



Intelligent Technologies

Transform Procurement with SAP® Solutions

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Executive Summary

Today, many SAP customers running software such as the SAP® Supplier Relationship Management application want to understand which solution set SAP recommends to address their new challenges. SAP embraces digital transformation with SAP S/4HANA® as the digital foundation and supplier collaboration, guided buying, and collaborative sourcing enabled by SAP Ariba® and SAP Fieldglass® solutions. This paper targets our enterprise customers and provides an overview of how they can transform their procurement functions to **stay relevant and focus on value for their businesses.**



When transforming procurement, customers need to identify their personal path for moving from where they are currently to their target state. There are three key considerations:

- Value realization – The main objective of procurement transformation is to evolve the role of procurement and increase the value the function adds to the organization. Every step in the transformation process needs to be supported by a clear business case. Customers can realize value only if the new systems and processes are consistently deployed globally across all key types of spend and diverse users in their organization.
- End-to-end processes – When transforming procurement, customers should focus on end-to-end processes as opposed to individual solution components. Customers can maximize value by enabling industry-specific, integrated processes that span different software components.
- Choice – Every customer situation and objective is different, and so are their IT strategies, existing infrastructure, and transformation timeline. This is why SAP built a procurement strategy that works for customers of multiple sizes and industries. Customers have three main deployment options, depending on their current situation.

SAP S/4HANA^{®*}, SAP Ariba[®] solutions, and Ariba Network

- Customer is driving a digital IT transformation agenda (including procurement transformation).
- Procurement will be tightly connected to the back end in a single end-to-end system.
- Our recommendation is to manage procurement processes with SAP Ariba and SAP Fieldglass[®] solutions and integrate with SAP S/4HANA for core processes – whether single or multiple back-end systems based on business needs.

SAP S/4HANA^{*} and Ariba Network

- Customer is focused on transforming IT with an ERP suite and expects essential procurement process support as part of the core foundation.
- The main focus is digital IT transformation.
- Customer typically has less than US\$1 billion in revenue.

SAP Ariba and SAP Fieldglass[®] solutions and Ariba Network

- Customer's primary business case is procurement transformation.
- Strategic sourcing and supplier management are critical to business goals. Operational procurement scope is indirect; maintenance, repair, and overhaul (MRO); and services spend.
- IT has no immediate plan to go to SAP S/4HANA. Customer's system landscape may be heterogeneous and have multiple ERP instances across the globe.

*A customer's IT strategy will drive our recommendation for either SAP S/4HANA or SAP S/4HANA Cloud.

Trends in Procurement

The procurement function goes through constant change as chief procurement officers (CPOs) continue to deliver bottom-line savings – while increasingly focusing on value creation for the company. CPOs need to work with their teams and a wider stakeholder community to respond to the following trends that disrupt the way they currently run the procurement function:

- **Experience optimization** – Both professional and casual users expect an easy, consumer-grade experience across applications and devices. Procurement can meet this demand and deliver value to the enterprise by tapping into a wide array of resources, including marketplaces that offer extensive choice and value plus built-in purchasing compliance; timely data access to drive intelligent choices; feedback capture and response to support relevant and impactful engagement; and technologies such as voice-activated purchasing, natural-language search, virtual assistants, and sensor-driven automated ordering and decision support.
- **Networks and ecosystems** – Access to multienterprise networks with ecosystems of trading partners connects the organization to a thriving community of value-added processes, content, and services, enabling more resilient supply chains.
- **Support for multiple spend types** – Using a single system to address direct, indirect, services, and critical MRO offers many advantages, including simplification of the IT landscape, consistent processes that can scale globally, and better visibility and control across all enterprise spend.
- **Data and insights** – Harmonizing data from diverse sources delivers new insights and value faster and more systematically.

- **Digital technologies transforming procurement** – Procurement must embrace emerging technologies such as deep learning, artificial intelligence, predictive analytics, blockchain, and the Internet of Things (IoT) to service fast-changing business needs and create supply stability to support business growth.
- **Growing pace of business, rapid economic changes, and increased regulatory requirements** – Supplier risk and contingency and resilience management must become a part of the procurement process to avoid reputational damage and business disruption.
- **Purpose** – Consumers prefer companies that “do good.” Procurement needs to help the business achieve sustainable transformation by supporting responsible spend management practices that drive socially conscious, environmentally impactful, and ethically transparent supply chain relationships.

KEY VALUE DRIVERS

Most of the CPOs we speak with have already achieved a high degree of spend under management. Today, they are focusing on two main areas:

- **Providing more value to the business while reducing risks and exposures** – Engaging with business stakeholders on topics such as evolving from selling products to delivering solutions and services
- **Becoming a strategic advisor** – Monitoring market innovations and connecting innovative new suppliers with engineering to leverage the latest technologies

For more than 40 years, SAP has been working closely with CPOs and CFOs. This helps us deliver best-practice processes and software solutions that allow procurement and finance to continuously improve their value contribution to the company and drive bottom-line impact.

Today, the following applications are widely deployed and support the procurement functions of our customers:

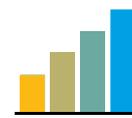
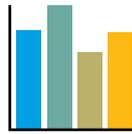
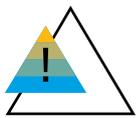
- Materials management component of SAP ERP
- SAP Supplier Relationship Management (SAP SRM)
- SAP Contract Lifecycle Management (SAP CLM)
- SAP Supplier Lifecycle Management
- SAP Sourcing
- SAP S/4HANA Sourcing and Procurement
- Cloud solutions from SAP such as:
 - SAP Ariba Buying
 - SAP Ariba Buying and Invoicing
 - SAP Ariba Invoice Management
 - SAP Ariba Sourcing
 - SAP Ariba Contracts
 - SAP Ariba Discount Management
 - SAP Ariba Supplier Risk
 - SAP Ariba Supplier Lifecycle and Performance
 - SAP Ariba Spend Analysis
 - SAP Ariba Supply Chain Collaboration for Buyers
 - Ariba Network
 - SAP Fieldglass Services Procurement
 - SAP Fieldglass Contingent Workforce Management
 - SAP Fieldglass Worker Profile Management



CAPTURING PROCUREMENT VALUE

The business cases that procurement builds around IT projects are usually centered on the same key value drivers that have been used over the past 10 to 15 years. These are the same ones that drove many companies to choose SAP as

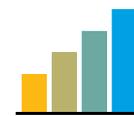
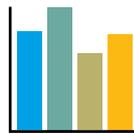
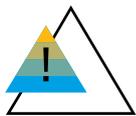
their strategic partner to deliver procurement solutions such as those listed above. What has changed, however, are the practices that CPOs are implementing to capture value, as shown in this table.



Value Driver	Value Capture Today	Value Capture in the Future
Spend under management	Rollout of catalogs to address indirect spend	<ul style="list-style-type: none"> • Employees and functional buyers supported through a guided buying experience • Buying experience that addresses multiple spend channels such as collaborative requisition, catalog buy, “long-tail” spend, and invoice against contract
Inventory management	Just-in-time (JIT) approaches, back ordering, bulk shipments, and maintenance of safety stock to ensure sufficient inventory on hand	<ul style="list-style-type: none"> • Real-time synchronization with multiple tiers of suppliers across the supply chain, maximizing supply chain efficiency • Complete visibility of supply to help reduce inventory levels and mitigate the need for safety stock, increase fill rates, and minimize risk
Costs of the procurement function	Ownership of operative, tactical, and strategic tasks by procurement to drive savings	<ul style="list-style-type: none"> • Operational tasks automated to run electronically • Fewer, more-experienced employees in procurement who are focused on value creation and strategic activities
Maverick spend	Mandated use of system, high-category coverage with prenegotiated catalogs, and free-text POs	<ul style="list-style-type: none"> • Marketplace capabilities that take sourcing and procurement team involvement out of the equation for select categories while offering low prices through economies of scale in the network
Percentage of electronic invoices	Supplier portals for purchase orders and invoices	<ul style="list-style-type: none"> • Business networks enabling collaboration with an ecosystem of trading partners • Fully automated, end-to-end processes
Discount capture rate	Scanning solutions followed by electronic approval workflows	<ul style="list-style-type: none"> • Touchless e-invoicing that provides immediate visibility • Expanded payment terms with supply chain financing, dynamic discounting, and other working capital management tactics
Number of invoices per accounts payable employee or FTE	Processing of all invoices	<ul style="list-style-type: none"> • Perfect purchase order • Electronic processing of invoices, which occurs after rules-engine validation

Procurement is becoming more actively involved in the core business of the company and working more closely with plant managers, heads of supply chain, and other business stakeholders. And leading CPOs will soon look at measuring

their impact with a new set of key performance indicators (KPIs). CPOs should choose or complement their existing procurement platforms based on a product's ability to support them in achieving these new KPIs.



