

Integrating SAP® Ariba® Cloud Solutions with SAP ERP and SAP S/4HANA®

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INTRODUCTION

SAP Ariba is the only cloud provider with true bidirectional integration into SAP® ERP and SAP S/4HANA®, including more than 150 integration processes and over 5,000 fields integrated to the SAP core.

Integration with SAP Ariba® solutions is achieved via the SAP Ariba cloud integration framework. The SAP Ariba cloud integration framework is a suite of components and complementary technologies that can be optionally deployed depending on a customer's specific landscape. It can be installed as an

- Add-on to SAP ERP to directly connect to SAP Ariba cloud solutions
- Adapter for SAP Process Integration

This document provides an executive-level summary of some of the most typical integration options between the procurement capabilities provided by SAP ERP and SAP Ariba on-demand solutions.

The Customer Comes First

We understand that customers have already made significant investments in IT and infrastructure, and that SAP ERP and SAP S/4HANA landscapes in particular can be very complex for large enterprises. Many SAP ERP customers have a long history of customizations and extensions that fine-tune the solution to perfectly fit their specific need. Hence, no two SAP ERP landscapes are exactly alike. As a result, there is no single

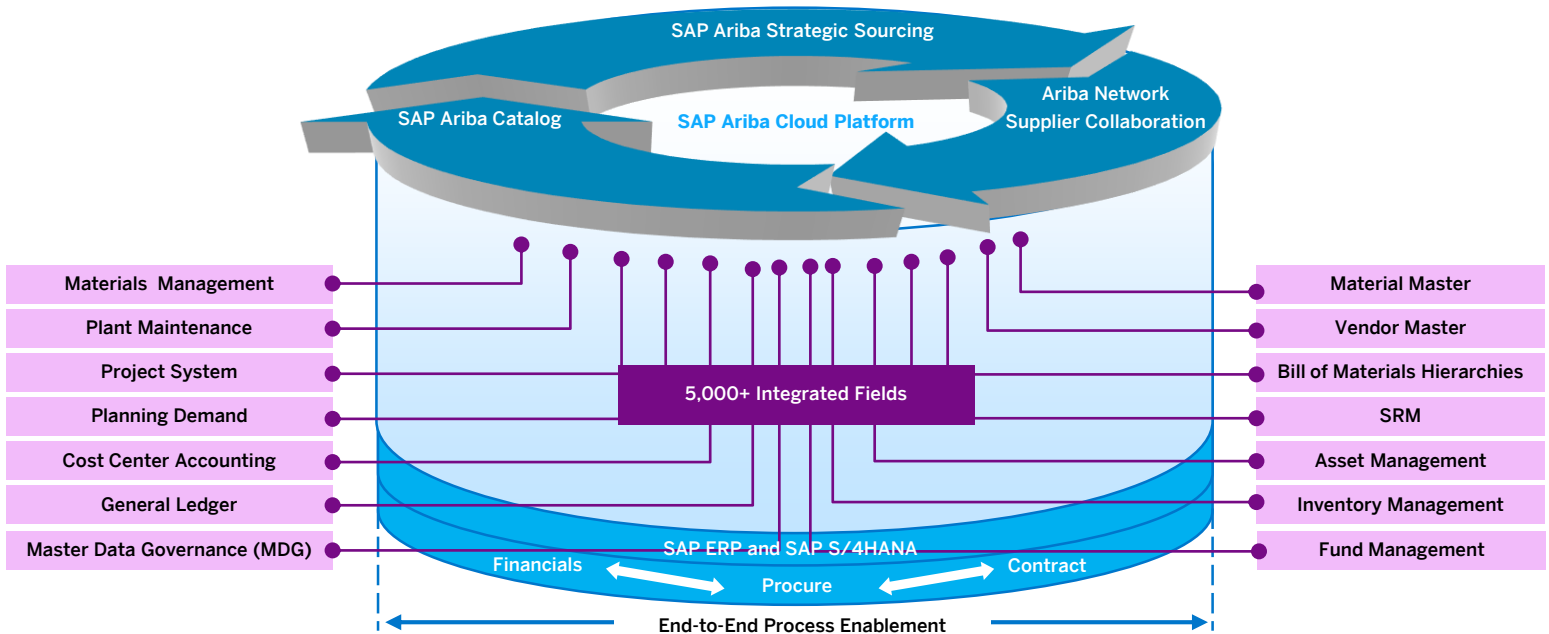
integration solution that can be deployed in exactly the same way for all environments. However, that does not mean that there cannot be a consistent and simple approach to integration.

SAP Ariba's approach to integration starts with the following customer-centric integration goals:

- Protect and leverage customers' SAP ERP and SAP S/4HANA investments
- Minimize overall integration costs
- Deliver a best-in-class, seamlessly integrated procurement business process
- Align with SAP's strategy, assuring that today's investments will continue to deliver value to customers for years to come

To meet these customer-centric integration goals, we have designed a flexible and simple integration framework and integration solutions based on:

- **Choice** – By designing the SAP Ariba cloud integration framework to provide flexible integration options that fit into a customer's landscape
- **Open Standards** – By using open standards and common technologies for connectivity and data exchange, allowing customers to leverage existing IT expertise
- **Simplicity** – By eliminating the need for new components, keeping the integration solution simple, and taking advantage of existing infrastructure and components
- **Extensible Business Processes** – By providing a rich portfolio of standard integrated business processes that customers can extend and adapt to meet their specific needs



SAP ARIBA CLOUD SOLUTIONS INTEGRATION WITH SAP ERP and SAP S/4HANA

SAP Ariba's products are focused on two key areas:

- Ariba Network
- SAP Ariba applications – SAP Ariba Strategic Sourcing, SAP Ariba Supplier Management, SAP Ariba Procurement, SAP Ariba Supply Chain, and SAP Ariba Financial Supply Chain solutions

In this paper we'll explore the value proposition that each of these product areas brings to you, and how they can be integrated seamlessly to provide added benefits for SAP ERP and SAP S/4HANA customers.

Ariba Network

Ariba Network is a cloud-based network where buyers and suppliers collaborate by managing different business processes, either via the Ariba Network portal or by exchanging commerce extensible markup language (cXML) messages. Buying organizations use Ariba Network to find suppliers and to run automated business transactions from ordering to issuing payments. Suppliers use Ariba Network to find new business opportunities and to work more efficiently and effectively with their customers on all the shared aspects of business commerce: proposals, contracts, orders, invoices, and payments.

Ariba Network is

- **Open** – Ariba Network can integrate various kinds of buyers and suppliers using different technologies and protocols.

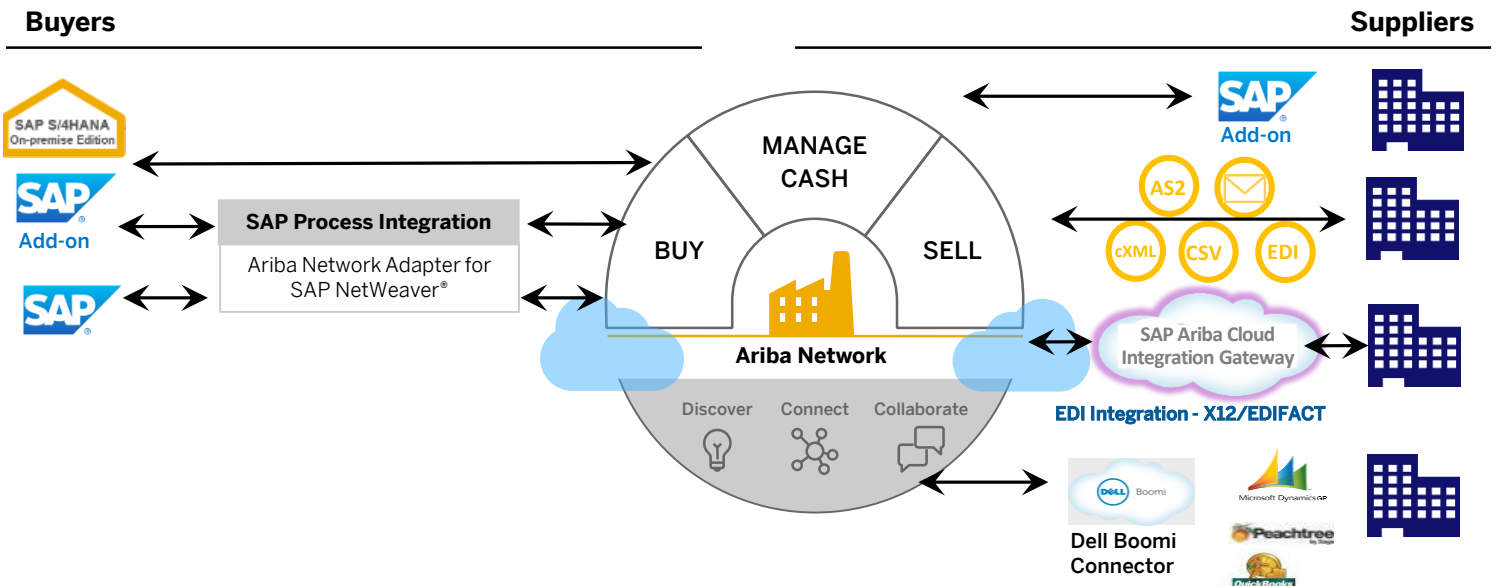
- **Comprehensive** – Ariba Network supports all business processes and collaborations that are relevant for the procurement of goods and services.
- **Intelligent** – Ariba Network does not just transmit messages, but also validates their content to eliminate errors that delay processing and drive up cost.

