations	You can create simplified planning data and use them as reference data in a simulation.
Process pMRP simulations	<p>The simulation provides a demand plan view where you can simulate changes to the demand quantities and a capacity plan view where you can simulate changes to the available capacity.</p> <p>In addition, you can display the multi-level bill of material and detect issues on a particular bill of material level. You can change the source of supply, if an alternative one exists or start a preproduction of a particular material component to solve capacity issues.</p> <p>You can check the impact of these simulated changes and display a summary.</p>

3.9.3 Production Operations

3.9.3.1 Production Control

Business Background

This process enables you to manage and regulate the manufacturing process. It is typically performed by the production supervisor who is responsible for dispatching production operations to individual machines if a work center/resource has several alternative machines and for assigning shop floor specialists to operations or machines. The production supervisor also decides on measures to mitigate machine breakdowns or missing components, for example.

Key Features

The following features are available:

Key Feature	Use
Monitoring and adjusting the production worklist	You can change production orders or process orders, perform scheduling, and check component availability.

Key Feature	Use
Releasing production orders/process orders	<p>You have to release the production/process order before it can be processed. You can use the time period between creating and releasing an order, for example, to carry out company checks and preparations.</p>
	<p>You can release the production/process order at header level releasing all operations. Or, you can release single operations. You can also perform a mass release. Furthermore, you can schedule an order release run that instructs the system to automatically release all your production/process orders periodically.</p> <p>Once the orders are released, you can execute confirmations, print shop floor papers, and execute goods movements, for example.</p>
Monitoring production execution	<p>You have various options for monitoring the production progress.</p> <ul style="list-style-type: none"> ● Order Progress Report This report shows you which documents, MRP elements, stocks, and deliveries exist for products and their components that have been ordered by a customer. The order progress report gives you a quick overview of the status of production and procurement, statements about the adherence to delivery dates or delays and this information can be displayed for more than one sales order or a WBS element. From the report, you can navigate to the individual procurement elements, the stock/requirements list, or the stock overview, for example. ● Order Information System This report provides you with reporting functions for production orders, planned orders, and process orders. You can view all the orders in the system, including the orders with deletion flags or deletion indicators. For production and process orders, you can display the order headers, items, documented goods movements, operations, components, the production list, and confirmations, for example. From the report, you also have various navigation options.

Key Feature	Use
Executing production completion	<p>To complete the production process, you can set the status of the production/process order to technically complete and you can complete the order settlement. When an order is settled, the actual costs incurred for the order are settled to one or more receiver cost-objects (for example, to the account for the material produced or to a sales order).</p> <p>Technical completion means ending a production order from a logistical viewpoint. The following actions are executed for orders with this status:</p> <ul style="list-style-type: none"> • The order is no longer relevant for MRP • Reservations are deleted • Capacity requirements are deleted • Purchase requisitions for external operations or non-stock materials are deleted • The order and its operations are set to <i>Technically Completed</i> <p>An order with this status can no longer be changed. You can however, still make postings for the order such as a material withdrawal or a confirmation.</p> <p>After closing the order, no further updates are possible.</p>

3.9.3.2 Production Execution

Business Background

This process enables you to make all the necessary preparations required for production and to document the production progress. It is typically performed by the shop floor specialist and includes the following tasks:

- Material staging before production starts.
- Reporting goods withdrawals.
- Processing time tickets for a production order or a process order.
- Entering the goods receipt information for the order on completion of the product.

Key Features

The following features are available:

Key Feature	Use
Monitoring released production orders/process orders	You can display the released production/process orders. This means that you have access to all the information required to produce the product including dates, times, and quantities, for example. You can also print the production/process orders and you can send the printed version by e-mail.
Picking	You can use the picking function to determine which components have not yet been issued from stock for an order and then you can perform the goods issue. You can also print the pick list and you can send the printed version by e-mail.
Confirming production	<p>You can confirm the production progress for production and process orders. A confirmation documents the processing status of orders and triggers the following business operations, for example:</p> <ul style="list-style-type: none">• Updates order data (quantities, activities, dates, status, for example)• Backflushes material components• Posts goods receipts• Updates costs <p>You can cancel or partially cancel confirmations.</p> <p>You can reprocess goods movements.</p>

3.9.3.3 Repetitive Manufacturing

Business Background

You can use Repetitive Manufacturing for planning and controlling your production in repetitive manufacturing and flow manufacturing environments.

In repetitive manufacturing, you can plan and monitor the material flow in a much higher level of detail than that at which you collect and analyze costs. You use planned orders to model, plan, and trigger material flow and product cost collectors to collect the costs. Planned orders are simple and easy to manage with low overhead which you can use to model small increments of the production quantity. The product cost collectors collect the costs of the complete quantity produced during an accounting period. All deviations are aggregated.

On the other hand, in discrete manufacturing, you plan and manage both the material flow and costs on the same level of detail in the production order, for example. Therefore, if you want to collect scrap and other deviations in detail, you are recommended to use discrete manufacturing.

You can use repetitive manufacturing in the following scenarios:

- Make-to-stock production

Production is controlled without a direct reference to the sales order. Run schedule quantities determine the dates and quantities. Run schedule quantities are planned orders of the type PE that do not have to be released and that you do not have to convert into production or process orders to be able to carry out production. The requirements are generated by demand management, for example. Sales order quantities are delivered from stock and consume the planned independent requirement quantities in demand management, according to the planning strategy you select. A product cost collector is used to collect actual data and to settle costs.

- Make-to-order production

The system creates one or several planned orders which directly reference the sales order item. The material is then manufactured on the basis of these planned orders. That is, production is triggered by the receipt of the sales orders. For component materials that are relevant to repetitive manufacturing, you use the product cost collector of the component to collect costs. On finished item level, you either use valuated or non-valuated material: Costs are collected by the sales order if you use non-valuated material and by the product cost collector if the material is valuated.

The business process includes analysis, material requirements planning, and the evaluation of the planning results. You can carry out extensive planning steps such as the MRP run in the background or manually.

Key Features

The following features are available:

Key Features	Use
Planning table	<p>Your main planning tool in repetitive manufacturing is the planning table. It is an operative planning tool that you can use to plan the production quantities. In the planning run, the system assigns the run schedule quantities to the correct line as defined in the production version. In the planning table, you can change the assignment of run schedule quantities to production lines/versions manually.</p> <p>In this type of manufacturing, you plan and control your production using the planning table based on periods and quantities. You can check production quantities, monitor the available capacity of the production lines and check up on the availability situation of the products produced on each line. In the planning table, you can enter and change production quantities and you can assign and reassign quantities to alternative production lines.</p> <p>The planning table allows you to schedule planned orders to the corresponding production lines as follows:</p> <ul style="list-style-type: none">• You can change the planned orders/run schedule quantities created in MRP manually (such as quantity/date changes), or you can create additional orders.• You can assign unassigned production quantities to the production lines or reassign production quantities to different production lines.• You have the option of using production or process orders to perform planning tasks. A prerequisite for this is that you have created a valid production version for the material.• Because planning is often carried out on the basis of shifts, the planning table also has functions for distributing production quantities across shifts.
Staging materials using the pull list	<p>You can use the pull list to control the in-house flow of material for supplying production with materials. A prerequisite for this is that the components required for production are already available (either produced in-house or procured externally) and must only be brought from their current storage location to the production storage location.</p> <p>The pull list checks the stock situation at the production storage location and calculates the quantities of missing parts. You can create replenishment elements for these missing parts. You can stage the components by direct stock transfer or stock transfer reservation. You can also trigger replenishment by setting a kanban to empty or by creating transfer requirements in Warehouse Management.</p>

Key Features	Use
Confirming production for repetitive manufacturing	<p>Separate tools are available for recording work progress in a repetitive manufacturing environment. In accordance with the requirements of this type of production, the confirmation process is very lean. For example, you have the option of deferring the entry of all actual data from production until the receipt of the finished part is recorded by a goods receipt confirmation. In the case of make-to-stock repetitive manufacturing, you also have the option of posting a reporting point confirmation at defined operations to record the stock of semifinished products in production, for example.</p> <p>You can couple the following processes in a goods receipt confirmation:</p> <ul style="list-style-type: none"> • Posting of goods receipts for finished products • Posting of goods issues for the components (backflushing) • Reduction of planned orders • Posting of production costs to the product cost collector • Updating of statistics for analytical purposes <p>You can also cancel incorrect confirmations and reprocess goods movements.</p>
Analyze the product cost collector	<p>You can analyze the costs per period. This means that you collect costs in a cost object over a long period of time and can analyze the credits and debits for certain periods.</p>
Perform evaluations/reporting	<p>You can create the following evaluations:</p> <ul style="list-style-type: none"> • Reporting point overview You are provided with a statistical overview of all the reporting points of a production version. • Backflushing documents Documents are saved in the system for all backflushes. You can list and print these documents according to various selection criteria. • Updating planned quantities • Call cost reports in Cost Object Controlling

3.9.3.4 Kanban

Business Background

Kanban is a procedure for controlling production and material flow based on physical material stock in production. Material that is required on a regular basis is kept available in small quantities in production. With kanban, the replenishment or production of a material is only triggered when a certain quantity of the material has been consumed. This replenishment is triggered directly by production using previously maintained master data. Entries in the system are reduced to a minimum and all other actions are carried out automatically in the background.

With kanban, the production process is designed to control itself and the manual posting effort is kept to a minimum. Thus, you can achieve shorter lead times and reductions in stock levels.

With kanban, for example, the signal for material replenishment is triggered by the work center that requires the material (the consumer or the demand source). This signal can simply be a card that the demand sources

sends to the work center that produces the material (producer or supply source). This card describes the required material, quantity, and information on where it is to be delivered. It is these cards, which are known as kanbans in Japanese, that have given this type of production its name.

Compared to the basic kanban process that only uses boxes and cards to trigger material replenishment, this automated solution offers the following advantages:

- Goods movements are posted automatically meaning that inventory information is always up to date.
- Your supply sources are informed faster about the requirements situation at the demand source.
- The system collects data about the kanban cycle times that you can use to improve the process.

Key Features

The following features are available:

Key Feature	Use
Control cycle maintenance	<p>You define the relationship between the demand source (such as a production line in production) and the supply source (such as an external supplier or warehouse) in the control cycle. The control cycle contains the following control data for kanban production:</p> <ul style="list-style-type: none">• Kanban circulation, that is, the number of kanbans that circulate between the supply source and demand source and the material quantity per kanban.• Basic data required for the automatic kanban calculation in the control cycle, if necessary.• Replenishment strategy such as in-house production, external source, or stock transfer.• Printing kanbans, if necessary.• Delivery address, if necessary.• Process control (such as the indicator for separate goods receipt, status sequence key, indicator for the logic to trigger the replenishment for one-card kanban, packing instructions, and production call profiles).