Value Driver

Value Capture Today

Value Capture in the Future

Cost of managing vendor master

Administration through workflow-based processes and controls

- Enabling supplier self-service updates of their information on Ariba® Network
- Actively managing supplier lifecycles enterprise-wide across categories, regions, and business units

New-product lead time

Minor or no supplier innovation triggered by procurement

- Incorporating supplier-driven innovation in new-product development, enhancing competitive advantage
- Engaging suppliers and the procurement team in new-product development and production-part approval processes to drive component price savings, accelerate the procurement cycle, and support faster time to market

Supply chain resilience

Holding inventory and issues resolution through interaction by phone or e-mail

- Choreographing supplier collaboration electronically to optimize planning, manufacturing execution, and inventory levels
- Proactively assessing, monitoring, and managing supplier risk

Asset uptime

Manual ordering

- Sensor-driven ordering of spare parts as part of predictive asset-management scenarios
- Specifying and buying IoT-ready assets
- 3D printing of replacement components

Procurement Solutions from SAP

The integration of SAP S/4HANA with SAP Ariba and SAP Fieldglass solutions enables a tangible step up in performance, speed, agility, visibility, and control.

With SAP S/4HANA as the digital foundation, customers can manage massive amounts of data to run live, with access to real-time digital visibility into crucial details of their operations. SAP S/4HANA covers operational procurement processes, including purchase requisitioning and order processing, invoice processing, order confirmation, and operational contract management supported by real-time, embedded analytics across spend categories.

Digitally transforming procurement processes requires fast innovations in areas such as user experience, supplier collaboration, and the adoption of intelligent technologies such as machine learning and process automation. This type of digital transformation is enabled by using SAP S/4HANA together with SAP Ariba and SAP Fieldglass solutions in the cloud.

SAP Ariba solutions extend core operational processes, providing full source-to-settle functionality. This includes guided buying, collaborative sourcing and contracting, supplier lifecycle and risk management, discount management, and network-based, end-to-end supplier collaboration to deliver a new, guided, and simplified user experience and collaboration with suppliers over Ariba Network. SAP Fieldglass solutions support services procurement and contingent workforce management by providing extensive visibility and control over this critical and fast-growing area of spend.

Combining SAP S/4HANA with SAP Ariba and SAP Fieldglass solutions provides access and outreach to partners and suppliers outside the four walls of a customer's organization. With their suppliers, customers can collaborate on changed order priorities, track shipments, provide service entries, and share delivery schedules, forecasts, and inventory across the extended supply chain. These capabilities enable real-time collaboration that reduces supplier and supply chain risks.

With SAP S/4HANA, SAP Ariba solutions, and SAP Fieldglass solutions, SAP offers the most complete portfolio (see [Figure 1](#)) to manage the entire source-to-settle process:

- **It has breadth.** It can manage each step of this process – from sourcing, through procurement, to payments.
- **It has depth.** It can manage diverse spending and expense types – direct, indirect, services, MRO, capital projects, and contingent labor.
- **It has reach.** It connects and allows collaboration between buyers and a broad network of partners and trusted suppliers.
- **It has intelligence.** It makes customers aware of potential business-critical situations, recommends how to solve these situations, offers predictive analytics, and automates business processes.

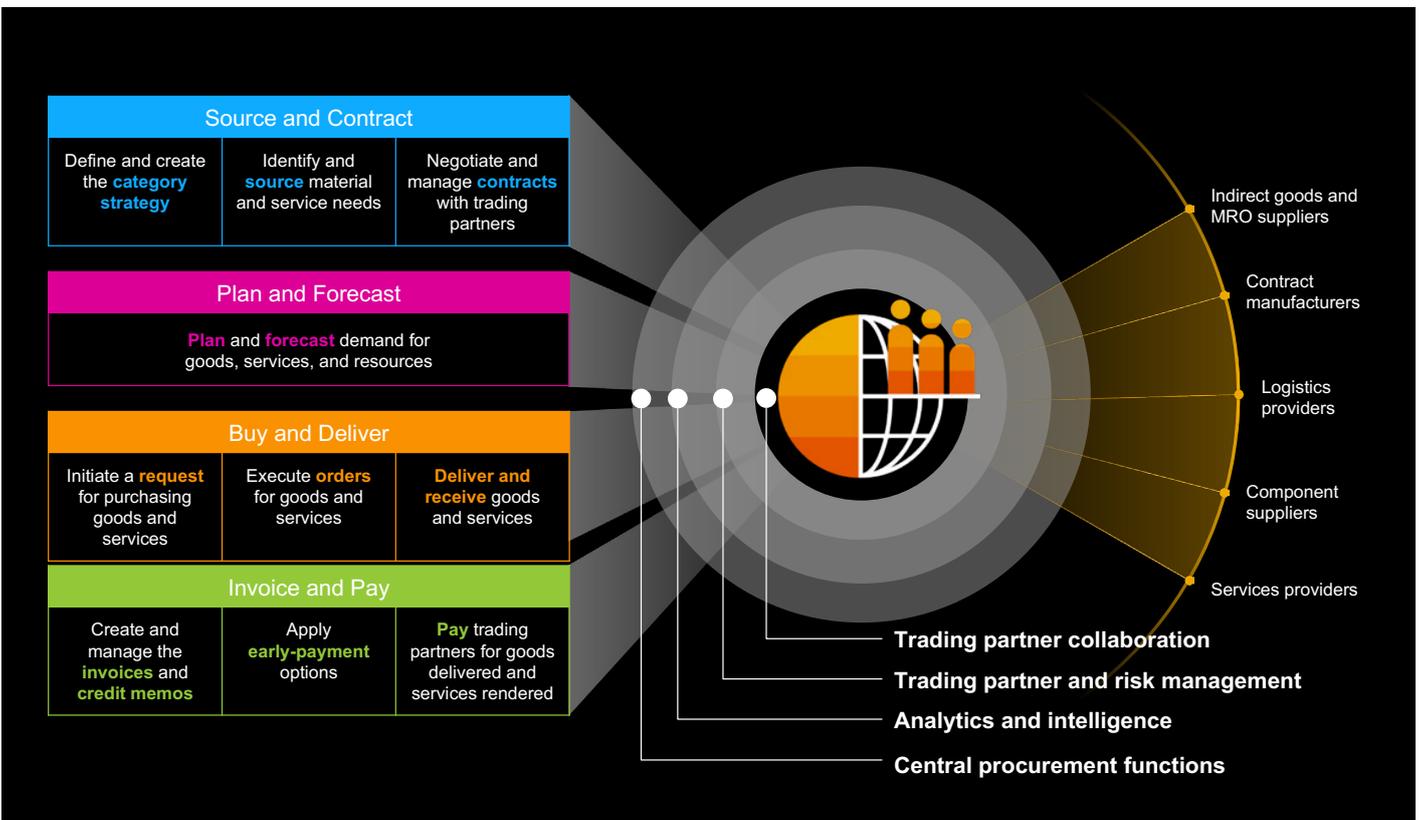
CLOUD EXTENSION POLICY

SAP customers have the flexibility and choice to adapt to their evolving business needs by changing their existing on-premise SAP solution infrastructures. Customers that have licensed the SAP ERP, SAP SRM, SAP CLM, SAP Supplier Lifecycle Management, or SAP Sourcing applications can work with their SAP account executives to leverage our cloud extension policy. They can decide to reallocate elements of their installed on-premise solutions to SAP Ariba solutions, SAP S/4HANA Cloud, or SAP Fieldglass solutions, replacing the affected on-premise licenses and maintenance agreements with public cloud subscriptions.

Customers are asking SAP for recommendations on how to best take advantage of the continuous stream of innovations delivered with SAP S/4HANA and SAP Ariba and SAP Fieldglass solutions. They also want to know how this relates to their

current SAP software implementations. Over the next pages, we will guide you through our recommendations along the source-to-pay process.