SAP ERP and SAP S/4HANA customers integrate their system with Ariba Network when they want to manage their procurement process within their SAP ERP or SAP S/4HANA environment while also benefiting from the collaboration capabilities and efficiency gains that Ariba Network can provide.

Ariba Network integration with SAP ERP and SAP S/4HANA is not limited to buying organizations. Suppliers on Ariba Network can have their SAP ERP systems integrated with Ariba Network as well.

Ariba Network and cXML

SAP Ariba, with the input of many other companies, has defined **cXML** as an open protocol for business-to-business transactions in a commerce domain. This is the most comprehensive XML standard covering a wide variety of common business processes and the integration protocol that Ariba Network is built upon. The cXML protocol is continuously updated to support new business processes and new business documents. See <https://cXML.org> for more information.



Ariba Network and SAP ERP and SAP S/4HANA

The SAP Ariba cloud integration framework provides the following standard paths to integrate SAP ERP and SAP S/4HANA with Ariba Network:

- SAP Business Suite add-on for Ariba Network
- Ariba Network adapter for SAP NetWeaver®

SAP Business Suite Add-On for Ariba Network

The SAP Business Suite add-on for Ariba Network is installed in the SAP ERP system. Its main purpose is to enable SAP ERP to natively communicate with Ariba Network via cXML without the need for a protocol mapping between cXML and SAP technologies such as BAPI® and IDoc.

With the SAP Business Suite add-on for Ariba Network, SAP ERP systems can send and receive cXML either directly or mediated via the SAP Process Integration middleware. If SAP Process Integration is already used for connecting legacy systems, mediated communication via SAP Process Integration provides a flexible configuration option to also enable cXML connectivity.

Ariba Network Adapter for SAP NetWeaver

The Ariba Network adapter for SAP NetWeaver is deployed in the SAP Process Integration system to translate between cXML and traditional SAP interfaces such as IDoc, BAPI, and remote function call (RFC). It consists of the following components:

- The design package in the SAP NetWeaver Process Integration component, which contains integration processes, interface objects, and mappings.
- The cXML adapter installed on the SAP NetWeaver Process Integration component, which conforms to the J2EE connector architecture (JCA) specification, and implements the cXML transport protocol
- SAP Transport files installed on the SAP ERP system

SAP Ariba also provides native integration with SAP S/4HANA for select business scenarios – PO and invoice automation. In

fact, SAP S/4HANA speaks the cXML language by default, which means you don't need any additional installation to integrate SAP S/4HANA with Ariba Network for those scenarios. This will be extended to other business scenarios in the coming releases.

Ariba Network and SAP ERP or SAP S/4HANA Integration Scenarios

Document Automation

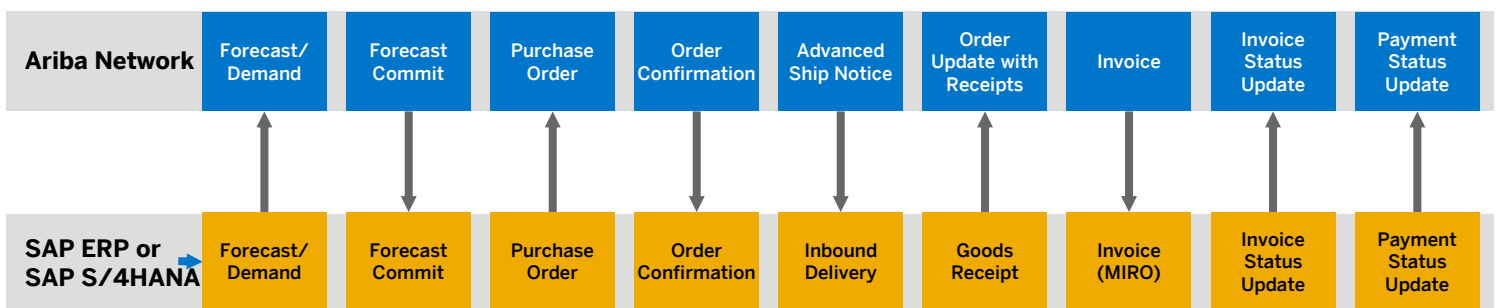
SAP Ariba offers many different integration scenarios to support many business processes, but the most typical process is document automation for purchase order (PO) and invoice automation. In this scenario, users create POs in their SAP ERP or SAP S/4HANA system, which sends them to the suppliers on Ariba Network for processing. Suppliers confirm orders or let their customers know if items are backordered; they can notify them that items have shipped and send a PO invoice for payment. Business rules enforce process and document compliance. For example, you can require that a supplier must confirm an order, create a ship notice, or wait for a goods receipt notice before they can send an invoice.

SAP Ariba Supply Chain Collaboration

Ariba Network provides enhanced supply chain visibility for direct materials for discrete and process manufacturing, consumer products and life sciences, and merchandise spend in the retail industry.

To improve poor supply chain visibility, communication, and collaboration among supply chain partners, SAP Ariba Supply Chain Collaboration was developed to provide comprehensive direct material and supply chain collaboration tools with industry-specific aspects and a single access point and collaboration platform for all partners across different supply chains. These scenarios include processes for subcontracting, consignment, forecasting, and supplier-managed inventory as well as returns.

SAP ARIBA COMMERCE AUTOMATION AND SAP ARIBA SUPPLY CHAIN COLLABORATION – BASIC SCENARIO



- Buyer activity
- Supplier activity
- ➔ Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

Contract Manufacturing Collaboration (Subcontract PO)

There are several steps in the subcontracting process. The first is the basic subcontracting purchase orders with components, purchase order confirmation, and ship notice of finished goods to the buyer. The buyer sends a goods receipt and invoice to the supplier.

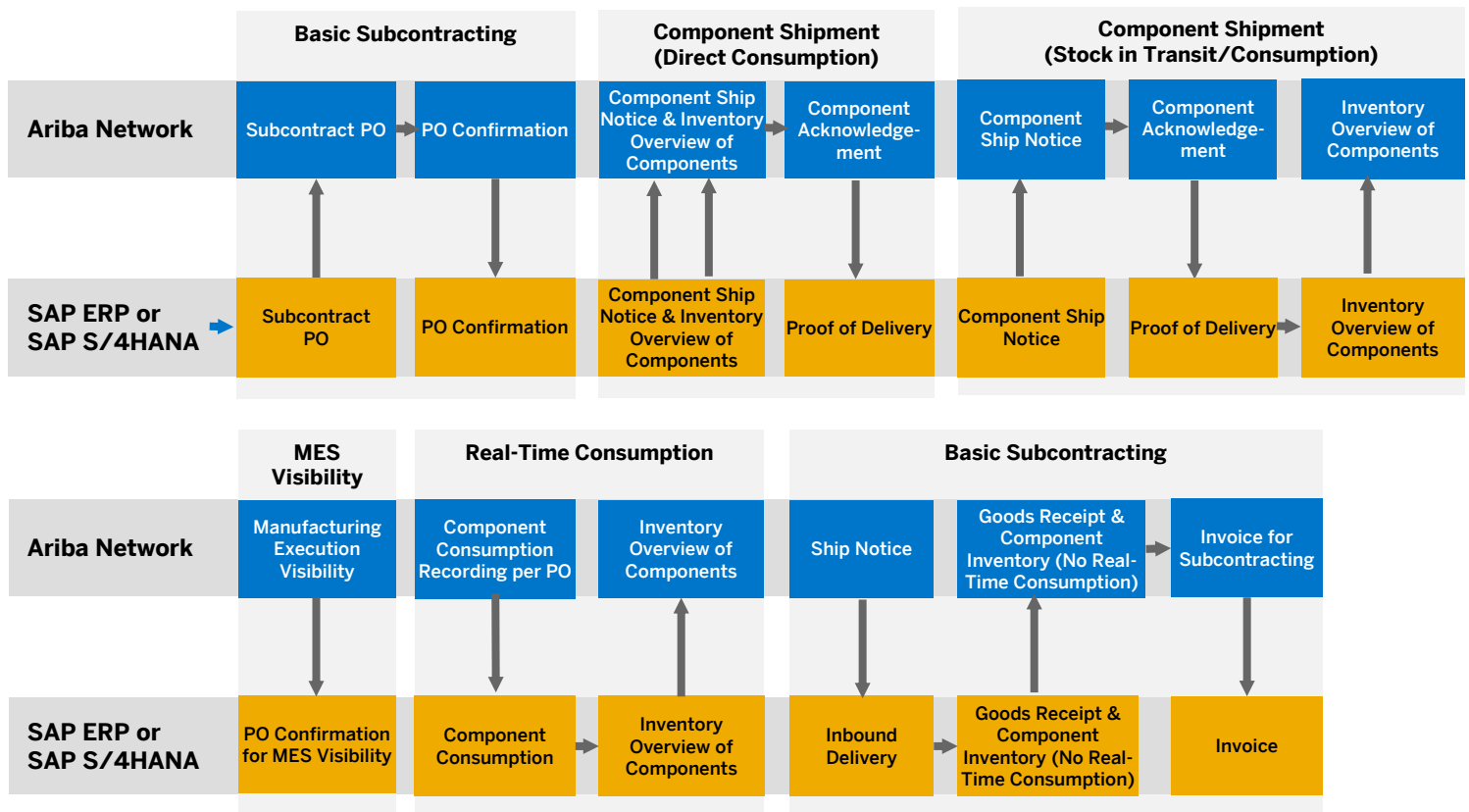
In addition, basic subcontracting allows buyers/sellers to monitor component shipments/deliveries. Component shipments are supported as well as visibility of component inventory and component acknowledgement. In the flow below, there are two different options for component shipments.