Key Feature	Use
Kanban status change (Confirmation)	<p>You can control the production process by setting your kanbans to the appropriate station. You mainly use the statuses empty and full which are mandatory statuses. When a material in a kanban has been used up, you set the kanban status to empty which automatically triggers the replenishment process. The source of supply (producer, supplier) receives the signal to fill up the kanban. When you receive the full kanban back at the demand source (consumer), you set the kanban status to full which triggers the goods receipt posting for the material.</p> <p>You can work in a kanban environment quite efficiently using these two statuses. If you require additional information for special cases, the following (optional) statuses are available:</p> <ul style="list-style-type: none"> • Waiting: Indicates that although the material has been consumed, the supply source is not yet to replenish it. You also use this status if a new kanban has been created. • In process: Indicates that the requested material is currently being produced by the supply source. • In transit: Indicates that the material is currently on its way from the supply source to the demand source. • In use: Indicates that the material is currently being withdrawn by the demand source. • Error: Assigned by the system. Indicates that a desired status could not be set successfully. <p>You only use the first four additional statuses if you work with the kanban board. Here, you can use them to record work progress.</p>
Monitoring with the kanban board	<p>You can use the kanban board to monitor production progress. Irrespective of whether you are the supply source or the demand source, the kanban board provides you with a detailed overview of the kanbans in circulation. You can also use the kanban board to change the status of the kanbans. The following additional information is available, for example:</p> <ul style="list-style-type: none"> • You can display the control cycle, material, plant, actual quantity, status, date of the last status change and so on by double-clicking the individual kanbans. • You can display the control cycle data by double-clicking the appropriate row on the kanban board. • You can navigate to the stock/requirements list, the stock overview, or the material master for a control cycle. • You can trigger the kanban correction facility for a control cycle.

Key Feature	Use
Cost accounting for Kanban	<p>You have various options for controlling cost accounting for kanban with in-house production depending on which replenishment elements are used. If you use:</p> <ul style="list-style-type: none"> Run schedule quantities: The costs are collected in a product cost collector and can be settled periodically in product costing. Manual kanban: The costs are also collected in a product cost collector. Production orders or process orders: The costs are either collected in a product cost collector if you want to analyze the costs by periods rather than by lot, or they are settled to the individual production orders/process orders. <p>Updates to the actual costs at the product cost collector can be triggered by logistical transactions (such as goods issues or confirmations) for production/process orders and run schedule headers. For example, goods issues for a production order or reporting point backflushes in repetitive manufacturing debit the product cost collector with actual costs. Goods receipts credit the product cost collector. Alternatively, the actual costs at the product cost collector can be updated directly through G/L account postings in Financial Accounting (FI), for example.</p> <p>You can access reports and view the actual costs for the product cost collector. During the period-end closing, you can:</p> <ul style="list-style-type: none"> Charge the product cost collector by means of template allocation. Reevaluate the activities at actual prices. Calculate overhead for the product cost collector. Calculate the value of your unfinished products (work in process) for the period. Calculate the variances of the period. Settle the work in process and variances to other application components.

3.9.3.5 Outsourced Manufacturing

3.9.3.5.1 Basic Subcontracting

Business Background

Basic subcontracting provides you with the means to instruct a supplier or subcontractor to process a material for which you provide the components. When procuring materials externally, you use subcontracting purchase orders or schedule lines to alleviate capacity bottlenecks. Subcontracting purchase orders/schedule lines instruct your subcontractor to make a certain finished material using the components that you provide and potentially using additional components provided by the subcontractor.

Key Features

The following features are available for the external procurement of materials:

Key Feature	Use
Planning materials to be made by a subcontractor	This feature enables you to plan your materials that are produced by a subcontractor. In the planning run, the system creates subcontracting purchase requisitions or schedule lines for the material which is made by the subcontractor, explodes the BOM of these materials, and creates subcontracting requirements. You may have more than one subcontractor that supplies one material and they may require different components to be provided while they procure the other components themselves. In this case, you have to create several production versions that cover the needs of your different subcontractors. The purchasing info record of the subcontractor references the appropriate production version.
Planning materials to be provided to subcontractor	This feature enables you to plan the parts to be provided to your subcontractor. You can create an MRP area for each subcontractor which simplifies the planning process if you have several subcontractors. When planning the component materials with subcontracting MRP areas, the system checks whether the subcontracting requirements can be covered by existing inventory at your subcontractor's or whether you have already sent the parts to be provided to your subcontractor. If current inventory at your subcontractor does not cover the subcontracting requirements, the system creates a stock transfer reservation to transfer the demand from the subcontractor company to your company. You can then produce or procure the material and send it on to your subcontractor.

Key Feature	Use
Triggering the provisioning of the materials to be provided to subcontractor (subcontracting cockpit)	<p>This feature provides you with a comprehensive overview of all relevant information about your subcontracting process. It provides a single entry point for all documents related to your subcontracting process providing direct access to the following features:</p> <ul style="list-style-type: none"> • You can choose whether you want to send your components to the subcontractor using the one-step procedure, or the two-step procedure. You can check directly whether your components are already at the subcontractor's site, or still on the way there. • You can check which components are currently in the subcontracting stock. • When you create a subcontracting order, you can change the shipping point for the outbound delivery, or change the batch number. • For each purchase order item, you can display additional information such as the production order, the number of the external operation, or the operation text. For each purchase order item, you can create an outbound delivery that is displayed in the purchase order history for the corresponding item. <p>You can also process the following documents centrally in the Subcontracting Cockpit:</p> <ul style="list-style-type: none"> • Purchase orders • Purchase requisitions • Outbound deliveries with open goods issues • Reservations • External deliveries (subcontracting components that are prepared by a third party) <p>Key data such as the supplier, material, or plant is displayed for each of these documents.</p>
Goods receipt for parts made at subcontractor	The goods receipt of the subcontracting purchase order/schedule line triggers updates to inventory, purchasing statistics and so on. In addition, the system backflushes the components that were provided to the subcontractor.
Sending advanced shipping notification	You can send advanced shipping notification to a subcontracting supplier registered on an external procurement system (currently, Ariba Network) and receive proof of delivery.

3.9.3.5.2 Basic External Processing

Business Background

Basic external processing provides you with the means to instruct a supplier or subcontractor to process individual production steps such as operations or sub-operations. The external processing of production order

operations is frequently used for standardized process steps such as galvanizing which you cannot perform in your own factory. In the case of galvanizing, you may have environmental reasons for outsourcing this step to your subcontractor. In this case, it does not matter to the subcontractor which material IDs are produced. The subcontractor is only responsible for processing (galvanizing) a certain quantity of (metal) pieces.

Key Features

The following features are available for basic external processing:

Key Feature	Use
Planning externally processed operations	<p>When you convert a planned order into a production order, the system checks to see whether there are any routing/work center operations that require external processing. You can use external processing if you have individual production steps that are operations or sub-operations which are performed outside of your company by a supplier. This provides you with an alternative to in-house production if capacity bottlenecks occur.</p> <p>You can use an outline agreement to specify that a certain operation of the production order is executed by an external subcontractor on a regular basis.</p>
Scheduling externally processed operations	<p>When you perform scheduling, the system takes account of any external operations. The duration of an external operation is calculated either by using the planned delivery time or using the standard values. The system automatically creates a purchase requisition for the operation or sub-operation that requires external processing. This requisition is automatically updated with any quantity changes made to the production order.</p> <p>You should not convert the purchase requisition into a purchase order until the external processing is actually required. The reason for this is that any quantity changes made in the production order will automatically update the requisition. Once you have created the purchase order, it is printed and sent to the supplier.</p>

Key Feature	Use
Triggering the provisioning of the materials to be provided to subcontractor (subcontracting cockpit)	<p>This feature provides you with a comprehensive overview of all relevant information about your subcontracting process. It provides a single entry point for all documents related to your subcontracting process providing direct access to the following features:</p>
	<ul style="list-style-type: none"> • You can choose whether you want to send your components to the subcontractor using the one-step procedure, or the two-step procedure. You can check directly whether your components are already at the subcontractor's site, or still on the way there. • You can check which components are currently in the subcontracting stock. • When you create a subcontracting order, you can change the shipping point for the outbound delivery, or change the batch number. • For each purchase order item, you can display additional information such as the production order, the number of the external operation, or the operation text. For each purchase order item, you can create an outbound delivery that is displayed in the purchase order history for the corresponding item.
Valuating externally processed operations	<p>You can also process the following documents centrally in the Subcontracting Cockpit:</p>
	<ul style="list-style-type: none"> • Purchase orders • Purchase requisitions • Outbound deliveries with open goods issues • Reservations • External deliveries (subcontracting components that are prepared by a third party)
Goods receipt	<p>Key data such as the supplier, material, or plant is displayed for each of these documents.</p>
	<p>When data is maintained for an external activity, a cost element is specified. The cost element determines how the external activity is to be valued. A decision needs to be made whether an operation or suboperation is processed externally via its control key. The control key determines whether externally processed operations are scheduled on the basis of their standard values or the planned delivery time. This information is needed to settle externally processed operations and suboperations that have been marked as relevant for costing in their control keys.</p>
	<p>When the supplier has completed the external processing, the material is shipped back. You receive the externally processed goods back into the warehouse. The supplier service is reflected in the production order by means of an operation confirmation. The purchase order and the production order both show the quantity received and the system updates the status of the operation accordingly.</p>

3.9.3.6 Just-In-Time (JIT) Supply to Customer

Business Background

Just-in-Time (JIT) processing is a common practice in manufacturing industries for efficient demand-driven production and logistics across supply chains. Just-In-Time Supply to Customer covers JIT processes from the perspective of a supplier.

The JIT process is based on sales scheduling agreements that cover the commercial and planning aspects of the business relationship between supplier and customer. Based on their production and material requirements planning, the customer sends JIT calls to the supplier to request a delivery of goods.

Key Features

The following table explains the key features available:

Key Feature	Use
Master data for JIT processing	You define various master data specifically for processing JIT calls from your customers, enabling you to manage customer JIT calls with respect to business requirements.
Managing sales scheduling agreements for JIT processing	You maintain sales scheduling agreements for JIT processing for the materials requested by customers. It enables you to specify terms and conditions with regards to sales, delivery and billing, and to create delivery schedules received from your customer as forecasts to plan production and procurement.
Managing customer JIT calls	<p>You create a customer JIT call after receiving the JIT call from your customer. The customer JIT call is created either as summarized JIT call or sequenced JIT call. In case the customer sends a JIT call update or cancellation, you can modify or cancel the customer JIT call.</p> <p>For a sequenced JIT call, the customer could reorder components and you can create an additional sequenced JIT call indicated as reorder.</p> <p>For customers requesting highly configurable assemblies or sets using a list of components, the corresponding JIT call components requested can be grouped to component groups using business rules.</p> <p>Based on how you define the packing of component groups for sequenced JIT calls, you can group JIT calls to be packed together and assign it to slots within the packaging material, based on the sequence of withdrawal at the customer.</p> <p>JIT calls can be viewed at component groups' level.</p>
Managing packing groups for sequenced JIT calls	You can create packing groups for sequenced JIT calls and also monitor their progress and status as further processing takes place. Certain actions can be performed on the packing groups.