Figure 1: An Intelligent Source-to-Pay Process



Trading Partner Collaboration

All processes across sourcing, direct and indirect procurement, and payments are natively connected to Ariba Network in the following way:

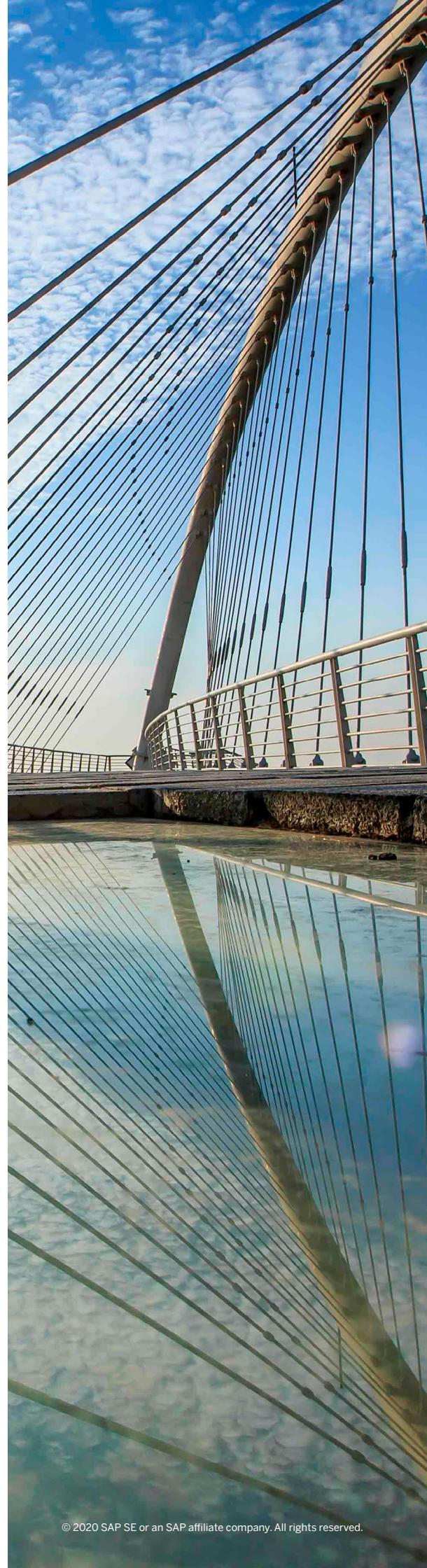
- Most processes require supplier collaboration and must match the process of the supplier: sourcing needs to match with the supplier's sales process, buying with the supplier's dispatch process, and paying with the supplier's receivables process.
- The network is key to automating business processes. It goes beyond transmitting documents to understanding context, checking compliance, and returning to sender when agreed-upon business rules are not met.
- The benefits of automated collaboration can only be achieved with a high level of adoption. This, in turn, requires a user experience that people gravitate to and a service to intuitively and quickly onboard suppliers at scale.

RECOMMENDATION

Customers should replace supplier self-services in SAP SRM as well as slow and costly paper-based processes by automating operational procurement with supplier collaboration over Ariba Network.

Customers should automate invoicing, payment, and discounting processes through Ariba Network.

Customers should also use new supply chain collaboration features that extend Ariba Network beyond purchase order and invoice collaboration to supply chain processes such as forecast and commit, consignment, scheduling agreements, returns, contract manufacturing with component shipments and consumptions, as well as inventory and quality.



END-TO-END USE CASES

Core Purchasing and Invoice Collaboration

Core purchasing processes in SAP S/4HANA, such as purchase orders, goods receipts, and invoices, can be extended with supplier collaboration through Ariba Network.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Forecast Collaboration

The demand plan is provided to the supplier for forecasting and committing, which results in a constrained plan.



Standard integration delivered by SAP between SAP S/4HANA, the SAP Integrated Business Planning for Supply Chain solution, and SAP Ariba Supply Chain Collaboration for Buyers through Ariba Network

Supply Chain Order Collaboration

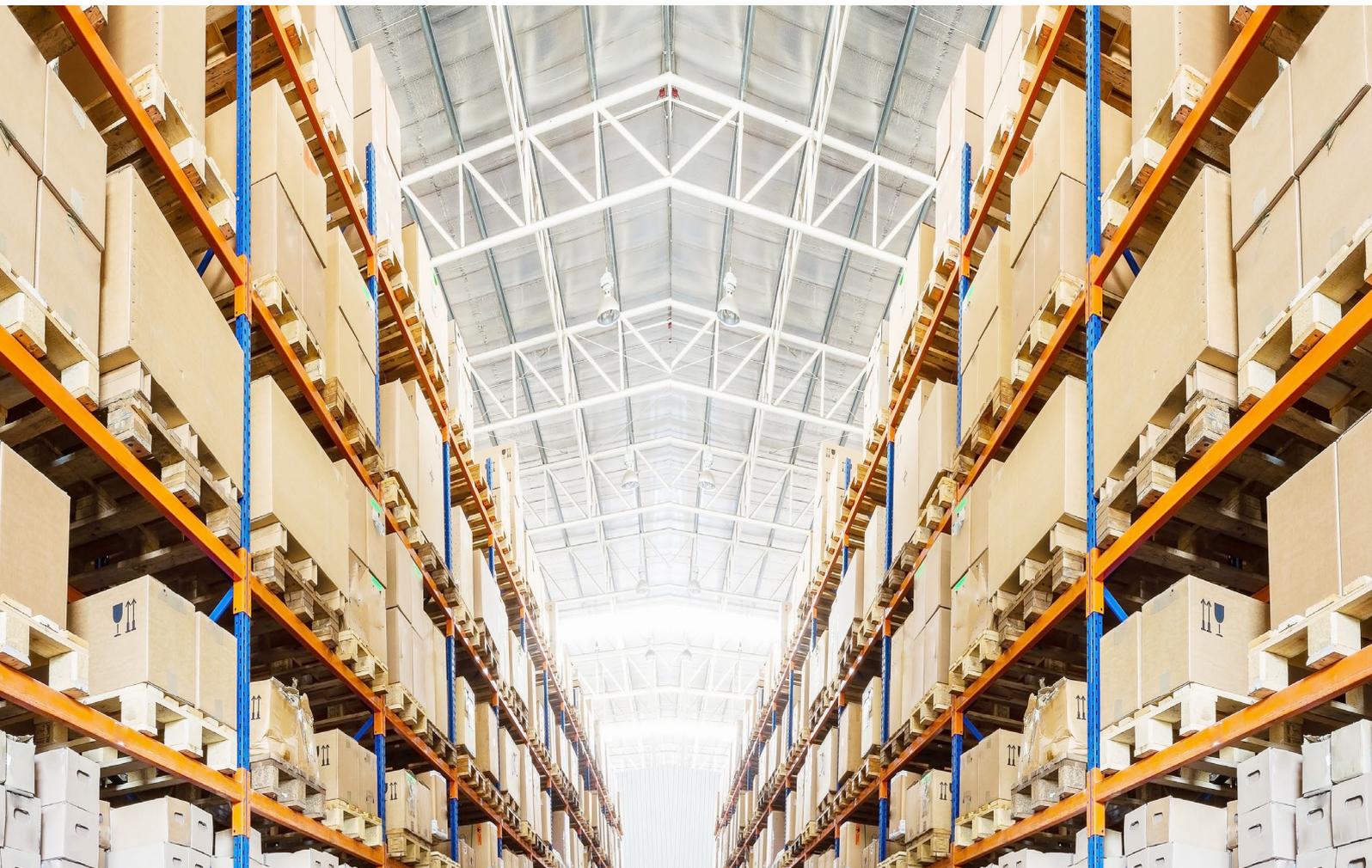
The material requirements planning (MRP) run triggers a purchase order, and the supplier continuously provides updates on delivery progress until goods and invoice receipt.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

VALUE CAPTURE

- Savings from reduced FTE and communication costs by automating the catalog management, purchasing, receiving, and routing of invoices for approval and payment
- Savings from touchless invoicing (automating the invoice and reconciliation process and preventing submission of invoices with errors) leading to clean invoices received in SAP ERP or SAP S/4HANA
- Increase in on-time payments and increase in working capital from early-payment discounts and payment-terms optimization
- Improved visibility and collaboration with suppliers, reducing the need to expedite shipments and decreasing unnecessary inventory for safety stock
- Reduced cycle times for order, forecast, inventory, and quality collaboration scenarios with suppliers



Trading Partner Management

All processes across sourcing and procurement require collaboration with business partners, and successful companies manage these relationships very closely.

- **Clean and up-to-date supplier information** is key to executing frictionless processes as well as identifying savings potential through analytics.
- Working with suppliers across their **supplier lifecycles** enables customers to stay close to their most-critical business partners and draw on their innovations. The supplier lifecycle process covers scalable supplier onboarding, qualification, and segmentation, and it enables suppliers to keep their data current.
- Customers can **make procurement more risk aware** by proactively understanding supplier risk and taking corrective actions. As buying organizations, they can use supplier risk insights in every step of their procurement decision-making process.

As a service for customers using Ariba Network, SAP offers the full supplier onboarding process on their behalf.