- **One-step process:** In this process both the ship notice request and product activity message are sent in a single step. The proof of delivery is triggered at the seller side once the components have been received.
- **Two-step process:** Although the overall steps are the same as the one-step process, the main difference is when these steps are taken. The two-step process waits for the product to be received before the product is moved into the buyer system, and a product activity message is triggered.

- **Finished production:** Integrated suppliers have the option to notify the buyer of production of the finished goods via manufacturing execution system (MES) visibility. These messages are usually triggered from completed production orders in the supplier system and sent to inform the buyer of how much finished goods has been produced.
- **Real-time consumption:** Real-time consumption is when the supplier uses up the components originally shipped by the buyer, and notifies them. Once the buyer receives the notification, a product activity message is sent to the supplier from SAP with current component quantities as SAP needs to be the system of record. If real-time computation is not used, then the product activity message for component overview is sent when the goods receipts from the ship notice of finished goods is sent.

The following illustrates typical contract manufacturing process flows along with consumption and execution visibility at the component level:

SAP ARIBA SUPPLY CHAIN COLLABORATION – CONTRACT MANUFACTURING PROCESS FLOWS



- Buyer activity
- Supplier activity
- ➔ Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

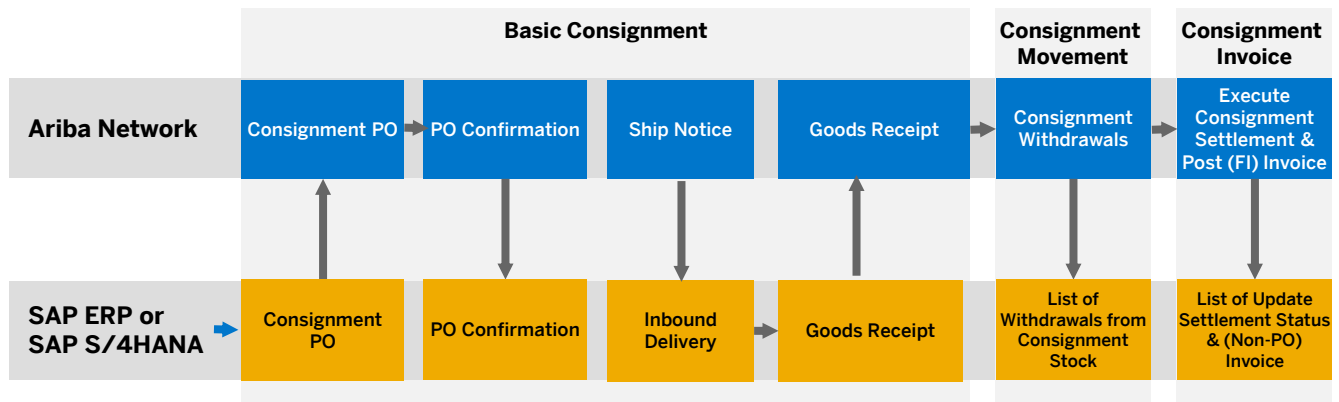
Consignment Collaboration (Consignment PO)

The nature of consignment inventory is that “change of ownership” is unrelated to the shipment/receipt processes. This is contrary to the basic design of most inventory/accounting systems’ transactional processes. Because of this, most inventory systems do not handle consignment inventory very well. This feature enables buyers to send consignment line items on POs to suppliers and receive consignment goods that are still owned by the suppliers. The feature provides visibility of the consignment PO items, visibility of the consignment material movements, transfer of ownership of stock, and invoice settlement based on the material movements.

- **Consignment Movement:** After the goods receipt is generated in SAP, the consignment movement using transaction MB1B triggers the product activity message to Ariba Network to transfer consignment stock to own stock.
- **Consignment Settlement and Invoice:** Real-time consumption is when the supplier uses up the components originally shipped by the buyer, and notifies them. Once the buyer receives the notification, a product activity message is sent to the supplier.

The following illustrates typical consignment process flows:

SAP ARIBA SUPPLY CHAIN COLLABORATION – CONSIGNMENT COLLABORATION PROCESS FLOWS



- Buyer activity
- Supplier activity
- ➔ Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

Forecast Collaboration

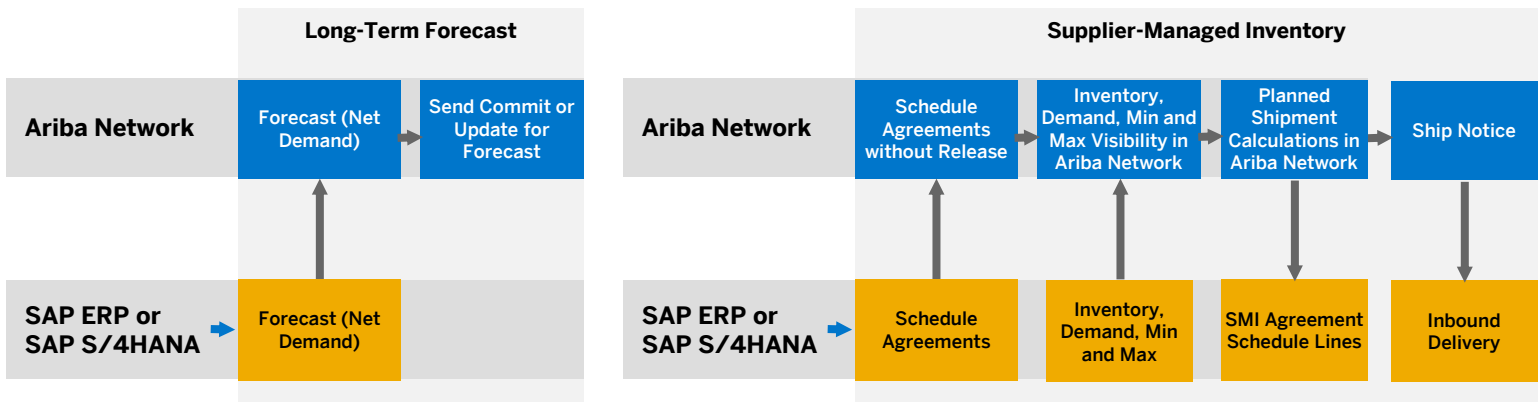
Forecast collaboration provides several benefits to the supplier. First, by providing suppliers with near real-time visibility into demand forecast, they are able to more effectively schedule operations and plan capacity usage in order to meet the customer’s requirements. It also allows suppliers to provide commitment against the buyer-requested forecast quantities, which can be mapped to process into the material requirements planning (MRP) software the buyer is using.

the stock levels for a buyer and send product based on scheduled agreements. This process would allow the supplier to see the gross demand and current inventory levels and to make any necessary adjustments based on capacity to satisfy the needs of the buyers. This process allows suppliers to manage the more day-to-day execution of the forecast plan and send back SMI agreement schedule lines to the buyer. They can then ship against those schedule lines and can be measured to the original forecast commitment agreed upon.