Key Feature	Use
Managing production for customer JIT calls	In case production should be executed based on customer JIT calls, the feature enables you to release customer JIT calls to production and confirm production thereafter.
Processing outbound deliveries for customer JIT calls	You can create outbound deliveries for customer JIT calls and process these further from picking to goods issue posting. When notifying the shipping to the customer, you can refer to the customer JIT calls also.
Analysis and monitoring	<p>You can monitor the receipt and further progress of customer JIT calls. For that, the progress is reflected by status updates as the JIT call is processed, such as when confirming production or creating outbound deliveries.</p> <p>You could also analyze the demand provided by customers for deviations as compared to the received JIT calls.</p> <p>The availability of stock for materials requested as components in customer JIT calls can be analyzed to detect potential shortfalls in supply to your customers.</p>
Managing delivery confirmations to customer JIT calls	You can receive JIT delivery confirmations from your customers, referring to customer JIT calls already delivered. You can monitor and release these for further processing towards billing or self-billing.
Scheduling custom actions	You can schedule in advance the execution of custom actions for customer JIT calls.

3.9.4 Quality Management

3.9.4.1 Quality Planning

Business Background

Quality planning helps you to ensure the quality of your products, processes, and services right from the start. During the early stages of product design and development, it is important to have the correct quality tools and to implement appropriate quality-planning strategies in your processes.

Key Features

The following features are available:

Key Feature	Use
Failure Mode and Effects Analysis (FMEA)	You can use this feature when planning new products and processes. It enables you to prevent and avoid defects. You can perform a risk valuation and derive quality-specific actions that ensure high levels of quality.
Quality-related master data	For quality planning purposes, you define specifications and processes on a long-term basis as master records. You can define quality-related data for generic master data records, for example, material or supplier.
Inspection planning	You use the inspection planning functions to define inspection criteria (for example, material to be inspected, how the inspection is to take place, characteristics to be inspected).

3.9.4.2 Quality Inspection

Business Background

Quality management deals with quality inspection activities in procurement, in manufacturing, in stock handling processes, and in sales.

If the material is specified accordingly, an inspection lot is created in the following cases:

- When a goods receipt is posted
- When a material is received from production or during the production process itself
- When a material is posted to quality inspection stock
- When an outbound delivery is created

Key Features

The following features are available:

Key Feature	Use
Inspection lot creation	An inspection lot represents the request to perform a quality inspection. An inspection lot can be created manually, or the creation can be triggered automatically during the different logistical processes.
Inspection execution	This feature allows you to record the results of an inspection, for example, for an inspection lot. You can record results in different ways, for example, for one or several inspection characteristics in several inspection lots at a time or using the optimized table form.
Inspection completion	Once the inspection results have been recorded, the inspection lot is completed with a usage decision.
Dynamic modification of the inspection scope	You can define rules so that the system automatically determines the scope of the next inspection depending on the latest inspection results. You can vary the sample size of the next inspection lot in stages between a predefined inspection scope and a skip.
Defects recording	This feature allows you to manually record defects and to manage defects that were automatically recorded during the inspection process.
Quality certificates	You can manage quality certificates for goods receipts and for outbound deliveries.

3.9.4.3 Quality Improvement

Business Background

Quality Improvement provides tools that form the basis for improving your processes and products. You can gain better insights into your inspection-related data, which helps you reach your quality goals.

Key Features

The following features are available:

Key Feature	Use
Quality notifications	This feature allows you to record and process complaints from customers and complaints against suppliers and to execute a problem-solving process.
Nonconformance management	This feature enables you to record defects and manage or process defects that were recorded manually or automatically. To correct the defects and to prevent them from recurring, you can trigger and process tasks.
Internal problem solving	You can resolve internal problems using the step-based 8D methodology.
Trigger external problem solving	SAP S/4HANA Cloud supports the integration with a collaborative problem-solving system (currently SAP Supplier Problem-Solving) to enable a collaborative problem-solving process together with suppliers. When the collaborative problem-solving system is integrated, you can trigger an external problem-solving process from a complaint against a supplier.
Quality analytics	You can perform different quality evaluations, for example: <ul style="list-style-type: none">• You can analyze inspection lots with regard to the usage decisions that have already been made.• You can analyze inspection results that have been recorded for inspection characteristics.• You can analyze defects (with and without assignment to a quality notification).

3.10 Professional Services

3.10.1 Customer Project Management

Business Background

The following features enable your project manager to create, manage, and monitor customer projects and internal projects. Project managers plan work packages and efforts, staff resources, and create billing plans for services. Subsequently, when efforts have been recorded, billing data is prepared, which are later used in the creation of invoices.

Project managers can also monitor projects for financial performance, using criteria such as cost, revenue, margin, and variance.

i Note

- Project information such as planned effort, planned cost, planned revenue, and ETC are stored and reported per month following the Gregorian calendar.

- Periodic billing plans are only available for customer projects in professional services.

Key Features

The following features are available:

Key Feature	Use
Create customer projects	You can create and plan customer projects. You can plan several aspects such as high-level schedules, the type of project roles and people required to deliver the project, and plan costs and expenses. You can also create project-specific prices for delivered services, create billing plans, and thereby plan the project revenue and margin.
Manage customer projects	You can manage customer projects for which you are the responsible project manager. You can search for projects, copy existing projects, and edit your projects to plan work packages, effort, resources, and billing, recalculate cost and revenue, and analyze financial key performance indicators (KPIs).
<p>i Note</p> <p>Staffing screens do not provide the possibility to distinguish and staff resources by their employment.</p>	
Monitor customer projects	You can monitor customer projects from the perspective of financial performance. Project managers can keep track of cost, revenue, and margin, compare planned and actual values, analyze variance between planned and actual values, and use the information to review the project plan, or initiate follow-up activities.
Review customer projects	<p>You can carry out monthly reviews of projects to measure progress and forecast project outcomes such as EAC and margin.</p> <p>You can improve the accuracy of costs at the completion of a project, with the ability to adjust estimate to complete (ETC) or deviations from planned quantities against roles and staffing. You can also simulate the effect of ETC changes on project EAC, PoC, and margin.</p> <p>You can manage statuses and trends, and view a historical record of statuses and trends across a project's lifecycle.</p>

Key Feature	Use
Fixed price billing	By creating a fixed price billing plan as part of your project, you can bill customers a predetermined amount for the services that you will provide to them.
Periodic billing processes	You can create billing plans at item level to trigger periodic billing (at predetermined due dates) of customers. You can also bill based on customers' usage behavior (usage-based billing).
Resource-related intercompany billing	Intercompany billing enables you to generate invoices between separate accounting units within a corporate group. This is necessary if one accounting unit within the group provides services for another unit, or if one unit needs to bill another unit for expenses to another unit (for example, travel costs). You can only use this process when the ordering company is in Germany and the delivering company is in the USA.
	You can create customer projects. You can check for intercompany sales orders in the list of sales orders. You can create and change intercompany sales orders. You can create and change debit memo requests. You can create billing documents from debit memo requests in the billing due list. You can process open customer invoices and monitor incoming payments. You can view key performance indicators (KPIs) for invoices and process invoices.
Time and material and WIP clearance bills	You can bill customers for the time, materials, and other expenses incurred by their projects.
On-account billing	You can bill customers for partial amounts of the final cost to be invoiced. The billed amount is recorded to the customer account as revenue.
Billing for projects	You can get an overview of all billing elements within the projects assigned, prepare the billing details and subsequently trigger billing processes.
Create internal projects	You can create and plan internal projects. You can plan several aspects such as high-level schedules, the type of project roles and people required to deliver the project, and plan costs and expenses.

Key Feature	Use
Manage internal projects	You can manage internal projects for which you are the responsible project manager. You can search for projects, copy existing projects, and edit your projects to plan work packages, effort, and resources, recalculate cost, and analyze financial key performance indicators (KPIs).
	<p>i Note</p> <p>Staffing screens do not provide the possibility to distinguish and staff resources by their employment.</p>
Monitor internal projects	You can monitor internal projects from the perspective of financial performance. Project managers can keep track of cost and margin, compare planned and actual values, analyze variance between planned and actual values, and use the information to review the project plan, or initiate follow-up activities.
Staff external employees	You can search for and staff third-party employees for whom master data (including cost center assignment) exists.
Distribute effort by months	You can adjust the distribution of planned effort between the months of the work package.
Authorize access to project apps	You can decide the project information for which a user has access to, by specifying service organizations in the business role.
Automatically adjust project dates while copying projects	When copying projects, you can specify the project's start date. The system automatically adjusts the project and work package dates based on the duration of the project you are copying.
Automatically adjust project dates	Project dates are automatically adjusted if work package start or end dates lead to the project start getting advanced or the project end getting postponed.
Plan revenue for expenses	You can plan revenue from expenses, and later on bill such expenses to clients during downstream processes.
Increased visibility of revenues as planned and revenues as sold	You can assess the impact of project planning on as-sold revenues, and also while making changes to project during execution.
Analyze project margins	Key stakeholders such as project managers or project controllers can benefit from broader coverage of project reporting, through generic reporting tools using CDS views and queries.

Key Feature	Use
Enhanced extensibility of projects	<p>Using tools for key user extensibility, designated key users can extend the usage of customer and internal project apps. For example, key users can add customized fields, rename labels, hide fields, and rearrange fields.</p> <p>Key users can also extend standard reporting and analytical content to suit individual or organizational needs, using the web-based query designer.</p>
Project plan versions	You can view the automatically-created baseline version, update the baseline version for selected work packages (if necessary), and view a comparison of plan figures in the baseline, the current plan, and EAC.
Integration with resource management	During the process of planning customer or internal projects, you can create resource requests for a resource manager to act on.
Set the forecast month	As a project manager or a key user, you can use an application job to set the forecast month for customer projects you are responsible for. This enables project managers to review and prepare project forecasts.

3.11 R&D / Engineering

3.11.1 Enterprise Portfolio and Project Management

3.11.1.1 Project Financial Control

Business Background

Managing projects, such as developing new products or running new investment projects, requires controlling-related financial aspects. With Project Financial Control, you can define projects and its underlying elements to serve as accounting structures for subsequent project financial accounting tasks such as cost planning, actual cost and revenue collection or settlement.

Key Features

The following features are available:

Key Feature	Use
Maintenance of template projects	You can define a project and its related elements for operative usage. This serves as a template for creating other operative projects. A project can contain individual elements that structure the project hierarchy, general organizational data, control profiles and default values.
Maintenance of operative project	You can create projects, or change and display existing projects and project parts. A project comprises of a header or definition, which serves as binding framework for all organizational elements created within a project. It can contain underlying elements, which describe either a certain task or a partial task that can be subdivided further. The structure tree displays the project object that you have selected in its hierarchical context. You can manually change the dependencies and assignments of individual project objects in the structure tree. Templates are available during processing to create new objects or structures in the current project by adding new project objects or copying project structures. For quicker access, you can store frequently used project data (project and project elements) in the worklist.
Generating project settlement rules	Costs are often collected in project, however, only temporarily. They are settled to one or more receivers as part of period-end processing. A settlement rule is essential for each object you want to settle. The settlement rule contains the receiver, the apportionment rule, and other settlement parameters. You can change the profile settings in the settlement rule parameters for an object.
Reporting of project costs and budgets and display of actual project cost line items	You can monitor the planned and actual costs as well as budgets for a project and use this for reporting purposes. You can use the actual line item report for projects to obtain flexible analyses of individual actual cost postings per various criteria. You can also view the real time costs of assigned orders. A number of functions support you in analyzing line items in reporting. These include sorting, filtering, or totaling.