RECOMMENDATION

Customers – including customers who run the SAP Supplier Lifecycle Management and SAP Sourcing applications – should use the SAP Ariba Supplier Lifecycle and Performance solution to support supplier-side tasks such as registration, onboarding, and qualification of suppliers. The solution can be extended with the SAP Ariba Supplier Risk solution to drive risk-aware procurement.

In case operational procurement is done in SAP S/4HANA, this system keeps the vendor master for operational processes and is the source of internal supplier evaluations (for example, based on quality incidents or delivery performance and individually defined criteria).

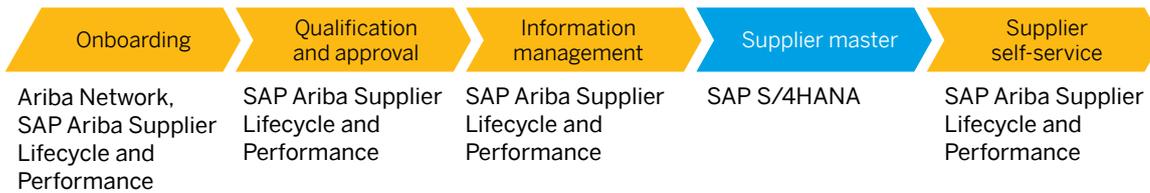
Customers with multiple back-end SAP systems should use the SAP Master Data Governance application as well.



END-TO-END USE CASES

Supplier Onboarding and Qualification

The supplier registers on Ariba Network and provides input for registration and qualification. The supplier master in SAP S/4HANA is then updated to facilitate core process execution.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions, including SAP Master Data Governance, Supplier, in case of multiple back-end systems

Operational Supplier Performance Management

Supplier performance can be evaluated based on product quality, delivery performance, and individually defined criteria.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

VALUE CAPTURE

- Reduced supplier management maintenance costs
- Increased continuity of supply through proactively acting on risk insights
- Optimized supplier performance by combining qualitative supplier qualifications with data on quality and delivery performance
- Increased shareholder value through brand protection and adherence to standards in social responsibility

Trading Partner Risk Management

Supplier risk processes are also tightly integrated across sourcing and procurement and require collaboration with business partners.

- **Segment suppliers based on risk categories and exposure for focused risk alerts and due diligence.** With a complete view of each supplier, customers can make more-timely, contextual, and accurate business decisions – and improve collaboration with their trading partners.
- **Drive compliance through smart, third-party risk assessments** for each supplier engagement.
- **Deliver business, social, and environmental impact** by providing end-to-end transparency to the root causes of risk, enabling compliance controls that matter, and providing insights and action plans for supplier selection, onboarding, and contracting while collecting data at scale to enable future intelligence and benchmarking.

Buying organizations can make their sourcing and procurement teams risk aware by proactively understanding supplier risk and taking corrective actions. This supports smarter, safer decisions prior to purchases by making risk due diligence a natural part of the procurement process. And when buyers are well informed, they'll make decisions that prevent supply chain disruptions, reducing the chance for damage to organizational revenue or reputation.

RECOMMENDATION

Customers should use the SAP Ariba Supplier Risk solution to segment their supply base and perform risk due diligence on targeted suppliers.

They can fully understand the risks in their supply base with data provided with integration to SAP S/4HANA, SAP Ariba Supplier Lifecycle and Performance, SAP Ariba Procurement solutions, and Ariba Network.

Customers should conduct intelligent risk-control assessments based on suppliers' inherent risk and then collaborate with them to address residual risk factors. They can drive collaborative risk disposition and remediation to minimize business risk by executing issue management and related action plans.

Proactive risk monitoring and alerts plus ongoing compliance checks can help customers proactively monitor regulatory and legal, financial, environmental, social, and operational risks, and real-time risk insights can help support key procurement decisions.

END-TO-END USE CASES

Supplier Risk Management

Supplier risk is proactively monitored through risk-exposure scoring using internal and external data. Customers can conduct intelligent risk-control assessments and due diligence on targeted suppliers and automatically calculate inherent risk. They can monitor risks through automated alerts or proactive compliance checks and mitigate supplier risk by using issue management, calculating residual risk, and informing the sourcing and procurement team when they make key decisions. They can also manage ongoing supplier lifecycle and performance by using SAP S/4HANA.



VALUE CAPTURE

- Minimal supply chain disruption by proactively acting on risk insights
- Risk insights as a natural part of the procurement decision-making process, as sourcing and procurement professionals become risk aware
- Ability to make more-timely, contextual, and accurate business decisions based on supplier risk exposure
- Increased shareholder value through brand protection and adherence to standards in social responsibility

Source and Contract

One of the key objectives of a purchasing organization is to reduce risk and cost through greater savings opportunities, sourcing efficiency, and contract and supplier compliance. Increasingly, procurement teams are also supporting new-product development and introduction (NPDI) processes by providing earlier visibility into product costs and opportunities to collaborate with suppliers and leverage their innovations.

- **Getting the best prices** is the biggest lever and the way to get measurable value early in the deployment journey to SAP S/4HANA. Procurement has the authority to bundle indirect spend across suppliers. In direct procurement, getting better prices with higher volumes is done in partnership with the engineering team. Early visibility into forecasted production volume and the ability to see historic pricing helps engineers make informed cost-optimization decisions during the design process – the most critical phase to influence product costs.
- **Managing risk** is crucial, and only a collaborative sourcing tool enables customers to engage with suppliers that adhere to the strictest standards of quality, delivery, and integrity.
- **Managing specifications** helps customers know exactly what they're buying. For indirect spend, this is asking stakeholders or analyzing previous spending projects. For direct spend, it is integrating with engineering and planning systems and documents.

RECOMMENDATION

Customers should adopt SAP Ariba Strategic Sourcing Suite and replace current sourcing solutions that are part of the SAP SRM or SAP Sourcing applications. This suite includes capabilities to manage contracts and suppliers as well as the sourcing of materials.

Customers in manufacturing, consumer, and retail industries should use the new, innovative capabilities for direct material sourcing in SAP Ariba solutions.

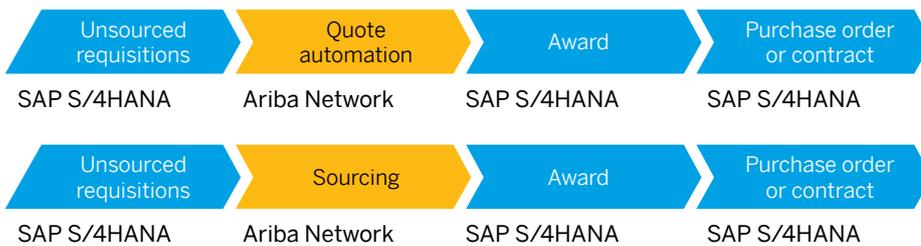
SAP S/4HANA enables users to send basic price requests to suppliers, and it covers operational contract management. Additionally, SAP S/4HANA now contains legal content management for addressing the needs of central legal departments. It is a central layer for linking legal content to objects across all lines of business. This solution can be used for generic legal content. For purchasing-related contracts, however, we recommend you use the SAP Ariba Contracts solution.

Effective contract management is important to ensure that terms negotiated in the sourcing process are executed in ERP-generated purchase orders, and our end-to-end strategic sourcing processes and solutions help make this possible.

END-TO-END USE CASES

Operational Sourcing

The employee buys from an existing supplier and sends an inquiry for current pricing through Ariba Network or SAP Ariba Sourcing for more complex sourcing events.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

Strategic Sourcing for Indirect Goods

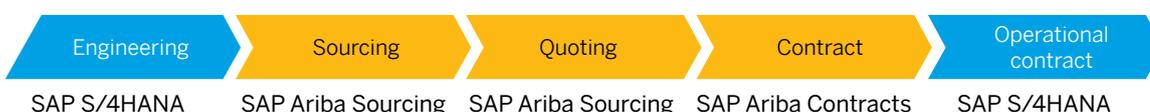
The category manager starts the tendering process to optimize conditions and pushes the final contract into SAP S/4HANA. Customers who choose to extend procurement into the cloud with SAP Ariba Buying or SAP Ariba Buying and Invoicing can also realize unified and smooth operational contract compliance management.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

Direct Materials Sourcing

The sourcing application addresses the needs for both simple and complex sourcing processes. To meet complex or direct sourcing needs, a sourcing engine integrated with procurement planning and product lifecycle, recipe management, and design collaboration tools enables engineering and strategic sourcing managers to collaborate with suppliers on engineering specifications and commercial terms. For simple sourcing requests, the sourcing engine provides self-service capabilities where a request for quote (RFQ) or request for price includes proposed RFQ templates and suppliers.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

VALUE CAPTURE

- Reduced sourcing cycle times
- Increased spend under management with fewer nonsourced and free-text purchase orders
- More favorable pricing through increasing competitiveness of sourcing events, allowing more bids and identifying potential new suppliers and price reductions
- Reduced time to market for new products through better supplier collaboration and the ability to bring sourcing into the product development process earlier
- Lower cost of goods sold through more competitive negotiation of component prices



Buy and Deliver – Indirect Procurement

Indirect demand can potentially come from any person in the company. An immersive, persona-based experience should guide users through the entire procure-to-pay process, empower them with self-service capabilities, and provide system access across all devices so they can spend as little time as possible on procurement tasks and more time on their core responsibilities.