Supplier-Managed Inventory Collaboration

In addition to sending a long-term plan, supplier-managed inventory (SMI) functionality will allow for suppliers to manage

SAP ARIBA SUPPLY CHAIN COLLABORATION – FORECAST AND SUPPLIER-MANAGED INVENTORY COLLABORATION PROCESS FLOWS



- Buyer activity
- Supplier activity
- Existing standard integration scenarios

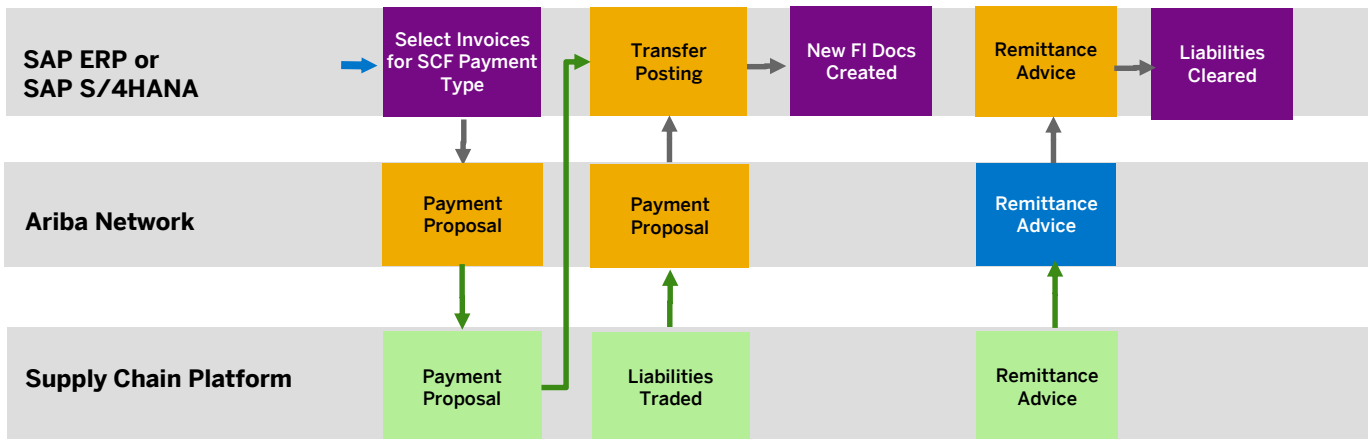
General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

Supply Chain Finance Capability

The supply chain finance capability allows third-party funders to provide financing for early payment to a supplier in exchange for discounts on the total invoice amount. The supplier receives funds early at a discount, and the buyer increases days payable outstanding (DPO) by extending terms.

Each trading participant may therefore meet its opposing working capital objective. The financing is facilitated by a financier who has relationships with one or more funders to pay approved invoices early in exchange for payment from the buyer on the net due date (at maturity).

SUPPLY CHAIN FINANCE CAPABILITY – BASIC SCENARIO



- Buyer activity
- Supplier activity
- SAP Ariba activity (automated or manual)
- External system activity
- Existing standard integration scenarios
- External supply chain integration

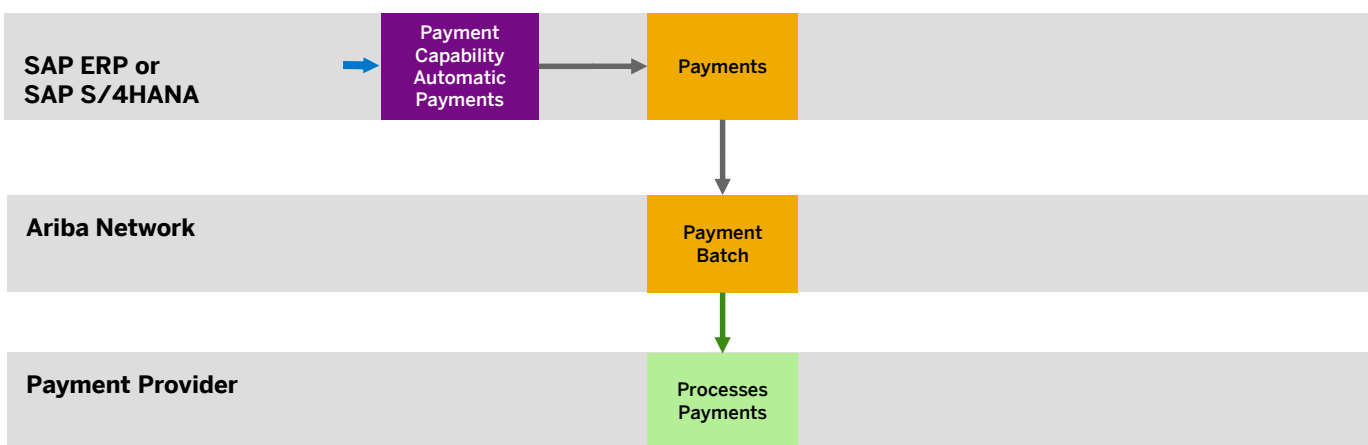
General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

Payment Capability

The payment capability allows buyers to send payments to the bank using the payment provider's network. It also provides suppliers with rich and timely remittance advice about each electronic payment – before the payment is received. Now you can complete the procure-to-pay process simply, securely, and

with a high degree of certainty about who is paying, to whom, for what, and when. All because the capacity of Ariba Network for facilitating buyer-supplier collaboration has been enhanced with the payment provider's expertise in securely managing sensitive bank information and moving money.

PAYMENT CAPABILITY – BASIC SCENARIO



- Buyer activity
- SAP Ariba activity (automated or manual)
- External system activity
- Existing standard integration scenarios
- External supply chain integration

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

Quote Automation

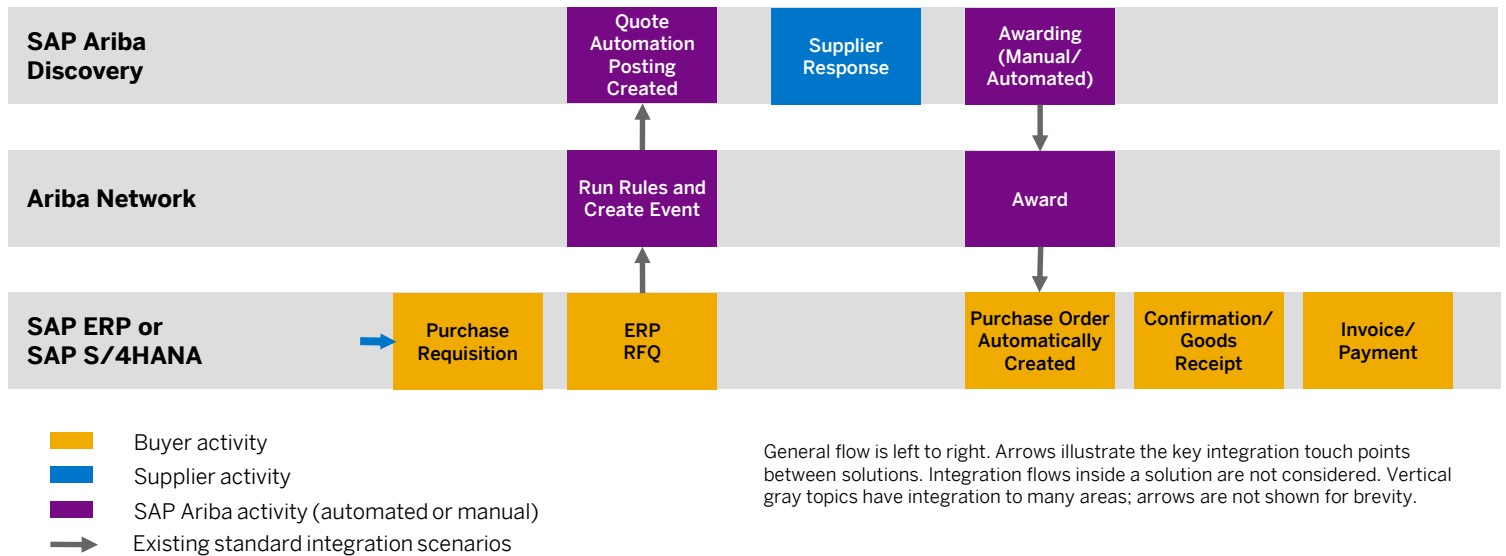
Sometimes buyers have an unplanned and immediate need for certain items that are not covered by contracts and strategic sourcing. These ad-hoc, one-time purchases are known as tactical spend. Quote automation, which builds upon the core functionality provided by SAP Ariba Discovery and Ariba Network, is a capability that optimizes such ad-hoc activities and automates the process completely or partially. Quote automation also includes supplier enablement features of Ariba Network to onboard new suppliers and to import their vendor data from the buyer's ERP system.