Key Feature	Use
Monitoring project related procurements	Using project control analytics you can monitor purchase requisitions, purchase orders, and account assigned to projects or project elements.
Using the approval process and monitoring project release	You can use the workflows for releasing a project. The workflow allows you to use one-step or multi-step approval process. From the overview of projects they are responsible for, the approvers can either approve or reject them, and add comments, if required. Based on the workflow configuration approvers can also send back the work items to requestors for rework. You will be notified if your project release has been rejected or sent back to you for rework. In case of rework, you can read the comments from the approver, make the required changes and resubmit. You can monitor the status of the project and also see who is responsible for an approval step.
Archiving objects	You can archive objects that have reached the end of the retention period.

3.11.1.2 Project Logistics Control

Business Background

With Project Logistics Control, you can define, trigger and monitor demands that are related to a project or a WBS element. It complements the planning of project activities by enabling the planning and assignment of human resources as well as the planning and triggering of service and material procurement for projects and WBS elements. This prevents business disruptions and improves all the logistics-related execution aspects of a project.

Key Features

The following table explains the key features available:

Key Feature	Use
Managing material and service demands	You can create material and service demands and trigger and monitor the procurement of the requested materials and services for your project or WBS element.

Key Feature	Use
Managing resource demands	You can create resource demands related to a project or WBS element, assign human resources to the demands, and monitor the actual efforts recorded during project execution.

3.11.1.3 Project Management

Business Background

Project Management enables you to monitor your internal projects, for example R&D projects, and to steer them through your company's organization. You are supported to keep all involved stakeholders in the loop about your ongoing projects, for example during the regular steering committee meetings.

Key Features

The following table explains the key features available:

Key Feature	Use
Displaying overview of projects	<p>As a project manager or as a member of project steering committees, you can get an overview of the most important details of your projects, for example:</p> <ul style="list-style-type: none"> • Upcoming milestones • Cost information • Status information
Displaying and updating projects	<p>You can display or update summarized project information that is essential for project review in steering committee meetings, such as the following:</p> <ul style="list-style-type: none"> • Milestones • Cost information • Status information • Team members • Related documents
Project collaboration	SAP S/4HANA Cloud supports the integration with a collaboration tool (currently SAP S/4HANA Cloud for projects, project collaboration) to enable users to initiate the creation of a project-related collaboration in the collaboration tool and to access the project-related collaboration from SAP S/4HANA Cloud.

3.11.2 Product Lifecycle Management

3.11.2.1 Integrated Product Development for Discrete Industries

3.11.2.1.1 Bills of Material

Business Background

A bill of material (BOM) is a formally structured list of the components that make up a product or assembly. The list contains the object number of each component, together with the quantity and unit of measure. The components are known as BOM items. BOMs are used in various situations where a finished product is assembled from several component parts or materials. They contain important basic data for numerous areas of a company.

Key Features

The following features are available:

Key Feature	Use
Manage bills of material	<ul style="list-style-type: none">You can create a complete, formally structured list of components that make up a product or an assembly. You can create versions of a BOM and also maintain BOMs for configurable materials. You can create and maintain manufacturing structures (manufacturing bill of materials (MBOMs)) from an engineering structure (engineering BOM (EBOM)).You can display and maintain the hierarchical tree structure of a multilevel BOM.You can integrate with SAP S/4HANA Cloud for intelligent product design through model object assignments to a BOM.
Find where materials are used in BOMs	You can search for a BOM header using a component that can be filtered for a plant, BOM usage, alternative BOM, etc. and view the where-used details of a material and replace a material with another material.
Order bill of material	You can create and maintain sales order-specific bills of material to meet your requirements.

For the enhanced cloud-based bills of material capabilities, see [Bills of Material \[page 257\]](#).

3.11.2.1.2 Classification

Business Background

The classification system allows you to use characteristics to describe various types of objects, and to group similar objects in classes – to classify objects, in other words, so that you can find them more easily later. You then use the classes to help you to find objects more easily, using the characteristics defined in them as search criteria. This ensures that you can find objects with similar or identical characteristics as quickly as possible.

Classes allow you to group objects together according to criteria that you define.

- You create classes for certain object types such as, for example, material.
- You use the class type to determine which object types can be classified in a class.
- You can assign characteristics to your class. These describe the objects that you classify in your class. When you assign a characteristic to a class, you can adapt (overwrite) the characteristic.

Key Features

The following features are available:

Key Feature	Use
Classification handling	You can define classes and their characteristics including characteristic values and organize classes into class hierarchies if the class type allows it.
Finding objects	Once you have set up a classification system in your company, you can search for the objects you have classified. You can also identify where a given characteristic and characteristic value is used.

3.11.2.1.3 Document Management

Business Background

Document Management (DMS) allows you to store, manage, and use documents during creating and maintaining digital product information company-wide and throughout the life cycle of a product.

The following examples show some of the uses of document management in different areas of a company.

- In the design office, document management can be used to manage drawings. All design drawings can be linked to material masters.
- Companies that process complex documents can use document structures to organize these documents. All documents and texts that are logically connected can be grouped together in one document structure.
- A routing contains the sequence of operations for manufacturing a product. Documents can be allocated to the operations in a routing. These documents may be used, for example, to describe the specifications of a product, or to store inspection requirements.

- Documents can be linked to projects. You can use the document hierarchy to represent individual product folders that are given to the product administrators responsible.

Key Features

The following features are available:

Key Feature	Use
Document handling	To store and manage a document, you create a document info record that contains all of the data required to process and manage a document including the original document itself.
CMIS Enablement from DMS	<ul style="list-style-type: none"> • The adoption of Document Management to CMIS standards enables seamless information flow between content repositories and easy adoption of the solution. • As a part of the new solution, files, document info records (DIRs), and business object links are stored as CMIS documents, CMIS folders, and CMIS items respectively in the content repositories. Since repositories store more business semantics now, they can be queried to accommodate the daily business and forecasts.

3.11.2.1.4 Engineering Change Management

Business Background

Engineering change management capabilities can be used to track the changes made to various aspects of production basic data (for example, bills of material, materials, and routings). Change implementation can be controlled by either date effectivity or parameter effectivity (based on specific conditions).

For enhanced engineering change management capabilities including support for managed change processes, see [Engineering Change Management \[page 258\]](#).

Key Features

The following table explains the key features available:

Key Feature	Use
Change master record handling	You can define change master records. Change master records contain descriptive data, such as the reason for the change, and data with control functions, such as valid-from date and indicators for object types. In addition to this data, which you can maintain directly, there is data that the system updates automatically, such as administrative data.
Revision level assignment	You can identify material changes that are made with reference to a change number by using revision levels. A revision level can be assigned on a valid-from date when an object is changed with reference to a change number.

3.11.2.1.5 Embedded Systems Management

Business Background

Embedded software is computer software that is embedded in one or multiple products. It provides functions together with various hardware and systems. For example, embedded software can be used to control or optimize the functions of the mechanical part or the electrical part of a product.

If you work with products that have one or multiple pieces of embedded software, you can use embedded software management to view and manage your software.

Key Features

The following table explains the key features available:

Key Feature	Use
Embedded Software Management	You can use a specific material type to define software. You can also use a specific document type to define software versions.

3.11.2.1.6 Product Structure Management

i Note

The below mentioned feature for Product Structure Management are only available for customers who have licensed these features before SAP S/4HANA Cloud 1908 including maintenance for these features. For further information, please contact your SAP Account Executive.

Business Background

Product structure management can be used in early development phases. Product structures consist of a set of hierarchically ordered objects with the purpose of documenting one product or a set of similar products. They use abstract representations of products and components.

Key Features

The following table explains the key features available:

Key Feature	Use
Manage product structure	You can create new product structures and maintain them (product families, product items, product views, and software items). You can also view the product structures in a customizable table.

3.12 Sales

3.12.1 Order and Contract Management

3.12.1.1 Sales Master Data Management

Business Background

You can use sales master data management to improve sales processing efficiency and to assist in the fulfillment of customized basic functions.

Master data in Sales represents common, basic business data that can be directly reused across sales activities and for basic functions. It's centrally maintained and remains relatively static in the system.

Key Features

The following table explains the key features available:

Key Feature	Use
Customer materials definition	You use this feature when your customer manages a product (that is, a material) using a number that differs from the number that your company uses.
Material determination	You can maintain material (that is, product) determination records to help enable the automated replacement of a product number entered in sales documents with a target product number.
Listing and exclusion	You can maintain material (that is, product) listing records and exclusion records, which specify which products customers can or can't buy.
Item proposal	You can maintain frequently used combinations of products (that is, materials) and order quantities as item proposals. During sales order processing, the system can propose product and quantity information from the maintained records.
Text control	You can maintain texts in master records (for customers, products, and customer materials) and sales and distribution (SD) documents. Based on predefined text determination rules, texts can be automatically copied from master records or preceding documents to target documents during sales processing.
Partner control	You can maintain partner relationships in customer master records and SD documents. Based on predefined partner determination rules, partners can be automatically copied from customer master records or preceding documents to target documents during sales processing.

3.12.1.2 Price Management

Business Background

You can use price management to improve sales processes with accurate, structured, and accessible master data.

Key Features

The following table explains the key features available:

Key Feature	Use
Price master data	You use this feature to define price master data.
Configuration of pricing	You use this feature to set up the pricing process in business documents. This includes how price master data is determined and how net values are calculated.
Pricing process in business documents	You use this feature to calculate and adapt accurate prices based on the price master data and the configuration of pricing. This feature is available for all price-relevant business documents of the sales process.

3.12.1.3 Sales Quotation Management

Business Background

You can create sales quotations for your customers.

Key Features

The following table explains the key features available:

Key Feature	Use
Inquiry processing	You can use this feature to enable your customer to request a quotation or sales information without obligation. An inquiry can relate to product (that is, materials) or services, conditions, and if necessary, delivery dates. The sales area that accepts the inquiry becomes responsible for providing a quote.
Sales quotation processing	<p>The process starts when a request for quotation (RFQ) is received from your customer. In response to the customer's RFQ, a sales quotation is created. The customer can then either accept the sales quotation or reject it. This enables you to assure your business partners that you will deliver a product quantity at a specified time and price. If accepted, the sales quotation is transferred into a sales order.</p> <p>You can analyze how the sales quotations that you are responsible for are being referenced. You can focus on sales quotations with the highest net values and sales quotations with the lowest conversion rates. You can drill down to sales quotation conversion rates by selected criteria.</p>

Key Feature	Use
Sales quotation approval processing	You can set up approval processes for sales quotations. This helps you ensure that sales quotations in the approval process are rejected, reworked, or approved, as needed.