With the IoT being deployed in more and more organizations, demand also comes from all sorts of sensor application scenarios. For example, a shop-floor worker might zap a bar code on the bottom of the bin as she takes the last box of disposable safety gloves. Or a temperature-warning sensor might activate on a piece of equipment, requiring parts to be autoreplenished and an engineer to be dispatched. These scenarios trigger autoreplenishment and supplier collaboration in the SAP applications to automatically reorder components and services, making indirect procurement touchless.

Successful indirect procurement requires the following:

- **High adoption** can be achieved only by making sure the solution is available to all employees and all suppliers are enabled and present in the system.
- **Compliance** is achieved when users are guided seamlessly to the assigned buying channels and preferred suppliers and are motivated to follow company policies – which will minimize the company's exposure to reputational and financial risks.
- **Enterprise-wide spend visibility** is critical to optimizing indirect procurement spend and identifying maverick spend, given the vast number of commodities and fragmented nature in this spend category.

- **Efficiency improvement** can be achieved through the digitalization of paper-based and manual processes, enabling self-services and the adoption of digital technologies to automate repetitive tasks and transactions. This will increase productivity, decrease operating costs, and free up FTE capacity.

RECOMMENDATION

Companies with procurement savings targets or relatively high spend (over approximately \$100 million) should use the guided buying capability for SAP Ariba solutions with purchase order management in SAP S/4HANA or in SAP Ariba Buying:

- Run the guided buying capability for SAP Ariba solutions integrated with purchase order management in SAP S/4HANA when driving a holistic digital transformation agenda across all spend categories and when using the SAP S/4HANA solution for central procurement
- Run purchase order management in SAP Ariba Buying integrated with back-end invoicing processes when driving a line-of-business transformation using back-end SAP or third-party software systems, specifically for nonmanufacturing industries

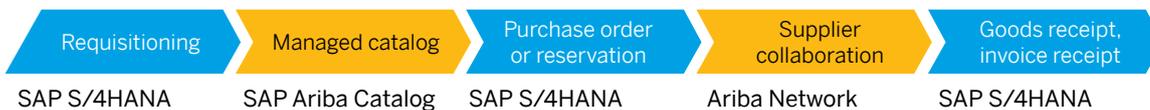
Companies with relatively low indirect spend (below \$100 million), where essential indirect procurement capabilities are sufficient, should move indirect procurement to SAP S/4HANA, complemented by Ariba Network with the SAP Ariba Commerce Automation solution and the SAP Ariba Catalog solution (for catalog buying).

END-TO-END USE CASES

Procurement solutions from SAP offer different options that work for customers of multiple sizes and industries to begin their procurement transformation journeys. The options take into consideration where they are now, where they want to be, and the procurement processes undergoing transformation.

Catalog Buying

Companies with low indirect spend (below \$100 million) and simple indirect procurement processes can extend core purchasing in SAP S/4HANA with functionality in SAP Ariba Catalog. The employee uses a catalog to create a shopping cart and sends the purchase order out.

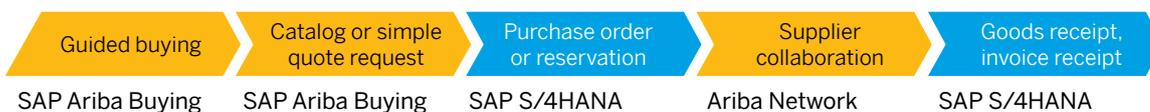


Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

Companies with higher spend (above \$100 million) or procurement saving targets should use the guided buying capability for SAP Ariba solutions. There are two options for guided buying.

Guided Buying (with Purchase Order Management in SAP S/4HANA)

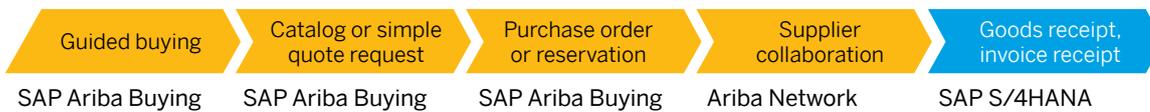
Casual users and functional buyers are guided through the buying process and company policies (for instance, a facilities employee commissioning a new office setup). If an item is unavailable in the catalog, a simple “three bids and a buy” process is started. The purchase order and receiving are done in SAP S/4HANA.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

Guided Buying (with Purchase Order Management in SAP Ariba Buying)

Casual users and functional buyers are guided through the buying process and company policies (for instance, a facilities employee commissioning a new office setup). If an item is unavailable in the catalog, a simple “three bids and a buy” process is started. The purchase order processing is done in SAP Ariba Buying. The data from the solution is sent through technical integration to multiple SAP or third-party back-end systems.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions

IoT-Triggered Buying

Sensors trigger the automatic replenishment of components to achieve hands-free purchase requisitions creation. The requisitions will follow the approval workflows and procurement processes in SAP Ariba Buying. Supplier collaboration will be achieved through Ariba Network, and the data will be sent to the back-end systems for processing.



Project-based integration between SAP S/4HANA and SAP Ariba solutions (the SAP Internet of Things solution)

VALUE CAPTURE

- Improved procurement employee efficiency by pushing the buying process to the casual user and moving from medium-touch to no-touch buying
- Increased spend compliance to contracts, preferred supplier lists, procurement policies, and preferred pricing
- Greater negotiated sourcing savings by reducing maverick spend
- Enhanced spot savings for tail spend through “three bids and a buy” and connectivity to marketplaces
- Reduced total cost of ownership by avoiding use of a separate catalog management tool and eliminating loading of supplier catalogs

GUIDED BUYING CAPABILITY

With a procurement system in place, it is important to capture the value identified in the business case. Specifically, in indirect procurement, the key value levers are:

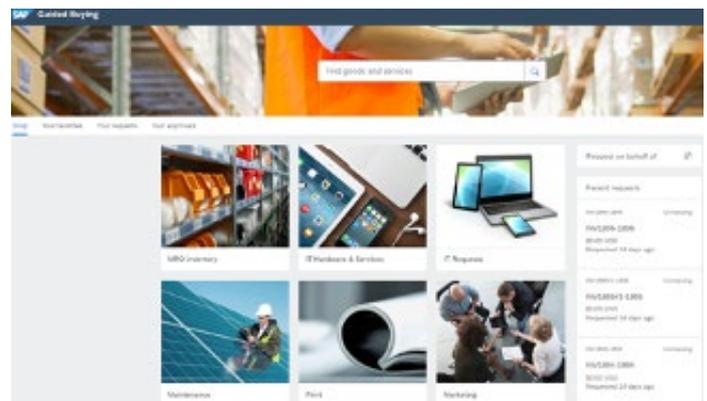
- Persona-based and consumer-grade user experiences to foster intuitive and self-service procurement to drive higher efficiency and adoption rates
- A robust, end-to-end procure-to-pay process to drive buying channel strategy and spend coverage for indirect procurement spend, including MRO and inventory items
- Policy validation and preferred supplier indicator to maximize compliance, while custom forms and tactical RFQs provide flexibility to tailor to companies' unique processes and drive incremental savings

These value levers are addressed by the guided buying capability – a simple, smart, and elegant experience designed to increase user engagement across all spend (see Figure 2). Intuitive guidance and predictive search functionality help people inside and outside the procurement area find the items and suppliers they need, adhering to the rules and policies provided within the context of the buying process. Scalable to meet the needs of functional departments, guided buying enables distributed, compliant procurement for

all users. For instance, facility managers who commission a new workspace setup and run a quick supplier selection are now guided by a buying system that supports improved collaboration with sourcing agents and suppliers to help drive competition and incremental savings. This is a great improvement over complying with procurement processes by capturing a purchase order that is the result of e-mail-based negotiations.

One of our recent innovations was to enable guided buying to provide visibility of MRO (inventory) items mastered in a back-end system from SAP. This helps optimize inventory management by allowing users to order from existing stock rather than purchasing new items from suppliers.