Quote automation with SAP ERP or SAP S/4HANA integration starts in the SAP system when a user creates a request for quotation (RFQ) from a purchase requisition or from scratch. Users enter event open and close dates, and specify line items with material groups and receiving plants.

The RFQs are sent through the Ariba Network adapter for SAP Process Integration to Ariba Network, which automatically creates a quote automation posting and publishes it on SAP Ariba Discovery. Suppliers can either be invited as part of the quote automation posting or matched through SAP Ariba Discovery based on product and service categories and location. If an invited supplier is not registered on Ariba Network, an Ariba Network account is automatically created for them.

Invited and matched suppliers receive notifications about the quote automation posting from SAP Ariba and can then respond directly to the posting on SAP Ariba Discovery. Depending on how quote automation is configured, supplier responses can automatically be sent back to the SAP ERP or SAP S/4HANA system as purchase orders with no action from project owners, or buyers can manually award suppliers directly within the quote automation feature.

QUOTE AUTOMATION



SAP Ariba Strategic Sourcing and SAP Ariba Supplier Management Solutions

The SAP Ariba Strategic Sourcing solutions cover what is sometimes called strategic procurement. This includes collaborative sourcing (finding suppliers for a given need), collaborative contract management, and spend analysis. The SAP Ariba Supplier Management solutions cover management of supplier information and performance, lifecycle, and risk.

SAP Ariba Strategic Sourcing integration with SAP ERP or SAP S/4HANA is implemented when a customer wants to manage their operational procurement process within their SAP ERP or SAP S/4HANA separately from their strategic procurement process in SAP Ariba Sourcing.

SAP Ariba Sourcing and SAP Ariba Contracts Integration with SAP ERP and SAP S/4HANA

SAP Ariba Sourcing

The standard integration between SAP and SAP Ariba Sourcing supports integrated sourcing events initiated from SAP ERP or SAP S/4HANA:

- Manually created purchase requisitions in SAP ERP materials management (MM) that then create a request for quotation (RFQ)
- Automatically created purchase requisitions during MRP runs that then create an RFQ
- Manual creation of SAP ERP RFQs without purchase requisitions

An RFQ is sent through the Ariba Network adapter for SAP Process Integration to Ariba Network, and from there to SAP Ariba Sourcing as a sourcing request. The sourcing request is routed to the appropriate sourcing manager based upon the header data sent from SAP ERP or SAP S/4HANA. The sourcing manager is notified to review the sourcing request and edit and send it for approval if required, and then creates a sourcing

project based upon the most appropriate template.

The sourcing project allows the sourcing manager to manage every aspect of the sourcing event, including creation, collaboration with suppliers, monitoring the execution, scoring and grading of supplier responses, and awarding suppliers. A sourcing event can be a request for information (RFI), a request for proposal (RFP), or an auction. When the sourcing manager creates awards for the event, SAP Ariba Sourcing sends a cXML document based on the award to the ERP system. The ERP creates a purchase order or contract from the cXML document.

SAP Ariba Contracts

When a buyer publishes a contract, SAP Ariba Contracts sends contract information such as the contract header data and line-item data to SAP ERP or SAP S/4HANA. SAP ERP or SAP S/4HANA then creates an outline agreement based on the contract information received from SAP Ariba Contracts.

Master Data Integration

Buyers using SAP Ariba Sourcing or SAP Ariba Contracts can import organizational data, cross-application data such as incoterms and payment terms, and material master data from SAP ERP systems. This allows buyers to initiate the sourcing process in SAP Ariba Sourcing and send the award to SAP ERP or SAP S/4HANA.

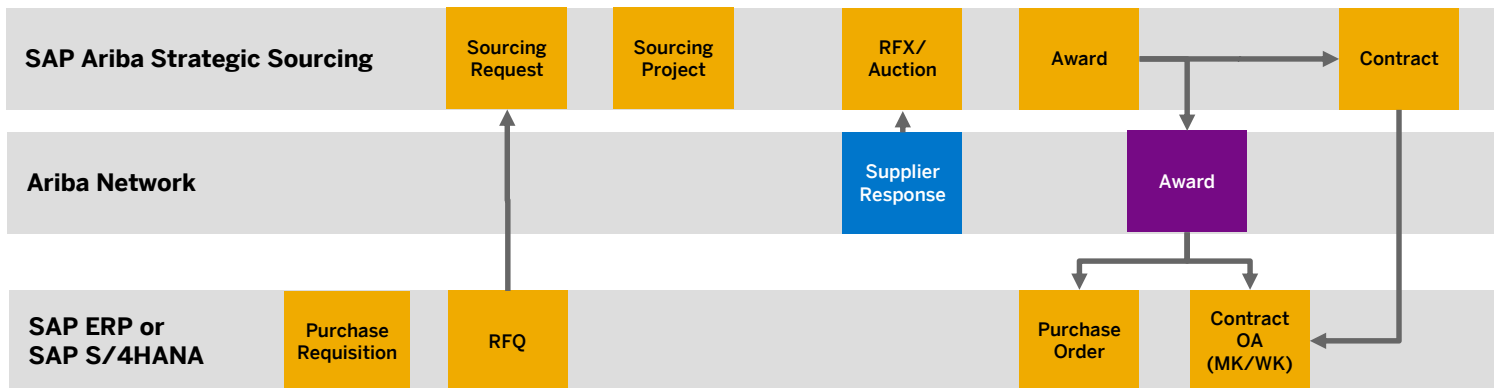
Direct Material Sourcing

Buyers using the SAP Ariba Strategic Sourcing Suite will be able to integrate additional master data elements such as bill of material (BOM) and purchasing information records (PIR) with SAP ERP or SAP S/4HANA.

Service Items Integration

External services procurement containing a flat list of service line items is supported in the integration flow from RFQ in SAP ERP or SAP S/4HANA to sourcing request, award to PO or outline agreement in SAP ERP, and contract to SAP ERP outline agreement.

SAP ARIBA STRATEGIC SOURCING



- Buyer activity
- Supplier activity
- SAP Ariba activity (automated or manual)
- ➔ Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas; arrows are not shown for brevity.

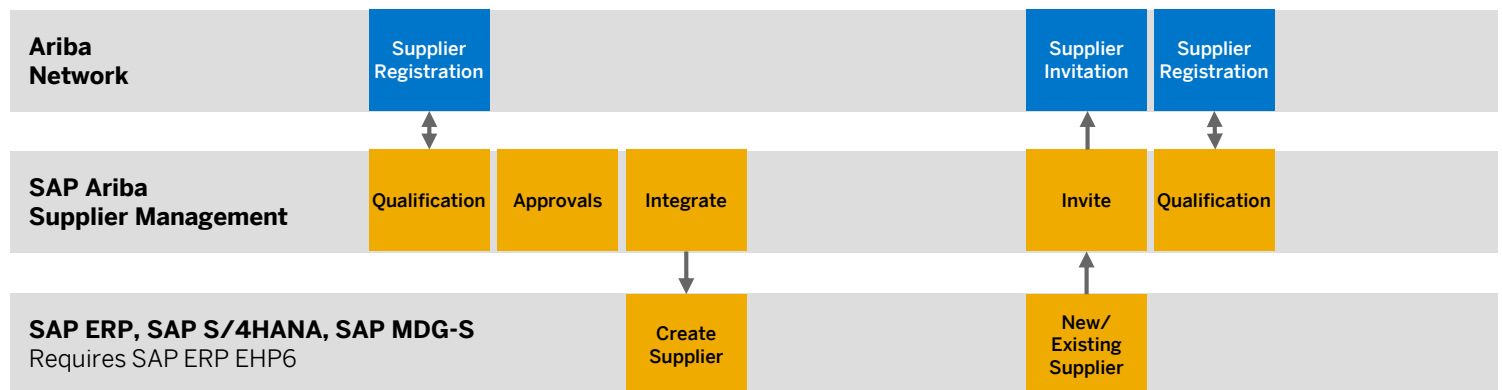
SAP Ariba Supplier Management Solutions Integration with SAP ERP, SAP S/4HANA, and SAP Master Data Governance

The integration of SAP Ariba Supplier Management solutions with SAP ERP, SAP S/4HANA, and SAP Master Data Governance (SAP MDG) now enables seamless sharing and reuse of supplier information between the systems. This bidirectional integration is available in both the direct connect and mediated connectivity options using SAP NetWeaver Process Integration, and it includes

the initial load as well as incremental updates. The two main use cases supported are:

- Upload existing supplier master data from SAP ERP, SAP S/4HANA, or SAP MDG with SAP Ariba Supplier Management followed by the invitation to suppliers to register via Ariba Network.
- Download new supplier data from SAP Ariba Supplier Management with SAP ERP, SAP S/4HANA, or SAP MDG for suppliers who self-register and are successfully qualified.