3.12.1.4 Sales Contract Management

Business Background

You can help your sales representatives negotiate sales contracts and sales scheduling agreements.

Key Features

The following table explains the key features available:

Key Feature	Use
Contract processing	You use this feature to create, change, display, and list contracts. You can list incomplete contracts, completed contracts, expiring contracts, and expired contracts.
Contract fulfillment rate tracking	You can analyze how the sales contracts that you're responsible for are being fulfilled. You can focus on contracts with the highest target value. You can drill down to sales contract fulfillment rates by selected criteria.
Contract release order processing	You use this feature to enable your customer to request from a vendor part of the total quantity or value of goods or services agreed in a contract. The release order contains information on quantities and delivery dates.
Sales contract processing with customer down payment	You use this feature when customers are required to pay some amount in advance before goods delivery. You can specify the agreed down payments in the billing plans of sales contract items and then you can create down payment requests. You can create contract release orders that the system blocks from delivery until customers complete all down payments. When customers complete all agreed down payments, the system removes the delivery blocks. You can also record the receipt of the down payment, and create invoices deducting the down payment received.
Sales scheduling agreement processing	You use this feature to create, change, display, and list sales scheduling agreements. The sales scheduling agreement is an outline agreement between buyers and suppliers.

Key Feature	Use
Delivery schedule of sales scheduling agreement processing	You use this feature to enable your customer to release quantities of goods outlined in a sales scheduling agreement at regular intervals. The delivery schedule contains information on quantities and delivery dates.
Consignment processing for sales scheduling agreements	You use this feature to enable a consignee (that is, an external service agent or a customer) to manage a stock of products (that is, materials) at the customer site (that is, the purchaser site). You as a supplier retain ownership of the products until they are withdrawn from the consignment stores. Payment for consignment stock is required only when the product is withdrawn for use. For this reason, you are informed of withdrawals of consignment stock on a regular basis.

3.12.1.5 Sales Order Management and Processing

Business Background

You can execute business transactions based on sales documents defined in the system.

Key Features

The following features are available:

Key Feature	Use
Sell from stock	You use this feature to enable your internal sales representatives to enter a sales order based on customer requirements. When your internal sales representative creates sales orders, the system proposes products and quantities. When your internal sales representative creates or changes sales orders, the system confirms dates and quantities. Your internal sales representative can display and change the sales order to respond to customer questions. Your shipping specialist creates the delivery for the sales order and prints the picking list. Your internal sales representative can check the status of sales orders and resolve issues that stop sales orders from being fulfilled. The shipping specialist can view delivery details such as the picked delivery parts, the weight and volume of the delivery, the picking status, and so on. Your billing clerk creates an invoice for the delivery from the billing due list. The billing clerk displays the billing document in a list, checks the status of the billing document, posts the billing document, and sends output to the customer. The system transfers the billing document to the accounts receivable accountant. The accounts receivable accountant is then responsible for receiving payment for the billing document.
Sales order processing with customer down payment	You use this feature when customers are required to pay some amount in advance before delivery of goods (for example, in make-to-order production). You can create requests for down payment, record the receipt of the down payment, and create a final invoice after the deduction of the down payment received. You can also create a receipt of the final amount due on the invoice.
Credit management	You use this feature to set credit limits for your customers. The system checks the credit limit when you create or change sales documents. If you change quantities or values in a document, the check is repeated. The system totals the receivables, the open items, and the credit value of the sales order for every item of a sales document. The system displays information about what caused blocks. When your credit department manually reviews the customer's current credit situation and when the sales order is approved, the system removes the block from the sales order.
Consignment processing	You use this feature to enable a vendor (that is, an external supplier) to manage a stock of products at the customer site (that is, the purchaser site). The vendor retains ownership of the products until they are withdrawn from the consignment stores. Payment for consignment stock is required only when the product is withdrawn for use. For this reason, the vendor is informed of withdrawals of consignment stock on a regular basis.
Make-to-order sales processing	You use this feature for production in which products are made upon receipt of an order from a customer.

Key Feature	Use
Free-of-charge delivery processing	You use this feature to provide goods to a customer at no charge. A sales order type is created that is not billing relevant. The order is confirmed based on the availability of goods. A delivery is then created and the goods are subsequently picked, confirmed, and delivered to your customer.
Third-party order processing	You use this feature when another company, rather than your company, delivers the items requested by your customer. You can either create your invoice based on the invoice from your third-party supplier or you can book the delivered amount directly as a statistical goods receipt.
Returnable package processing	You use this feature to return reusable packaging back into inventory (for example, standard pallets belonging to the manufacturer). You can monitor the shipment of standard pallets and their returns.
Listing and exclusion	You use this feature to control the sale of specific products to a customer. Your customer can only buy products included in the product listing assigned to them. The system does not allow you to enter products that are not included in the product listing in a sales document for a customer.
Customer material info records	You use this feature when your customer manages a material (that is, a product) with a number that differs from the one your company uses.
Processing sales documents with customer expected prices	<p>You use this feature to display sales document items which are locked due to discrepancies between the customer-expected price and the net price.</p> <p>You can resolve discrepancies and release items for further document processing by either accepting or declining the customer-expected price. You can also reject sales document items.</p>
Listing sales documents by object status	You can search for sales documents and sales document items and display them in a list.
Mass change of sales documents	You can make changes to multiple categories of sales documents at the same time (for example, sales orders and sales contracts).
Sales order approval processing	You can set up approval processes for sales orders. This helps you ensure that sales orders in the approval process are rejected, reworked, or approved, as needed.
Intercompany business processing	You use this feature to process business transactions that take place between two affiliated companies (company codes that may or may not be based in different countries/regions) belonging to the same corporate group.

Related Information

[Sales Quotation Management \[page 119\]](#)

[Logistics Execution \[page 181\]](#)

3.12.1.6 Solution Order Management

Business Background

Solution Order Management allows you to manage end-to-end processes that span from creating a solution order to delivering products of different categories, such as physical goods, one-time services, and long-running services. This includes the integration with billing, invoicing, and controlling.

During the end-to-end process, the solution order orchestration handles the forward and backward data exchange for specific information between the solution order and its follow-up transactions. In addition, you can use the *Solution Order Progress* to monitor the process.

You can also create solution orders and communicate with external systems using the corresponding APIs.

Key Features

The following table explains the key features available:

Key Feature	Use
Solution orders	<p>The solution order is the main business transaction in Solution Order Management. You can add various types of items for different products, such as physical goods, one-time services, and long-running services.</p> <p>The supported item types are sales items, service items, service part items, expense items, service contract items, project items, and subscription items. For these item types, specific processes are supported.</p> <p>From the solution order items, the corresponding follow-up transactions are created, such as sales orders, service orders, service contracts, and subscriptions. The creation of the follow-up transactions is controlled by the solution order orchestration.</p>
Solution order orchestration	<p>Solution order orchestration represents the creation of follow-up transactions from the solution order items, for example a service order from a service item.</p> <p>Orchestration also includes the forward and backward data exchange during the end-to-end process. For example, the items in the solution order are updated with billing information from the follow-up transactions.</p>
Solution order progress	<p>The solution order progress provides an overview of the end-to-end process, in which any issues are highlighted. This allows you to identify the business objects that may require your attention.</p>

3.12.1.7 Sales Billing

Business Background

You can create and manage billing documents, post them to financial accounting, and output them to a variety of channels. You can also create and manage billing-related documents such as invoice lists, preliminary billing documents, and billing document requests.

Key Features

The following table explains the key features available:

Key Feature	Use
Debit memo processing	You use this feature to apply a debit to a customer account, either by creating a debit memo request, or directly by creating a debit memo with reference to a billing document. A debit memo request (that is, an invoice increase request) is then created with the amount to be debited. The debit memo is sent to the customer and posted to accounting.
Credit memo processing	You can use this feature to apply a credit to a customer account, either by creating a credit memo request, or directly by creating a credit memo with reference to a billing document. The credit memo is sent to the customer and posted to accounting.
Billing document processing	<p>You can create billing documents (for example, invoices for customers) from items in the billing due list (for example, debit memo requests and outbound deliveries). When you post billing documents, the system forwards billing documents to accounting and triggers output (for example, an invoice by e-mail).</p> <p>You can change or cancel billing documents as needed. You can setup billing batch execution by scheduling billing creation and scheduling billing output. You can also schedule billing documents for release to accounting. You can manage documents blocked for billing.</p>

Key Feature	Use
Preliminary billing document processing	<p>You can create preliminary billing documents from items in the billing due list.</p> <p>You can view a filtered list of all preliminary billing documents in the system.</p> <p>You can display preliminary billing documents in detail or view a concise summary.</p> <p>You can change attributes of preliminary billing documents (such as prices, texts, and the billing date). You can also add and remove attachments.</p> <p>You can preview preliminary billing document output and send the output. You can create billing documents based on preliminary billing documents.</p> <p>You can schedule the creation of preliminary billing documents. You can also schedule the creation of billing documents with reference to preliminary billing documents.</p>
Approval processing for preliminary billing documents	<p>You can set up approval processes for preliminary billing documents. This helps you ensure that preliminary billing documents in the approval process are rejected, reworked, or approved, as needed.</p>
Invoice correction processing	<p>You use this feature to create an invoice correction request if the wrong quantities or prices have been calculated for the customer. The invoice correction request can be automatically blocked by the system until it has been checked.</p> <p>The system calculates the difference between the amount that was originally calculated and the corrected amount for each item. Once it has been approved, you can remove the block. The system creates a credit or debit memo with reference to the invoice correction request. The credit or debit memo is sent to the customer and posted to accounting.</p>
Invoice list processing	<p>You use this feature to create, at specified time intervals or on specific dates, a list of billing documents (invoices, credit and debit memos) to send to a particular payer (usually the head office of a corporate group).</p> <p>The billing documents in the invoice list can be single or collective documents (collective invoices combine items from more than one delivery).</p> <p>There are two types of invoice lists, one for invoices and debit memos and one for credit memos. If you wish, you can process invoices, debit memos, and credit memos at the same time. The system automatically creates a separate invoice list for credit memos.</p>

3.12.1.8 Solution Billing

Business Background

You can use solution billing to combine billing data from sold products, services, and projects into a single, combined customer invoice.

Key Features

The following table explains the key features available:

Key Feature	Use
Omnichannel convergent billing	<p>You can use convergent billing to converge billing data from different categories of billing due list items (such as sales orders, outbound deliveries, and debit memo requests) to create combined, single invoices for customers.</p> <p>You can use omnichannel convergent billing to converge billing data from your SAP S/4HANA Cloud system with billing data from one or more external sources. The external billing data is persisted in your system in the form of external billing document requests (EBDRs). You can create EBDRs automatically by integrating external systems that send billing data, or you can create them manually by uploading billing data stored in spreadsheet files.</p> <p>EBDRs are added to the billing due list, from where they can be converged with your other billing due list items to create combined, single invoices for customers. Stand-alone billing of EBDRs is also possible.</p>

3.12.1.9 Sales Rebate Management

Business Background

You can use *Settlement Management* for your sales rebate management.