Figure 2: The Guided Buying Capability for SAP® Ariba® Solutions



Key capabilities include:

- Persona-led user experience with customized dashboards
- Clean, user-friendly layout
- One place to procure all goods and services
- Buying-channel strategy through configurable landing pages and tiles
- Consistent compliance across purchase types with adherence to policies and approvals
- Easy and powerful search that can connect to external buying systems
- A help community to publish support resources to users
- In-context collaboration among functional users, procurement experts, and suppliers
- Support for ad hoc requests
- Support for three bids and a buy – self-service quote requests based on policies and thresholds
- Native integration with applications to enable tactical sourcing and spot buying, increasing spend visibility, compliance, and incremental savings
- Support for intuitive receiving and non-PO invoice entries
- Automated direction for users to the right items and preferred suppliers

Guided buying is available at no additional cost to customers using SAP Ariba Buying and runs in combination with SAP S/4HANA (see indirect use cases).

RECOMMENDATION

Customers should implement the guided buying capability in line with the recommendations for indirect procurement. In addition, customers can maximize value and drive adoption by following these recommendations:

- Since guided buying is targeted for casual users and functional buyers, customers should include representation from these groups to set the objectives and iterate the design of guided buying.
- Leveraging the persona-based approach in guided buying provides users with curated content to drive adoption. This starts with reviewing the buying channel strategy and consolidating procurement policies and purchasing forms.



SPOT BUY CAPABILITY

Many CPOs face a common problem: a growing “long-tail” list of one-time, ad hoc suppliers required to support tactical buying needs. Most of these types of buys are simply too expensive to manage with traditional processes – such as sourcing, contracts, and catalogs. Companies are increasingly using online marketplaces to address this need. However, this is introducing a whole new set of challenges that sourcing and procurement professionals must address – establishing policies; ensuring they are getting the best price, quality, selection, and delivery; and perhaps most important, integrating into procurement and ERP from order to invoice to payment and, finally, to reconciliation.

SAP has partnered with leading marketplace providers and key suppliers on Ariba Network to create the Spot Buy capability. It provides regionally curated, high-quality supply for easy purchasing of nonsourced goods from procurement solutions that are based on SAP S/4HANA, SAP ERP, SAP SRM, and SAP Ariba solutions.

How is this a better approach to traditional punchout catalogs?

- **More control and compliance** – Procurement departments have the ability to prefilter marketplace supply and content to make sure Spot Buy adheres to company buying policies, avoiding the potential reputational risk that could result from using controversial suppliers.

- **Increased savings** – Companies can realize higher vendor management cost savings by replacing one-time, ad hoc suppliers with a single Spot Buy vendor. And having a simplified process for finding and buying nonsourced goods eliminates noncatalog request process costs and lengthy response times.
- **Ease of use** – A single search across contracted and marketplace content results in a much better experience for users.

Many sourcing and procurement teams use Spot Buy to address their ad hoc buying requirements. But they also increasingly use the solution to augment, and in some cases even replace, sourced catalogs where the marketplace prices are as good or better than the traditionally sourced content.

RECOMMENDATION

SAP ERP and SAP SRM customers should use the SAP Ariba Catalog solution as a short-term value addition to their existing platforms as they reassess their digital transformation strategies.

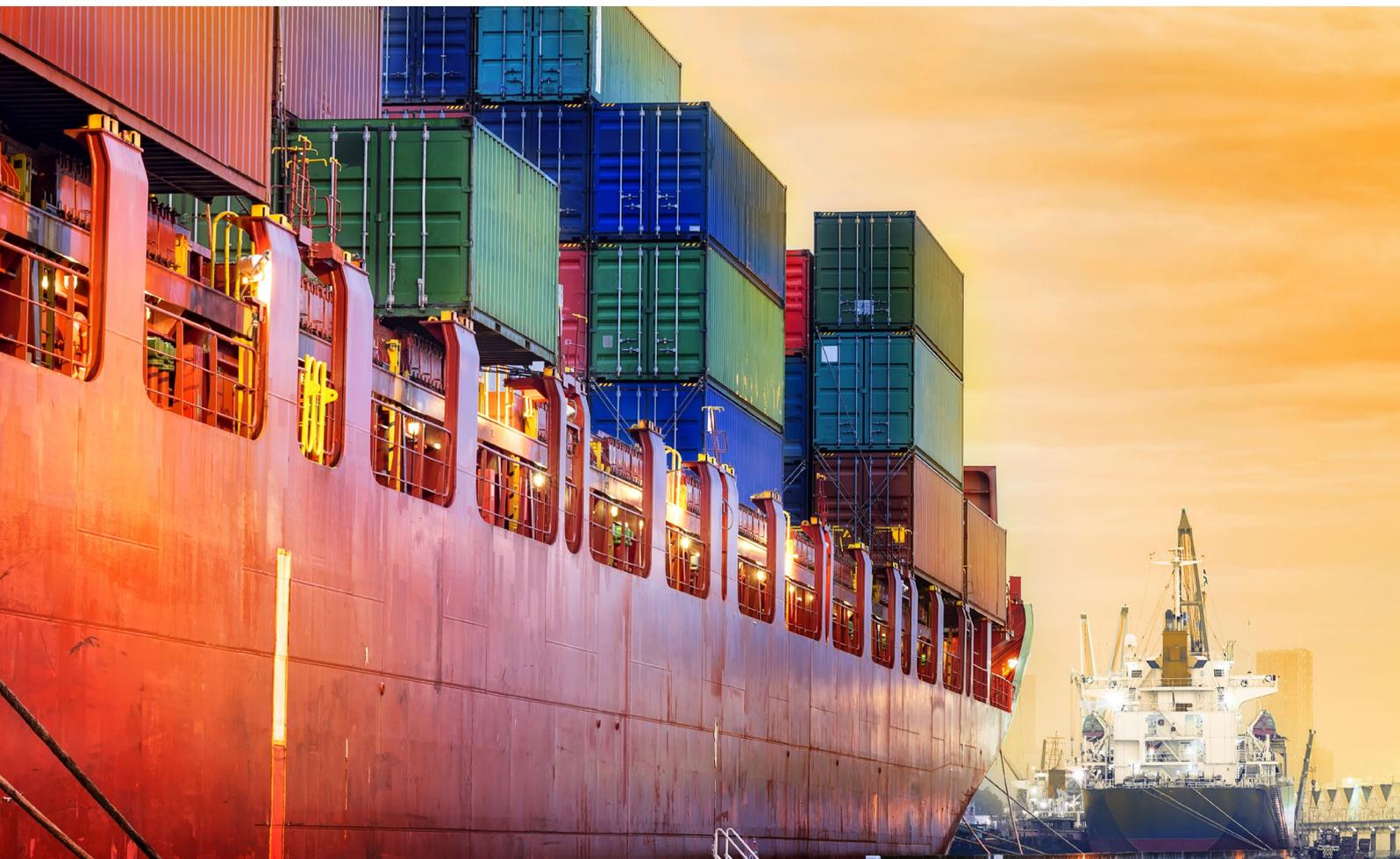
For customers running SAP S/4HANA and SAP Ariba solutions, Spot Buy should be part of the solution blueprint from the beginning – to start buying from day one.

Buy and Deliver – Direct Procurement

Direct procurement addresses spend that is accounted for as cost of goods sold and deals with procurement of raw materials and parts, subassemblies, packaging, outsourced manufacturing services, and similar purchases that all end up in a product sold by the company. Requirements in direct procurement are primarily plan driven, resulting from an MRP run in an ERP system or from more advanced supply planning in planning systems, and thus differ fundamentally from indirect procurement with ad hoc or user-driven requisitioning.

Direct procurement processes are mission-critical in nature, can become quite diverse based on manufacturing environments (such as make to

order, repetitive, or JIT), and show a high degree of variability across different industries. The focus in direct procurement is on high-value, critical parts, with the highest expectations for suppliers to meet requested delivery quantities, dates and times, and prices. Frequently changing plans and exceptions in daily operations require continuous alignment between internal planning, procurement, and logistics departments as well as tight collaboration with suppliers and third-party logistics providers. Global, multitier supply networks inhibit visibility into available supply, which leads to a trade-off between higher safety stocks and inventory carrying costs versus lower fulfillment rates and service levels for end customers due to missed shipments and stockouts.



In such an environment, the impact of disruptions and associated risks arising from any link along the supply chain can become huge. Therefore, a high degree of visibility, automation, speed, and agility, as well as seamless collaboration with trading partners, is needed.