SAP ARIBA SUPPLIER MANAGEMENT



- Buyer activity
- Supplier activity
- Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Arrows are not shown for brevity.

SAP Ariba Procurement Solutions

SAP Ariba Procurement solutions cover the operational procurement processes, which include:

- Managing catalogs
- Creating and approving purchase requisitions
- Creating and sending POs
- Recording the receipt of goods and services
- Receiving invoices (sent from suppliers electronically through Ariba Network, or as paper invoices)
- Reconciling invoices against contracts, POs, and/or receipts
- Real-time budget check with fund reservation in SAP ERP
- Taxes and charges in requisitions and purchase orders

SAP Ariba Procurement Solution Integration with SAP ERP and SAP S/4HANA

The data managed by SAP Ariba Procurement solutions includes the buyer catalogs, transaction documents (such as requisitions, POs, receipts, invoices), and master data such as user, accounting, and supplier data. The SAP Ariba cloud integration framework enables the integration between SAP Ariba Procurement solutions and SAP ERP or SAP S/4HANA for the exchange of both transactional data and master data.

Data can be extracted and transferred directly between SAP ERP or SAP S/4HANA systems and SAP Ariba Procurement solutions or through a mediated connectivity using SAP NetWeaver Process Integration.

Master Data Integration

Among the master data that SAP Ariba Procurement solutions can import from an SAP ERP system are users, user groups, vendors, accounting information, purchasing organizations, tax codes, currency exchange rates, plant, internal orders, work breakdown structure (WBS) elements, and fund management accounting objects.

The SAP Ariba cloud integration framework supports the integration of these without requiring complex customizations or mappings. Options for master data integrations are:

- **Direct Connectivity:** File-based through comma-separated value (CSV) file integration
- **Mediated Connectivity through SAP NetWeaver Process Integration:** File-based through CSV file integration

For a complete list of master data integrated with SAP ERP and SAP S/4HANA, see the “SAP Ariba Procurement Solution Integration – Supported SAP Master Data” section of the appendix on page 18.

Integrating Transactional Data

On the SAP ERP or SAP S/4HANA side, SAP Ariba Procurement solutions integration for transactional documents is based on SAP BAPI technology. This allows for a fully synchronous integration process, providing real-time integration, validation, and SAP PO number generation all within a single step.

Transactional data can be integrated using the following methods:

- **Direct Connectivity:** File-based through CSV file integration using the SAP Ariba data transfer tool
- **Mediated Connectivity through SAP NetWeaver Process Integration:** Web service-based integration or file-based through CSV file integration using the SAP Ariba data transfer tool

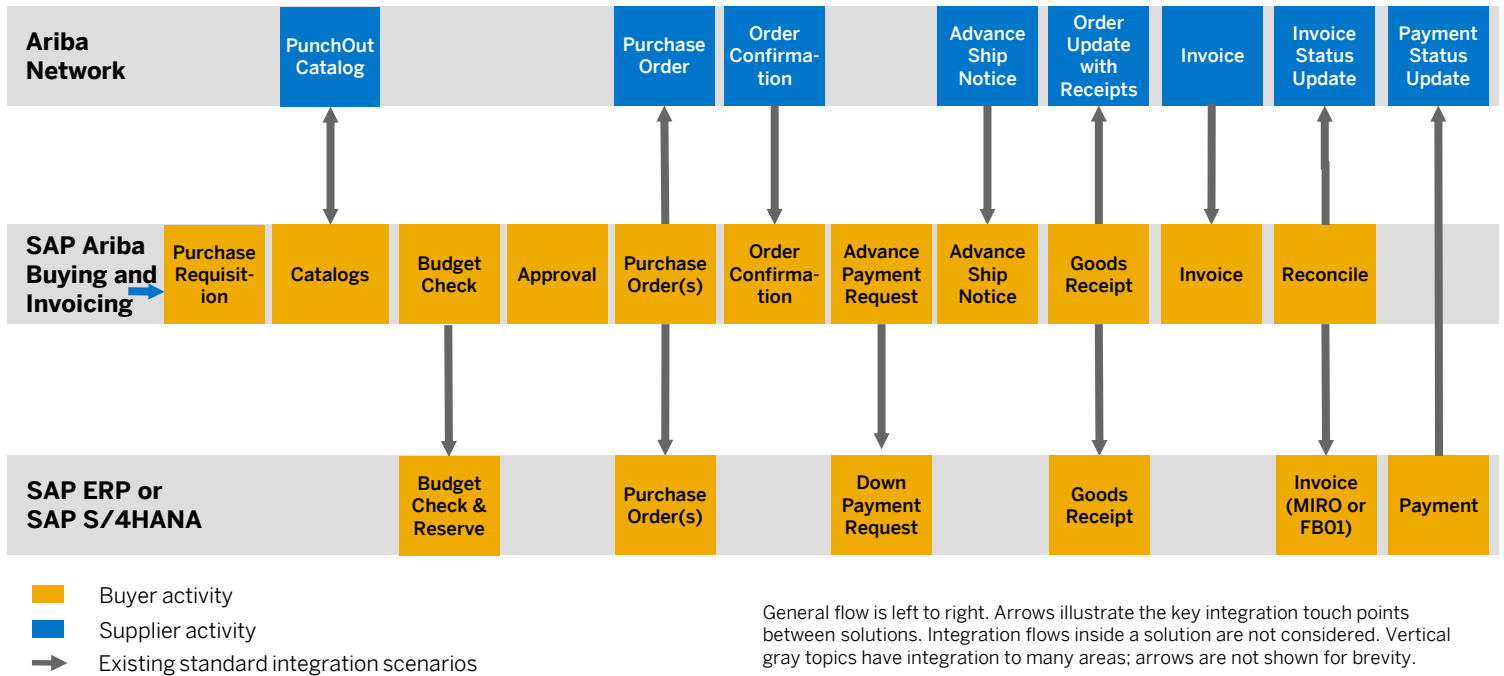
The following process diagram demonstrates a typical integration flow between SAP ERP or SAP S/4HANA and SAP Ariba Buying and Invoicing. The process begins when a user creates a requisition in SAP Ariba Buying and Invoicing. The user can optionally check real-time availability of budget in SAP ERP or SAP S/4HANA and reserve against the budget. When the requisition is fully approved, one or more POs are created that are sent to the suppliers on Ariba Network and to SAP ERP or SAP S/4HANA. Depending on the integration technology the user chooses from the SAP Ariba cloud integration framework, any changes or cancellations to POs in SAP Ariba Buying and Invoicing can be reflected in SAP ERP or SAP S/4HANA in near real time. If receiving is enabled in SAP Ariba Buying and Invoicing, goods receipt information can also be transferred from the SAP Ariba solution to SAP ERP or SAP S/4HANA.

Suppliers typically create invoices on Ariba Network by “flipping” a PO into an invoice. Ariba Network’s business rules engine ensures that each invoice meets certain defined criteria. If the invoice passes validation, it is sent to SAP Ariba Buying and Invoicing, where the invoice is either manually or automatically checked (reconciled) against receipts and the PO in a three-way match. If the invoice is successfully reconciled, it is sent to SAP ERP or SAP S/4HANA as an approved invoice for payment.