Related Information

[Settlement Management \[page 65\]](#)

3.12.1.10 Incentive and Commission Management

Business Background

You can use *Settlement Management* for your incentive and commission management.

Related Information

[Settlement Management \[page 65\]](#)

3.12.1.11 Claims, Returns, and Refund Management

Business Background

You can help your returns and refund clerk create customer returns.

Key Features

The following table explains the key features available:

Key Feature	Use
Returns management processing	You use this feature for processing customer returns. The process starts a returns order with reference to the original sales order or invoice for the goods. A return material authorization (RMA) document is forwarded to the customer (for example, an e-mailed PDF) to be attached to the incoming goods. The goods are shipped back, a returns delivery is created with reference to the returns order, and the product is received into returns stock. The returns stock location is set as non-MRP relevant. The goods are inspected and either selected for return to stock, for scrapping, or for other logistical processing. A credit memo is created from the billing run and posted to the customer's account or a replacement delivery is triggered to compensate the customer.
Customer return approval processing	You can set up approval processes for customer returns. This helps you ensure that customer returns in the approval process are rejected, reworked, or approved, as needed.
Credit memo request approval processing	You can set up approval processes for credit memo requests. This helps you ensure that credit memo requests in the approval process are rejected, reworked, or approved, as needed.

3.12.1.12 Sales Monitoring and Analytics

Business Background

You can efficiently check the status of your sales orders.

Key Features

The following features are available:

Key Feature	Use
Managing sales plans	You can create, change, release, and display sales plans. In a sales plan, you set sales targets on various dimensions for a planned period.
Comparing planned and actual sales data	You can analyze to what extent your sales targets are being achieved and thus gain insights into your current sales performance.
Analyzing sales quotations	You can analyze your sales quotations according to flexible combinations of dimensions.
Analyzing quotation conversion rates	<p>You can analyze how the quotations that you are responsible for are being referenced. You can focus on quotations with the highest net values and quotations with the lowest conversion rates. You can drill down to quotation conversion rates by selected criteria.</p> <p>You can perform modeling-based predictions on quotation conversion according to selected criteria. By comparing the actual and predicted results, you can predict to what extent your quotations could be converted into sales orders.</p>
Analyzing incoming sales orders	You can view sales order KPIs in a monthly rolling trend as a graphic or in a table with the display currency. You can drill down to view detailed information for selected sales organizations, products (that is, materials), material groups (that is, product groups), sold-to parties, sales document types and so on. You can filter the items according to various criteria, such as year, month, sales organization, product group, and sold-to party.
Listing incomplete sales documents	You can search for incomplete sales documents and display them in a list. You can display the number of issues with incomplete data.
Analyzing sales scheduling agreements	You can monitor product demand based on sales scheduling agreements.
Managing duplicate sales documents	You can search for duplicate sales documents (for example, sales orders, quotations, and returns) and reject the ones not required.
Monitoring sales order fulfillment	You can monitor and resolve issues that stop sales orders from being fulfilled, for example, a delivery or billing block. You can display your weekly workload with all overdue issues and all issues due in the next 7 days. You can display and resolve issues with incomplete data, credit blocks, delivery blocks, and billing blocks. You can display the number of issues with incomplete data and credit blocks, and the top 3 reasons for delivery blocks and billing blocks. You can use compact filters, visual filters, and charts to visualize your results, and a table from which you can navigate to resolve the issues.
Predicting delivery delay	You can identify the risk of a potential delay for open sales orders regarding the predicted delay of the planned delivery to the customer. This enables you to take action early on, to avoid a possible delay.

Key Feature	Use
Tracking sales orders	You can check whether the delivery of a sales order is on track regarding its fulfillment. For example, you can see whether it has been shipped, invoiced, or even if a journal entry (that is, an accounting document) has been cleared. You can recognize immediately whether the fulfillment of a sales order contains issues or not, or whether it is completed or still in process. You can visualize the sales order fulfillment status, and display all relevant documents for the corresponding sales document. You can display further details on the business objects in the context of their fulfillment, including issues and the process flow, and resolve issues directly from here, for example, remove a delivery block.
Analyzing pricing elements	You can analyze pricing elements, that is, condition types, in billing documents (for example, to check current discount conditions and pricing strategies).
Checking confirmed sales orders, backorders, and demand fulfillment	<p>You can check whether your sales orders have been confirmed for delivery on the date requested by your customer. You can identify backlogs in relation to your customer's requested quantity and delivery date.</p> <p>You can collaborate with your demand planner, for example, to solve issues regarding the availability of specific products.</p>
Monitoring delivery performance	You can monitor the current delivery performance of sales orders. You can see the percentage of sales order items delivered as requested for the last 3 weeks. You can compare the customer's requested delivery date or the committed delivery date of sales order items with the actual delivery date of the corresponding outbound deliveries. You can display this comparison, for example, as the ratio of sales order items delivered as requested or delivered as committed to the total number of sales order items.
Analyzing sales volume	You can view sales volume and related billing document KPIs in a monthly rolling trend as a graphic or in a table with the display currency. You can drill down to view detailed information for selected sales organizations, sold-to parties, bill-to parties, and so on. You can filter the items according to various criteria, such as year/month, sales organization, sold-to party, and bill-to party.
Analyzing sales volume in detail	You can customize a step-by-step analysis path that drills down into your sales volume on different dimensions.
Predicting sales volume	You can perform modeling-based predictions on sales volume according to selected criteria. This helps you predict to what extent sales volume can be achieved.
Checking sales volume and open sales	You can check your sales volume and open sales, that is, open orders, and open deliveries, in order to identify and resolve issues to increase your sales volume for the current month. You can navigate to analyze and resolve issues directly.
Checking sales volume, profit margin, and credit memos	You can check the relationship between sales volume, profit margin, and credit memos, to help you to increase your sales volume.
Analyzing your solution order profitability key figures	You can analyze your solution orders based on various key figures (for example, recognized revenue, recognized cost, recognized margin, and margin in percent).

Key Feature	Use
Analyzing your order to cash key figures	You can analyze your sales volume, profit margin, and incoming orders (that is, incoming sales and service orders), and further key figures.
Analyzing customer returns	You can analyze the monthly rolling trend of your customer returns based on flexible combinations of dimensions. You can analyze the return rate of your incoming sales orders.
Display an overview of sales data	
Displaying a sales management overview	You can get a graphical overview of various sales data as a sales manager.

3.12.1.13 Integration

3.12.1.13.1 Sales Order Collaboration (Direct Integration)

Business Background

In sales order processing, you can collaborate with your buyer that uses a direct integration of SAP S/4HANA Cloud with an external buyer system. You can do this by exchanging messages between SAP S/4HANA Cloud and the external buyer system.

Key Features

When an external buyer system is integrated and supports the below named features, SAP S/4HANA Cloud enables you to use the following key features:

Key Feature	Use
Creating, updating, and canceling sales orders	You can receive messages from your buyer that uses the external buyer system. In this case, SAP S/4HANA Cloud creates, changes, or cancels sales orders.

Key Feature	Use
Creating, updating, and canceling customer returns	You can receive messages from your buyer that uses the external buyer system. In this case, SAP S/4HANA Cloud creates, changes, or cancels customer returns.
Sending confirmations	You can send confirmations for sales orders and customer returns to your buyer's external buyer system.
Sending advanced shipping notifications	You can send advanced shipping notifications to your buyer's external buyer system.
Sending customer invoices	You can send invoices to your buyer's external buyer system.
Sending credit memos	You can send credit memos to your buyer's external buyer system.

3.12.1.13.2 Sales Order Collaboration (Business Network Integration)

Business Background

SAP S/4HANA Cloud supports the integration with a business network or external system (for example, Ariba Network) to help automate the order-to-invoice process. You can do this by exchanging messages between SAP S/4HANA Cloud and the business network or external system.

Key Features

When a business network or external system (for example, Ariba Network) is integrated and supports the below named features, SAP S/4HANA Cloud enables you to use the following key features:

Key Feature	Use
Creating, updating, and canceling sales orders	You can receive messages from your buyers that use the business network or external system. In this case, SAP S/4HANA Cloud creates, changes, or cancels sales orders.
Sending confirmations	You can send sales order confirmations to your buyers that use the business network or external system.
Sending advanced shipping notifications	You can send advanced shipping notifications to your buyers that use the business network or external system.

Key Feature	Use
Sending customer invoices	You can send customer invoices to your buyers that use the business network or external system.

3.12.1.13.3 Sales Scheduling Agreement Collaboration

Business Background

In sales scheduling agreement processing, you can collaborate with your buyer that uses a direct integration of SAP S/4HANA Cloud with an external buyer system. You can do this by exchanging messages between SAP S/4HANA Cloud and the external buyer system.

Key Features

When an external buyer system is integrated and supports the below named features, SAP S/4HANA Cloud enables you to use the following key features:

Key Feature	Use
Creating and updating delivery schedules	You can receive messages from your buyer that uses the external buyer system. In this case, SAP S/4HANA Cloud creates or changes delivery schedules of sales scheduling agreements.
Sending advanced shipping notifications	You can send advanced shipping notifications to your buyer's external buyer system.
Sending customer invoices	You can send invoices to your buyer's external buyer system.

3.12.1.13.4 Self-Billing Collaboration

Business Background

SAP S/4HANA Cloud supports the integration with a billing solution (currently, SAP Self-Billing Cockpit) to help streamline and automate billing processes for suppliers.

Key Features

When a billing solution (currently, SAP Self-Billing Cockpit) is integrated and supports the below named features, SAP S/4HANA Cloud enables you as a supplier to manage billing-related documents in the self-billing process.

Key Feature	Use
Processing billing documents	You can manage billing documents based on self-billing documents that are processed in the billing solution. You can update invoices, create credit memos, and create debit memos.
Processing accounting documents	You can manage accounting documents based on self-billing documents that are processed in the billing solution. For example, you can update journal entries.

3.13 Service

You can manage your service cycle, starting with service contracts and continuing through the processing of service orders and service confirmations. You can use service analytics to adjust and optimize your business processes, and to identify objects that require your attention.

3.13.1 Service Master Data and Agreement Management

3.13.1.1 Service Contract Management

Business Background

Service contracts are outline agreements with business partners that define the services offered for a particular period. A service contract usually represents a long-term service agreement with customers. It defines the content and scope of services guaranteed within specific tolerance limits for certain parameters, for example, within predefined time frames.

You can work with service contracts that are made available by using corresponding application programming interfaces (APIs). You can also create service contracts and process them by using the corresponding app. You can set billing plans, adapt prices, and trigger the billing process for service contract items. You can extend the validity of a service contract item by enabling auto renewal or triggering manual renewal. You can cancel service contracts and service contract items.