- Visibility into forecasts, orders, commitments, shipments, inventories, and quality information is key for proactive planning and smooth execution of the plan.
- Automation is enabled through process integrations from the planners' back-end systems to all supply chain partners digitally connected to a central network.
- Speed and agility are critical to help ensure flexible and reliable service. Any changes in demand or supply need to be communicated in near-real time along the supply chain to notify trading partners immediately and allow fast responses.
- Collaboration based on end-to-end process orchestrations leads to effective and efficient supply chain management and risk mitigation. For example, in supplier-managed inventory, the responsibility of planning replenishments into a customer's storage location is handed over to the supplier, who has to keep inventory within predefined minimum and maximum boundaries.

The procurement function thus takes a more prominent role in the company by being able to instantly react to exceptions and to proactively mitigate supply chain risks.

RECOMMENDATION

Direct procurement is managed in SAP S/4HANA.

Customers should transfer direct procure-to-pay processes currently implemented with the materials management component in SAP ERP or with SAP SRM to the SAP S/4HANA Enterprise Management solution.

Customers should extend process flows to trading partners on Ariba Network with SAP Ariba Supply Chain Collaboration for Buyers to enable collaborations on forecast, inventory, orders, consignment, contract manufacturing, and quality. They should also integrate with SAP Ariba Solutions for Direct Spend to better leverage supplier innovations, improve designs at reduced costs, and speed up the product innovation lifecycle.

END-TO-END USE CASES

Plan-Driven Replenishment

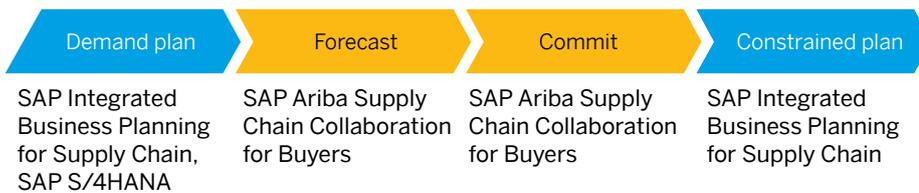
The MRP run triggers a purchase order to refill stock in time for manufacturing execution.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Forecast Collaboration

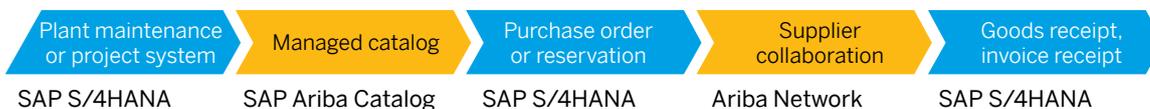
The demand plan is shared as a forecast with suppliers to receive a commitment, which in turn can be used as a constraint in the planning system.



Standard integration delivered by SAP between SAP Integrated Business Planning for Supply Chain and SAP Ariba Supply Chain Collaboration for Buyers

Plant MRO Procurement

A shortage of materials triggers the creation of a purchase order to replenish the materials.



Standard integration delivered between SAP S/4HANA and SAP Ariba Procurement solutions as well as Ariba Network

VALUE CAPTURE

- Maximized process efficiency through 100% plan-driven process automation
- Reduced inventories
- Increased customer fill rates
- Increased asset uptime by reacting to material shortages in a timely manner
- Improved visibility and collaboration with trading partners
- Improved compliance for direct and MRO spend

Buy and Deliver – Services Procurement and External Workforce Management

Organizations are increasingly turning to the external workforce – service providers and temporary or contract labor – to get work done. The use of the external workforce can be categorized into the following four scenarios:

- **Time-based services** include any type of outsourced service or temporary labor engagement that is charged as time and materials and captured using a time card or other time-capture or gate pass system. In this scenario, licenses and credentials are verified, and workers are onboarded and offboarded. Customers generally supervise workers and must comply with tenure policies in countries that are regulated. For example, a maintenance crew provides a range of services and is paid based on the hours worked and the role performed.
- **Activity-based services** are billed as fees or activity units based on rate cards that are generally prenegotiated in a contract or housed in a master service agreement. The process is initiated using a work order or service order and supported through a limit order or as releases against a contract. In this scenario, roles or crafts are commonly specified (for example, technicians, electricians, or welders), and the workers are supervised by their supplier. Additionally, workers may be identified, onboarded and offboarded, and monitored for safety or security purposes. Examples include scheduled crews performing work during a turnaround or shutdown or workers painting a corridor or installing scaffolding. In some cases, unplanned materials might be required to complete the activity, such as a service technician replacing cabling during an inspection.

RECOMMENDATION

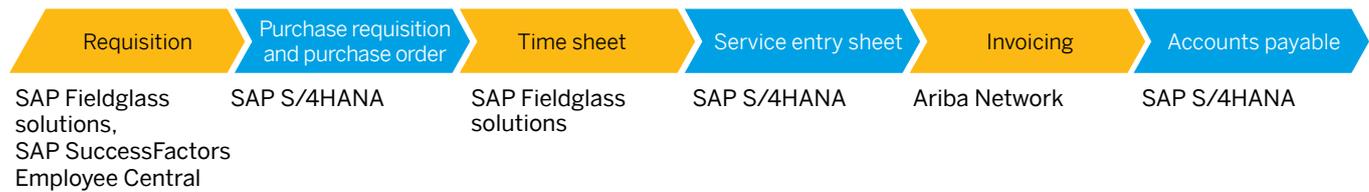
From the simple to the complex, SAP Fieldglass solutions accommodate the full range of ways in which customers can engage with service providers and the external workforce. Whether customers need to supervise temporary workers or manage complex, multiscenario projects that integrate with the guided buying capability in SAP Ariba solutions, SAP Fieldglass solutions cater to every use case that has an external labor component.

- **Deliverable-, milestone-, and schedule-based services** are usually initiated using a statement of work (SOW). In this scenario, predefined activities are tracked against a delivery date. Customers typically monitor the amount of time needed to complete the work, and workers may be tracked along the way. For example, a research firm conducts a survey and is paid per milestone, or office cleaning services are performed on a defined schedule.
- **Complex services** projects require the procurement of external service providers and indirect goods that are managed against a single project budget. In this scenario, multiple purchase orders and orders with different suppliers are used for the various components of the project. Capitalized goods or materials are typically procured using SAP Ariba solutions, and services are managed with SAP Fieldglass solutions. Examples include the construction of a building or installation of servers, both of which require the procurement of indirect goods as well as external labor to implement them.

END-TO-END USE CASES

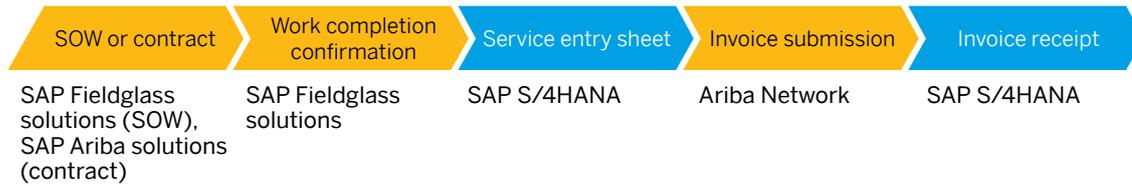
Time-Based Services

In this scenario, the process begins with a requisition initiated with SAP Fieldglass or SAP SuccessFactors solutions or SAP S/4HANA.



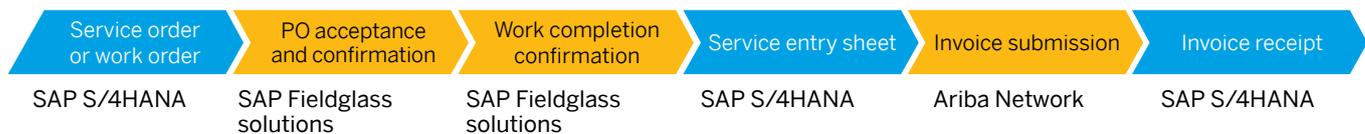
Activity-Based Services

In this scenario, the process begins with an SOW, if using SAP Fieldglass solutions, or a contract, if using SAP Ariba solutions.

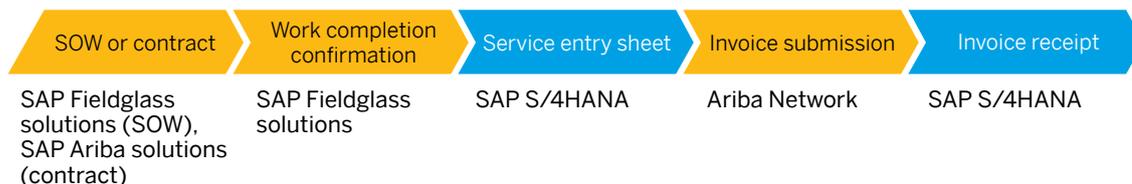


Deliverable-, Milestone-, and Schedule-Based Services

In the MRO or field services scenario, the process begins and ends in SAP S/4HANA.