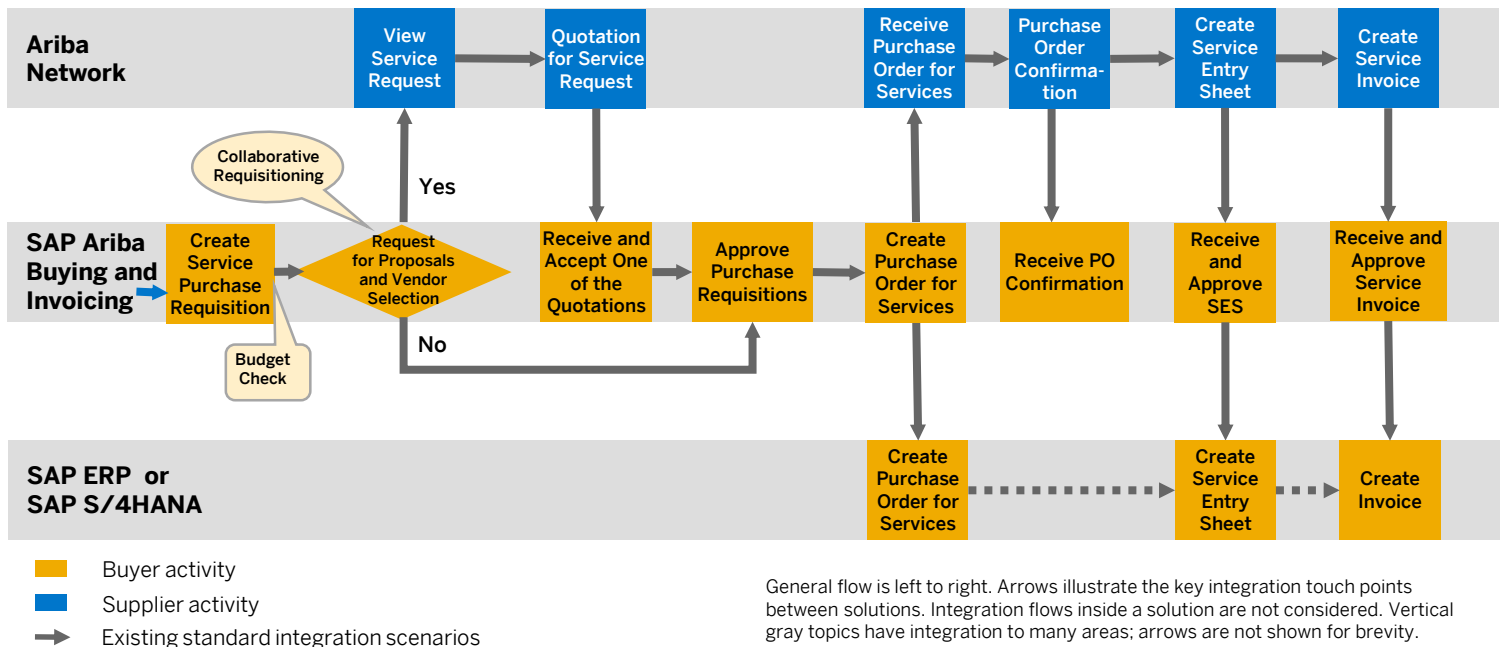
Service Procurement Integration

Service procurement is now integrated among SAP ERP and SAP S/4HANA, Ariba Network, and SAP Ariba Procurement solutions. The process begins with service requisitions. Service items support a single level of sub-items to represent service lines. The supplier has to create the service entry sheet and submit it in Ariba Network. After the buyer receives and approves the service sheet document, the supplier in Ariba Network can flip the approved service sheet document to create an invoice.

SAP ARIBA BUYING AND INVOICING – BASIC SCENARIO



SAP ARIBA BUYING AND INVOICING – SERVICE PROCUREMENT INTEGRATION



SAP ARIBA CLOUD INTEGRATION GATEWAY

The SAP Ariba Cloud Integration Gateway, enabled by SAP Cloud Platform Integration redefines how our customers integrate with the world's largest B2B network. It gives our suppliers a simple and efficient way to integrate with Ariba Network using standards other than cXML. It reduces the deployment time for suppliers to integrate with Ariba Network. This is currently only available for Ariba Network supplier-side integration.

Standard Features

Connect once: The SAP Ariba Cloud Integration Gateway changes how suppliers integrate and manage their integration, enabling them to connect once to Ariba Network and manage a single configuration based on their core transaction capabilities regardless of customer requirements.

Single sign-on with Ariba Network: Using the single sign-on functionality, users can access their SAP Ariba Cloud Integration Gateway account from their Ariba Network account.

Standard(s) mapping repository: The SAP Ariba Cloud Integration Gateway supports various standards that give suppliers the flexibility to use non-cXML data formats to transact with their customers on Ariba Network. Transactions include purchase orders, order confirmations, advance ship notifications, and invoices.

Connection protocol(s): The SAP Ariba Cloud Integration Gateway supports the AS2 and HTTPS protocols to provide enhanced security for suppliers transacting on Ariba Network. Suppliers can manage their connections by using certificate-based or basic authentication.

Integration wizard: The integration wizard automates complex integration tasks by asking a series of easy-to-answer questions. The answers suppliers provide help the SAP Ariba Cloud Integration Gateway derive transaction configurations. Suppliers can reuse all these configurations for future integrations with other customers.

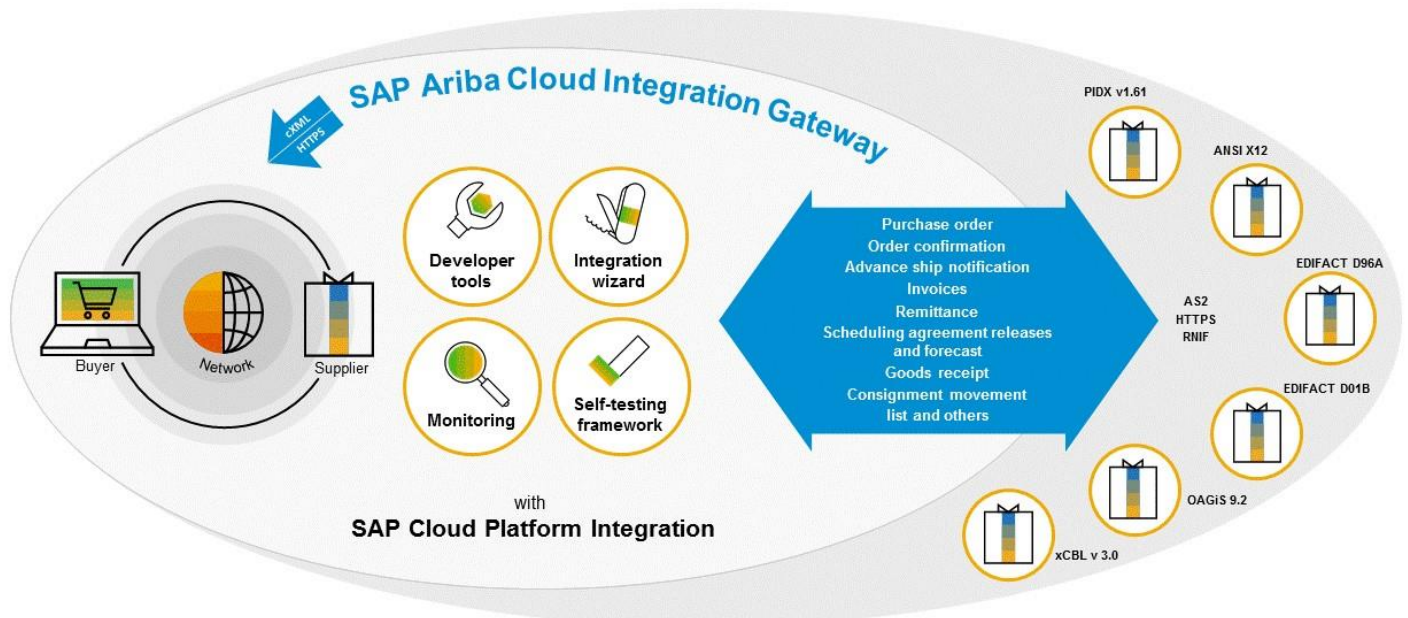
Developer tools: The SAP Ariba Cloud Integration Gateway has various tools that are designed to make integrations with Ariba Network simple. For example, the transformation tool transforms the data and verifies that the data meet customers' requirements. The schema validation tool allows easy validation to ensure that the formatting is accurate and acceptable.

One-click deployment: Once suppliers have verified their integration project, a single-click deployment option deploys the project to production.

Transaction tracker with search capability: The transaction tracker allows easy search and tracking of the status of transactions on Ariba Network. Users can also download the source and destination transactions, including attachment(s), processed by the SAP Ariba Cloud Integration Gateway.

Test Central: Test Central offers a new approach on how suppliers should self-test and integrate with Ariba Network. It reduces the overall testing timeframe for suppliers to transact with Ariba Network. Suppliers using Test Central to test integrations can validate connectivity, transformation, and content of the documents before they go live.

SAP ARIBA CLOUD INTEGRATION GATEWAY



THE FUTURE OF SAP: SAP S/4HANA AND THE INTEGRATED BUSINESS NETWORK

SAP S/4HANA is the next-generation business suite product that provides innovative, tightly coupled solutions that support end-to-end business process integration between SAP S/4HANA core components and SAP software-as-a-service (SaaS) cloud solutions, such as:

- **SAP Ariba** procurement and sourcing solutions – Ariba Network connects more than 2.5 million buyers and sellers, generating over U.S. \$1 trillion in commerce annually.
- **Concur** travel and expense (T&E) – Concur's travel and expense ecosystem consists of 20,000 customers, 30 million end users, and hundreds of developer partners, all processing more than U.S. \$50 billion worth of T&E spend a year.
- **SAP Fieldglass** contingent labor and services – More than 7 million users and 40,000 suppliers are managing over U.S. \$25 billion in global spend annually using SAP Fieldglass solutions, placing 1.4 million contingent workers in over 100 countries.