Key Features

The following table explains the key features available:

Key Feature	Use
Scheduling of billing document request creation	You can schedule a job for the automatic creation of billing document requests (BDRs) based on the billing plan of a released service contract item.
Periodic billing plans	You can use periodic billing plans to schedule individual dates for the billing of service contracts, independent of the provisioning of the service. Periodic billing plans have a start and end date. They bill fixed (predetermined) amounts at regular intervals, for example, a recurring quarterly maintenance fee in a maintenance contract.
Ad-hoc billing plans	You can use ad-hoc billing plans to flexibly define the dates on which billing is to occur and the value that is to be billed.
Auto renewal	You can enable auto renewal for a service contract item to extend the validity of the item automatically at the end of the contract.
Price adaptation	You can use the following methods to adapt prices if you require flexible pricing of service contract items: you can set a pricing date rule in the billing plan so that varying prices are determined according to varying pricing dates. Alternatively, you can set prices manually at billing request line level.
Price agreements	You can offer your customers individual prices, for example discounts for services and service parts, based on price agreements in service contracts. Prices from the price agreements are applied to the service transactions that are assigned to service contracts after service contract determination.
Service contract determination	The system automatically searches for and displays service contract items that service transactions such as service quotations and service orders can be assigned to.
Change processes	You can use change processes to make changes to existing service contracts, such as extending the validity period of service contract items (manual renewal) and changing the sold-to party of an active service contract.
Object list	You can enter objects (such as products, equipment, or functional locations) in the object list for which the contractual services defined in the service contract item can be claimed.
Product list	You can enter services and service parts in the product list of a service contract item. These services and service parts are included in the service product that is defined in the contract item and can be claimed in the course of subsequent service order processing with reference to a service contract.

Key Feature	Use
Service level agreement (SLA)	You can define the attributes of service products (for example, maintenance or hotline) that you have agreed upon with your customers in service contracts. SLAs affect the pricing of services rendered for service contract items and the date calculation in service orders, to which the relevant service contract items refer.
Maintenance plan	You can use service contract items for planned recurring services that are implemented by maintenance plans.
Configurable product	You can add and configure a configurable product as a service contract item. You can select the characteristics and characteristic values that are defined in the product master data. In addition, you can see the impact of the selected characteristics and characteristic values based on the defined variant conditions on the price. This data is displayed in the pricing details of the service contract header and item.
Credit management	If you use Credit Management, credit checks can be automatically triggered for business partners (payers) when a service contract is saved in the released status.
Service contract template	You can create and manage service contract templates containing service contract data that is commonly reused in your service business. You can then create service contracts as follow-up transactions of a service contract template. This helps minimize the amount of time required to create a service contract.

3.13.1.2 Service Monitoring and Analytics

Business Background

You can use analytics to address problems that may occur during the fulfillment of service transactions. Charts provide a clear overview of errors, execution, and confirmation issues as well as billing issues in service contracts, service orders, and service confirmations.

You can also use analytics to obtain information on a range of key performance indicators for service contracts and service orders.

Key Features

The following table explains the key features available:

Key Feature	Use
Service contract issues	You can display and monitor a range of issues that may impede the fulfillment of service contracts in real time.
Service order issues	You can display and monitor a range of issues that may impede the fulfillment of service orders in real time.
Service management overview	You can display overview information about expiring service contracts and the profit margins of service contracts. Additionally, you can display overview information on incomplete service orders, overdue service orders, and the average service duration for service orders.
Service contracts analysis	You can obtain information on key performance indicators for service contracts.
Expiring service contracts analysis	You can obtain information on service contracts that have expired or are about to expire.
Flexible analysis of service contracts	You can analyze service contracts including their billing information using a flexible combination of dimensions.
Service orders analysis	You can obtain information on incomplete service orders.
Overdue service orders analysis	You can obtain information on overdue service orders.
Flexible analysis of service orders	You can analyze contract-based and non-contract service orders using a flexible combination of dimensions.

3.13.2 Service Operations and Processes

3.13.2.1 Service Order Management

Business Background

The service solution supports a variety of functions for creating and processing service quotations, service order templates, service orders, and service confirmations.

Service quotations provide a cost estimate to customers for requested services.

Service order templates are used to define reusable sets of service-related data that minimize the amount of time required to create a service order.

Service orders are short-term agreements between service providers and service recipients. They contain the relevant information for specific service processes.

Service confirmations are used to confirm service orders.

You can manually create and edit service quotations, service order templates, service orders, and service confirmations. You can also process service quotations, service order templates, service orders, and service confirmations that are derived from external systems through the use of the corresponding APIs.

Key Features

The following table explains the key features available:

Key Feature	Use
Service quotation types	You can create and edit two types of service quotations: standard service quotations and fixed price service quotations.
Service quotation processing	You can send service quotations to customers through an output channel. Customers can accept or reject service quotations or partially accept the service quotation by rejecting one or more of the quotation items.
Service order templates	You can create and use templates for service orders that occur frequently in your service business. A service order template describes only the scope of planned services and not the actual execution.
Service order types	You can create and edit two types of service orders: Service orders that contain items where your customer is billed for the time and materials consumed and/or items where you have agreed on a fixed price Fixed price service orders where you have agreed on a fixed price with your customer
Service order template types	You can use service order templates and fixed price service order templates. Both types of service order template can contain various types of items such as service products, expenses, and service parts.
Service contract determination	The system automatically searches for and displays service contract items that you can assign to standard service orders and service quotations.
Service bundles	You can offer customers service products, service parts, and expense items as "bundles". Service bundles consist of a main item and one or more subitems. You can use two types of service bundles where either the main item or the sub-items are pricing and billing relevant.

Key Feature	Use
Service order processing	You can add various item types to service orders and cancel them. You can release billing-relevant service order items that have been completed for billing.
Service confirmation types	You can create and edit service confirmations for the two types of service orders. Alternatively, you can use partial service confirmations.
Service confirmation processing	You can cancel service confirmations. You can release billing-relevant service confirmations for billing. You can define a service confirmation as the final confirmation for a service order.
Credit management	If you use Credit Management, credit checks can be automatically triggered for payers under certain conditions when you save a service order.
Simulative ATP check for service parts	You can perform stock availability checks for service parts.
Configurable product	You can add and configure a configurable product in service order and service confirmation processing. Based on the selected characteristics and characteristic values for the defined variant conditions, you can see the impact on the price at header or item level of a service order and service confirmation.

3.13.2.2 In-House Repair

Business Background

In-House Repair supports companies that offer repair and maintenance services for products. These services are provided in-house at repair centers.

Key Features

The following table explains the key features available:

Key Feature	Use
Trigger customer return	Use customer returns to trigger the logistics process for repair objects that are returned for repair.
Create in-house repair	Create in-house repairs and add repair objects to the in-house repair.

Key Feature	Use
Perform precheck	Decide on the follow-ups to be performed within the in-house repair process for each repair object.
Plan diagnosis	Schedule the diagnosis of the repair object in the repair order and add the service employee who is to perform the diagnosis.
Perform diagnosis	Perform the diagnosis for the repair object as defined in the repair order. Record the actual consumption of services, service parts, and expenses in repair confirmations.
Process repair quotation	Edit and send out repair quotations for the repair object, and record whether the customer has accepted or rejected the repair quotation.
Plan repair	Schedule the repair of the object in the repair order and add the service employee who is to perform the repair.
External procurement	Procure non-stock service parts and external service providers who are required to perform the repair of the object.
Perform repair	Perform the repair for the repair object as defined in the repair order. Record the actual consumption of services, service parts, and expenses in repair confirmations.
Prepare for billing	Trigger the billing process for the diagnosis and the repair.
Create outbound delivery	Create an outbound delivery to send the repair object back to the customer.

3.13.2.3 Planned Recurring Service

Business Background

You can use the planned recurring service to organize, plan, and schedule periodic services that occur repeatedly at certain intervals, such as regular maintenance. The solution saves costs by providing improved and transparent service planning and efficient scheduling.

Key Features

The following table explains the key features available:

Key Feature	Use
Processing maintenance plans for planned recurring service	<p>To plan recurrent maintenance service, you can create time-based and performance-based maintenance plans, and multiple-counter plans. In time-based maintenance planning, maintenance is performed in specific cycles, for example, every two months or every six months. With performance-based maintenance plans, you can plan regular maintenance based on counter readings maintained for measuring points of technical objects and products.</p> <ul style="list-style-type: none">• You can create and assign maintenance items that describe which maintenance service must take place regularly for a technical object/product or a group of technical objects/products. You can assign a service order template to the maintenance item to specify the service that must be executed and the required service parts.• You can determine the maintenance cycles as planning data. If the maintenance plan is performance-based, you can assign counters. Furthermore, you can specify other scheduling information, such as shift factors.• You can display the scheduled maintenance calls for a maintenance plan. <p>When you schedule a maintenance plan and generate maintenance calls, the system generates maintenance call objects (service orders) for the due date and copies the relevant planning data into the call object. You can display the scheduled calls using the call history.</p>
Planning recurrent maintenance service with service order templates	<p>Service order templates describe service activities which are performed repeatedly. As a recurring service planner, you can use service order templates to standardize these recurring services. You can create general service order templates or service order templates for specific pieces of equipment, products, or functional locations. You can provide general information and specify validity periods for service order templates.</p> <p>When you assign a service order template to a maintenance item and the corresponding maintenance call is triggered, the system copies the service data from the service order template to the respective service order.</p>
Planning recurrent maintenance service with service contracts	<p>Service contracts describe the sold-to party, sales organization, and technical objects in the service orders generated for recurrent maintenance.</p> <p>When you assign a service contract item to a maintenance item and the corresponding maintenance call is triggered, the system copies the service data from the service contract item to the respective service order.</p>

3.13.3 Customer Service and Support

3.13.3.1 Warranty Management

Business Background

Warranty management enables the user to create, process, and post claims from a customer or to a supplier. As a central step of the process, a validation regarding the warranty terms is done to check the eligibility of reimbursement.

Key Features

The following table explains the key feature available:

Key Feature	Use
Process a claim with the supplier	Warranty claim processing enable users to create warranty claims that are forwarded to suppliers for reimbursement. This includes creating claims (based on repairs), validating claims for completeness and eligibility for reimbursement, and determining correct prices (for example materials, labor tasks) to claim the appropriate amount. Once the supplier responds, the claim processing supports the transparent maintenance of values and posting of the negotiated amount.
Process a customer claim	This scenario enables to create and process warranty claim from a customer that can be validated and decided upon. The payment for the reimbursement can be triggered then.
Manage master warranties	A warranty master data clerk can create and maintain master warranties, which are used to capture the contractual warranty situation. This builds the foundation for the validation with regards to an eligibility for reimbursement. The master warranty can be assigned to multiple equipment and is validated in the claim process.

3.14 Sourcing and Procurement

Purchasing allows you to order direct materials, consumable materials, and services. The purchasing department keeps track of the procurement process with the purchase order, the goods and invoice receipts, and service entry sheets.

3.14.1 Generic Features Available in Sourcing and Procurement

Business Background

Here, you can get an overview of the generic features that are available in Sourcing and Procurement.