SAP S/4HANA can be deployed on premise or in the cloud. It is built on the SAP HANA core, where the basic setup, master data, and core processes are defined and applied, and around which everything else can be built in a sustainable way.

Today, SAP ERP integration to SAP Ariba cloud solutions is made possible via SAP ERP add-ons and the Ariba Network adapter for SAP NetWeaver. With SAP S/4HANA, the add-ons become the basis for native integration support. Currently, the SAP S/4HANA 1511 On Premise and 1610 On Premise versions are supported.

SAP Ariba will continue to provide integration support through the SAP NetWeaver Process Integration adapter and upcoming SAP HANA Cloud integration releases.

Upcoming SAP Ariba Cloud Integration Enhancements

SAP Ariba will deliver major innovations in its next cloud integration release to help customers integrate their back-end SAP ERP and SAP S/4HANA systems and reduce the time needed to integrate SAP Ariba solutions.

On the Ariba Network buy-side, the key planned integration enhancements are:

- SAP Ariba Cloud Integration Gateway for Ariba Network buy-side integration
- Collaborative supply chain - Quality management
- SAP S/4HANA 1709

The key planned integration features on the SAP Ariba Cloud Integration Gateway for the supplier side include partner portal and support for EANCOM and GUSI.

On the SAP Ariba applications side, the key planned integration enhancements are:

- SAP Ariba Cloud Integration Gateway
- Account assignments
- Support for requisition and goods receipts
 - Service hierarchy
 - Pricing conditions
 - Spend visibility
 - Service master
 - Scheduling agreements
 - SAP S/4HANA 1709
 - Inventory check and reservation
 - Item categories

APPENDIX

Integration Message Formats

SAP ERP Protocols	SAP Ariba Protocols	EDI	Industry Standards	Security
<ul style="list-style-type: none"> • IDocs • RFCs • Web Services (SOAP) • Enterprise Services (ESOA) 	<ul style="list-style-type: none"> • cXML • MIME 	<ul style="list-style-type: none"> • EDIFACT • ANSI X12 	<ul style="list-style-type: none"> • PIDX • OAGiS 	<ul style="list-style-type: none"> • TLS 1.1 • TLS 1.2

Supported SAP Systems

SAP ERP Releases	SAP NetWeaver PI Releases	SAP MDG Releases	SAP S/4HANA	SAP Cloud Platform
<ul style="list-style-type: none"> • SAP ERP 6.0 • SAP ERP 6.0 EhP2 • SAP ERP 6.0 EhP3 • SAP ERP 6.0 EhP4 • SAP ERP 6.0 EhP5 • SAP ERP 6.0 EhP6 • SAP ERP 6.0 EhP7 • SAP ERP 6.0 EhP8 	<ul style="list-style-type: none"> • SAP NetWeaver 7.1 • SAP NetWeaver 7.3 • SAP NetWeaver 7.4 • SAP NetWeaver 7.5 	<ul style="list-style-type: none"> • SAP Master Data Governance 6.1 	<ul style="list-style-type: none"> • 1503 On Premise • 1511 On Premise • 1605 On Premise • 1610 On Premise 	<ul style="list-style-type: none"> • SAP Cloud Platform Integration *

* Network supplier-side integration only

SAP Ariba Cloud Integration Supported Solutions and Capabilities

Ariba Network	Strategic Procurement	Operational Procurement
<ul style="list-style-type: none"> • Supply Chain Finance Capability • Ariba Collaborative Commerce • SAP Ariba Commerce Automation (Includes Invoice and PO Automation) • SAP Ariba Supply Chain Collaboration • SAP Ariba Contract Invoicing • Discounting Capability • Payment Capability • Quote Automation 	<ul style="list-style-type: none"> • SAP Ariba Collaborative Sourcing (Transaction Data) • SAP Ariba Sourcing (Transaction Data) • SAP Ariba Spend Analysis • SAP Ariba Contracts • SAP Ariba Supplier Information and Performance Management • Ariba StartSourcing • Ariba StartContracts 	<ul style="list-style-type: none"> • SAP Ariba Buying and Invoicing • SAP Ariba Buying and Invoicing, Multi-ERP Edition • SAP Ariba Buying • SAP Ariba Buying, Multi-ERP Edition • SAP Ariba Catalog • SAP Ariba Invoice Management

Ariba Network Integration – Supported Transactions – Buy Side

<ul style="list-style-type: none"> • Standard PO • Subcontract PO • Consignment PO • Change PO • Cancel PO • Order Enquiry request • Order Confirmation • Inbound Ship Notice • Outbound ASN • Component consumption 	<ul style="list-style-type: none"> • Inbound Receipt • Outbound Receipt • Service Entry Sheet • Service Entry Status update • Invoice (incl. Credit Memo) • Invoice status • Carbon copy (CC) invoice • Quote request • Quote message • Payment instruction file 	<ul style="list-style-type: none"> • Outbound payment remittance • Inbound remittance advice • Remittance Cancellation • Inbound Payment proposal • Outbound Payment proposal • Scheduling Agreement (incl. Forecast/ Delivery Schedule and JIT) • Product Replenishment • Transfer movement / product activity
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Ariba Network Integration – Supported Transactions – Sell Side

- | | | |
|-------------|-------------------------|--------------------------------|
| • PO | • Order Confirmation | • Remittance Advice |
| • Change PO | • Invoice | • Delivery Schedule (Forecast) |
| • Cancel PO | • Shipment Notification | • Delivery Schedule (JIT) |

SAP Ariba Sourcing Solution Integration – Supported Master Data

- | | | |
|---------------------------|----------------------------|--|
| • Purchasing Organization | • Supplier (Inbound) | • Material Groups (Product Categories) |
| • Purchasing Groups | • Supplier (Outbound) | • Material Master |
| • Company Code | • Plants | • Material Master Plant |
| • Payment Terms | • Incoterms | • Bill of Material |
| • Purchase Info Record | • Manufacturer Part Number | |

SAP Ariba Sourcing Solution Integration – Supported Transactions

- | | | |
|-----------------------|--|--|
| • RFQ (Quote Request) | • Award (Award to PO and Award to Outline Agreement) | • Contract Workspace/Outline Agreement |
| • Quote Message | | |

SAP Ariba Procurement Solutions Integration – Supported Master Data

- | | | |
|---------------------------------------|--|------------------------------------|
| • Account Category Field Status | • General Ledger | • User Data |
| • Account Categories | • General Ledger Languages | • User Group Mapping |
| • Assets | • Plant | • WBS Elements |
| • Company Codes | • Plant to Purchasing Organization | • Company Code WBS Element Mapping |
| • Company Code Internal Order Mapping | • Purchase Groups | • Remittance Locations |
| • Cost Centers | • Purchasing Organizations | • Payment Terms |
| • Cost Center Languages | • Purchasing Organization Supplier Combo | • Contracts |
| • Currency Conversion Rates | • Tax Codes | • Fund Management Objects |
| • ERP Commodity Codes | • Supplier Data | • FM Derive |
| • Internal Orders | • Supplier Location | |

SAP Ariba Procurement Solutions Integration – Supported Transactions

To SAP ERP

- PO (Material as well as Service Items)
- Change PO (includes Cancel PO)
- Close PO
- Receipts
- Service Entry Sheet and SES Status
- Invoices
- Payment Request (Okay-to-Pay)
- Expense Report
- Budget Check
- Purchase Requisition (for Fund Reservation)
- Catalog

From SAP ERP

- PO Status
- Change PO Status
- Receipt Status
- Invoice Status
- SES Response
- Remittances
- Advance Payment Requests
- Advance Payments
- Cancel Advance Payment
- Requisition
- Change Requisition

Integration Partners

Technology Partners

- Dell Boomi
- Liaison Technologies

Value-Added Partners

- Discover (Payments)
- OpenText (Invoice Management)
- Prime Revenue (Supply Chain Financing)

About SAP Ariba Solutions

SAP Ariba solutions support the marketplace for modern business, creating frictionless exchanges between millions of buyers and suppliers across the entire source-to-pay process. Our market-leading solutions enable companies to simplify collaboration with their trading partners, make smarter business decisions, and extend their collaborative business processes with an open technology platform. More than 2.5 million companies use SAP Ariba solutions to connect and collaborate more than US\$1 trillion in commerce on an annual basis. To learn more about SAP Ariba solutions and the transformation they are driving, visit www.ariba.com.

www.sap.com/contactsap

<http://www.ariba.com/about/contact-us>

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