Key Features

The following table explains the key features available:

Key Feature	Use
Managing teams and responsibilities	You can, for example, define which team members are responsible for specific approval steps within the procurement process. For more information, see the section Responsibility Management [page 16] .
Using subcontracting documents	You can instruct a supplier (subcontractor) to manufacture materials using components provided by you. Based on the respective purchase order or scheduling agreement, you or a third-party supplier can send the components to your subcontractor, who then manufactures the ordered material. You can monitor the quantity of the needed components and trigger the goods issue, if required.
Managing model product specifications	You can use model product specifications to manage templates with item hierarchies for documents, such as purchase contracts. This allows you to quickly reuse and structure items that you use frequently without having to create them again. You can create new documents based on entire model product specifications, groups of materials and services, or individual items.

3.14.2 Procurement Analytics

3.14.2.1 Real-Time Reporting and Monitoring

Key Features

The procurement overview provides you with a set of actionable cards that you can easily rearrange as required. You no longer need to start different transactions and reports separately: both operational and analytical cards are visible on one single page. You immediately see your most relevant tasks and can navigate to KPI drilldowns, worklists, or specific object pages to get more detailed information and take immediate action.

In addition, the monitoring of purchasing document items enables you to immediately assess and resolve critical situations for your company.

The supplier object page is enhanced by analytical real-time insights into supplier evaluation scores, purchase requisition types, as well as purchasing and off-contract spend.

The following table explains the key features available:

Key Feature	Use
Operational cards	Examples of operational cards are the monitoring of contracts, so that you see which contracts are about to expire and require your attention, as well as purchase requisitions, showing you where a source of supply is missing and needs to be assigned. You can also monitor supplier confirmations that are overdue, or that deviate in quantity or delivery date from the purchase order.
Analytical cards	Examples of analytical cards are the actual and planned purchasing spend by supplier and material group, and the monitoring of the supplier performance by analyzing operational data and questionnaires.
Filtering	You can filter the content of cards by various criteria, such as by suppliers, purchasing categories, material groups, and purchasing groups. This enables you to make informed decisions and take immediate action.

Key Feature	Use
Monitoring	<p>With the monitoring apps, you can identify the following, for example:</p> <ul style="list-style-type: none"> • Overdue purchase order and scheduling agreement items • Next delivery dates and quantities for subcontracting documents • Missing supplier confirmations • Request for quotation items for which no bids were submitted in time for the deadline • Expiring purchase contract items • Variances of material prices in purchase contracts and info records • Purchase requisition items • Request for quotation types • Missing exchange rates for the currencies used in the analytical apps • Scheduled jobs that failed for supplier evaluation scores • Scheduled extraction jobs that failed for central purchasing data from the hub system to an optimized analytical table • Purchase order documents, for which the goods receipt based invoice verification flag is not set, but the goods receipt is posted and returns or cancellations exist. <p>Apart from the regular filter and table section, analytical elements such as visual filters and analytical charts are also provided. These elements support users in immediately identifying the most critical business issues.</p> <p>From the monitoring apps, you can navigate to related apps to trigger follow-on actions, or perform the necessary action directly in the monitoring app (you can, for example, extend the validity of a contract or its target value).</p> <p>In addition to the KPIs, multi-dimensional reports for analyzing the purchasing spend as well as the service spend are available. Users can define dimensions, such as the plant or company code, and measures, such as the spend or the expected spend based on purchase order schedule lines, using drag and drop.</p>

3.14.2.2 Spend Visibility

Key Features

The data that simplifies your daily work can be visualized in various chart types and by criteria such as supplier, purchasing group, purchasing category, or material group. The key performance indicators allow you to directly navigate into other apps, where you can immediately solve business issues.

The following table explains the key features available:

Key Feature	Use
Purchase requisitions	<p>Procurement organizations are measured according to their efficiency. Specifically in the area of managing purchase requisitions, you can notably increase the efficiency and automation of procurement processes.</p> <p>Key Performance Indicators (KPIs) help measure this efficiency and provide real-time insight into areas of improvement, such as the average approval time of a purchase requisition, changes made to a purchase requisition item, or carbon footprint of the products requested in purchase requisitions based on data from an external environmental management system (currently, SAP Product Footprint Management).</p>
Purchasing and invoice spend	<p>To identify cost-saving opportunities, it is essential that you see the purchasing and invoice spend under management. The available KPIs provide insight into purchase order value over time, future purchasing spend based on purchase requisitions that are currently in approval, purchasing spend classified by ABC suppliers, material groups and purchasing groups, invoices without purchase order reference, invoice price changes over time, and automation rates for sending purchase orders and receiving supplier invoices. You can, for example, retrieve the order value for all purchase orders over time, and determine all current values of all purchase orders in the system.</p> <p>Additionally, procurement dashboards for purchasing spend and off-contract spend in SAP Analytics Cloud can be accessed directly from SAP S/4HANA, showing purchasing data in real time.</p>
Contracts and scheduling agreements	Purchasers can manage contracts efficiently and make sure that the right contracts are in place at the right time when needed. They are able to do so by identifying maverick spend and contracts that are not used, contracts that will expire soon, and contracts or scheduling agreements that are almost consumed by comparing target values or target quantities with released values or released quantities.

Key Feature	Use
Supplier evaluation	<p>You can determine the overall score of a supplier in an organization based on the weighted average of the single scores for quantity variance, price variance, time variance, as well as quality scores based on inspection lots and quality notifications. Supplier evaluation scorecards that result from questionnaires enrich these operational supplier evaluation scores. A combined real-time view across operational and questionnaire-based scores provides a holistic view of your supplier's performance. You can also specify individual weighting and scoring factors per criterion and per purchasing category. You can also view the history of supplier evaluation scores. Additionally, you can send output messages (via email or print) with the supplier evaluation scores to the respective suppliers. Output scores can be based on on-the-fly real-time calculation or persisted historical scores.</p> <p>Define custom criteria based on your requirements in order to rate suppliers. Additionally, you can view the number of defective or rejected materials per million in relation to the goods received. This will help you to analyze the performance of a supplier as you can select a supplier with lower parts per million value for your future deals. You can also schedule jobs to persist the parts per million scores as a custom criterion to contribute towards the evaluation of a supplier.</p> <p>Additionally, a dashboard for supplier performance in SAP Analytics Cloud can be accessed directly from SAP S/4HANA, showing supplier evaluation scores in real time.</p>

3.14.2.3 Spend Reporting (Solution Capability)

Key Features

An SAP Analytics Cloud dashboard where buyers can view insights of the purchasing and off-contract spend. The analyzed data is presented in a broad range of graphs, such as bar charts, column charts, and tables.

The following table explains the key features available:

Key Features	Key Feature	Use
Purchasing spend		To identify cost-saving opportunities, it is essential that you view the purchasing spend details under one dashboard. The dashboard provides purchasing spend details in various formats. Buyers can view information like purchase order net amount and amount spent in individual quarters (current and previous year) on this dashboard. They can also filter the information based on the wide range of filters provided.
Off-contract spend		This dashboard can also be used to measure the percentage of purchases made without any contract being in place. Buyers can view the total amount spent on purchase orders that do not have a purchase contract reference.

3.14.3 Sourcing and Contract Management

3.14.3.1 Source Assignment

Key Features

The following features are available:

Key Feature	Use
Managing source lists	The source list is used in the administration of sources of supply. It specifies the allowed (and disallowed) sources for a material for a certain plant within a predefined period. Each source is defined by means of a source list record.
Managing info records	An info record serves as a source of information for purchasing activities. The info record contains information about a specific material and the corresponding supplier. The supplier's current pricing, for example, is stored in the info record. The info record allows purchasers to quickly determine the following: <ul style="list-style-type: none">• Which materials have been previously offered or supplied by a specific supplier• Which suppliers have offered or supplied a specific material

Key Feature	Use
Making mass changes to purchasing info records and monitoring them	<p>Purchasers can select purchasing info records and trigger a mass change for specific fields. You can also change prices in one or more purchasing info records. You can then monitor these mass changes.</p> <p>Purchasers can download information related purchasing info records into a spreadsheet, modify it, and upload it back again. They can create new purchasing info records using the spreadsheet.</p>
Managing quota arrangements	
	You can use quota arrangements to split up a specific material requirement for a plant to several sources of supply, that is, to several suppliers. This allows you to minimize the risk of delivery failures for important materials.

SAP S/4HANA Cloud supports the integration with external procurement systems (for example SAP Ariba Sourcing), also in combination with a business network (for example Ariba Network) to enable a seamless and highly efficient collaboration between your buying organization and your suppliers in the sourcing process.

If an external procurement system (for example SAP Ariba Sourcing) and potentially an external business network (for example Ariba Network) are integrated and support the features listed below, SAP S/4HANA Cloud enables you to use the following key features:

Key Feature	Use
Managing requests for quotations	If you do not have a valid source of supply, you can use the requests for quotations process to find one. A request for quotation (RFQ) is a request from a purchasing organization to a supplier to submit a quotation for the supply of materials or lean services.
	You can create requests for quotations and add attachments, if required. If you want your strategic buyers to invite suppliers to place supplier quotations, you can send the request for quotation (including attachments) to an external procurement system (for example SAP Ariba Sourcing) or directly to your suppliers, for example by e-mail. You can invite suppliers that are maintained in your supplier master data to participate in the bidding process on an external platform (currently, Ariba Network). In SAP S/4HANA Cloud, you can then receive the supplier quotations and perform the follow-on activities described below (see <i>Managing supplier quotations</i>).
	RFQ items can be selected for an info record update, which means that the prices from the most recent supplier quotations are transferred to the corresponding info record.

You can define approval rules for RFQs. These rules are applied during the awarding process.

Key Feature	Use
Managing supplier quotations	<p>A supplier quotation is an offer from a supplier to a purchasing organization to supply materials or lean services. In SAP S/4HANA Cloud, supplier quotations can be created in one of the following ways:</p>
	<ul style="list-style-type: none"> • They can be generated from quotations received from an external sourcing system, for example, SAP Ariba Sourcing. • You can create them manually in SAP S/4HANA Cloud.
	<p>If you receive supplier quotations from an external system that have not yet been awarded, you can award them in SAP S/4HANA Cloud and create follow-on documents. The same applies to supplier quotations that you have manually created in SAP S/4HANA Cloud.</p>
	<p>If you receive supplier quotations from an external system that have already been awarded, follow-on documents can be automatically created in SAP S/4HANA Cloud.</p>
	<p>Supplier quotations that have not yet been awarded can still be manually changed in SAP S/4HANA Cloud.</p>
	<p>You can define approval rules for supplier quotations. These rules are applied during the awarding process in SAP S/4HANA Cloud.</p>
Comparing supplier quotations	<p>You can select up to three supplier quotations and compare them simultaneously in a separate screen. To cover your demand for goods and services at the best price, you can either award one supplier quotation completely, or partially award several supplier quotations.</p>
Situation handling	<p>You can inform specific members in your purchasing organization about the approaching submission deadline for an RFQ and that only a low number of supplier quotations has been received.</p>