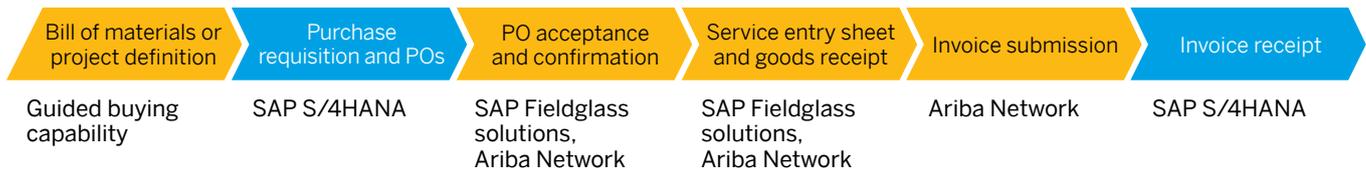
In a corporate IT scenario, the process begins with an SOW, if using SAP Fieldglass solutions, or a contract, if using SAP Ariba solutions.



Standard integration for service orders and work orders exists between the project systems functionality in SAP S/4HANA and SAP Fieldglass solutions. Standard integration for service orders and work orders between the project maintenance functionality in SAP S/4HANA and SAP Fieldglass solutions is on the road map.

Complex Services

In this scenario, the process begins with the guided buying capability facilitating the procurement of indirect goods for the project.



Standard integration delivered by SAP between SAP S/4HANA, SAP Ariba solutions, and SAP Fieldglass solutions

VALUE CAPTURE

- Single user experience for managing the procurement of all scenarios requiring services and external labor
- Quality metrics to assess the value delivered by service providers and workers
- Project tracking for visibility into the amount of time and effort used to complete work
- Analytics and data to determine the best channel for future projects based on quality, speed, and cost trade-offs
- Worker tracking to mitigate security and safety issues

Invoice and Pay – Indirect Procurement

Simplified processes for collecting and checking invoices, verifying them against preconfigured business rules, and handling exceptions increase process efficiency and help eliminate data-entry errors and duplicate invoices:

- This addresses the key requirements of all customers: **automation** and the reduction of administrative tasks.
- This is achieved when customers **eliminate paperwork** and e-mails and start communicating digitally with suppliers – a key element in their journey to “lights-out shared services.”
- The invoicing process allows both buyers and suppliers to **create additional business value** and win-win situations.

Payment capabilities such as single-use account virtual cards can be used to settle invoices. These provide payment certainty to suppliers, reduce the risk of fraud, and allow buyers to take advantage of benefits that come with a card program.

Customers can use a combination of capabilities such as dynamic discounting, payment terms management, and third-party bank-managed supply chain financing to optimize cash flow. These allow customers to establish close relations with suppliers by providing the right solution based on spend type and the type of supplier, letting treasury departments optimize days payable outstanding and suppliers shorten days sales outstanding.

Making cross-border payments to suppliers in a customer’s local currency helps align foreign currency exchange (FX) exposure with operational activities and eliminate the uncertainty in FX.

RECOMMENDATION

SAP recommends accounts payable teams use SAP S/4HANA to support final invoice approval and payment processes for all spend. We recommend the SAP Invoice Management application by OpenText for invoice verification and workflow on SAP S/4HANA.

Nonprocurement invoices and payment requests should be channeled directly into SAP S/4HANA to execute payments.

All suppliers should send all POs and contract-based invoices through Ariba Network to digitalize the entire invoice volume.

Customers using SAP Ariba Buying in indirect procurement can – in most geographies – channel invoices through SAP Ariba solutions for use in invoice verification, enrichment, and exception management. They can also send clean and compliant invoices to SAP S/4HANA, SAP ERP, or third-party ERP software for final invoice approval and faster payments.

In addition, customers can offer their suppliers dynamic discounting and working capital management services through SAP Ariba Discount Management. They can also use supply chain financing through third-party banks.

END-TO-END USE CASES

Smart Invoicing

The supplier offers special payment terms based on an e-invoice that was automatically validated against the purchase order.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Contract Invoicing

The invoice is created against the contract, based on rate sheets.



Standard integration delivered by SAP between SAP S/4HANA and SAP Ariba solutions and Ariba Network

Discount Management

Customers can leverage payment and discount terms to stabilize the supply chain and accelerate business growth.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

VALUE CAPTURE

- Reduction in supply chain risk as suppliers gain more flexibility to manage their cash needs through payment terms and dynamic discounting
- Increased working capital and cash flow to fund business growth initiatives
- Extended days payable outstanding and increased subsequent cash flow
- Fewer invoice exceptions through electronic invoicing and a rules engine on Ariba Network, leading to a reduction in overpayment errors
- Greater number of invoices processed by accounts payable employees
- Lower payment processing costs
- Increased rate-card compliance

Invoice and Pay – Direct Procurement

In the context of direct spend processes, smart invoicing goes beyond touchless invoicing to increase compliance, reduce accounts payable costs, and speed up payment cycle times, addressing capabilities such as:

- Three-way match reconciliation of invoice amount and quantity against purchase orders and goods receipts, including handling partial goods receipts
- Supporting returns and reversals of previous goods movement postings with subsequent credit memo handling
- Down payments to be accounted for in the final invoice
- Invoice processing against scheduling agreement releases
- Evaluated receipt settlements created on the buyer side and shared with trading partners for review, which can be especially relevant in consignment processes to settle withdrawals taken from consignment stock
- Inclusion of shipment costs and other charges on the header and item level
- Support for legally compliant e-invoicing across regions and countries as supply chains operate on a global level

Similar to other spend categories, the use of dynamic discounting, payment terms management, and third-party, bank-managed supply chain financing allows customers to establish close relations with trading partners and treasury departments to optimize working capital.

RECOMMENDATION

Accounts payable teams should use SAP S/4HANA to support invoice verification, enrichment, approval and exception handling, and payment processing. All suppliers should send direct spend invoices through Ariba Network to adhere to buyers' invoicing and payment rules.

Customers can offer their suppliers dynamic discounting and working capital management services through SAP Ariba Discount Management. They can also leverage supply chain financing through third-party banks.

END-TO-END USE CASES

Smart Invoicing

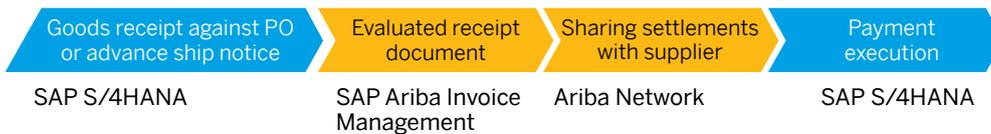
The supplier offers special payment terms based on an e-invoice that was automatically validated against the purchase order and goods receipt.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Evaluated Receipt Settlement

The buyer creates settlement documents in SAP S/4HANA and shares with suppliers for review.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Discount Management

Customers can leverage payment and discount terms to stabilize the supply chain and accelerate business growth.



Standard integration delivered by SAP between SAP S/4HANA and Ariba Network

Analytics

Many of the benefits that come from a procurement transformation business case will materialize only if procurement professionals have real-time information about their businesses and are also proactively alerted by their systems when their predictive analytics or machine learning algorithms detect critical deviations. This includes identifying the right spend categories for contract reviews, making sound predictions of when contracts will be fully consumed, appropriately phasing out selected suppliers based on risk and quality, optimizing delivery performance, and realizing economies of scale with acquisition spend. This is why analytics is at the core of SAP's procurement strategy.

There are usually three types of analytic scenarios:

- Operational reporting on the transaction level
- Group-type reporting, combining several data sources in one report for new insights and drill-down capabilities
- Spend visibility, combining data from various systems with manually or automatically enriched and classified data

Customers can leverage analytical capabilities in procurement using SAP S/4HANA and SAP Ariba and SAP Fieldglass solutions, the SAP BW/4HANA® solution, and the SAP Analytics Cloud solution:

- Each procurement functionality within SAP S/4HANA and SAP Ariba and SAP Fieldglass solutions provides real-time operational reporting using SAP Fiori® apps or predefined, embedded SAP Analytics Cloud dashboards. The reporting functionality can also be extended and enriched through custom fields or calculations.
- For broader analytical reporting, SAP S/4HANA and SAP Ariba and SAP Fieldglass solutions provide reporting APIs that allow users to extract data for reporting purposes, so it can be combined to address specific customer needs.

- For SAP Analytics Cloud, SAP recommends that customers use either standard, built-in, available user stories for procurement or connect APIs to build out analytics and leverage real-time decision support, such as through SAP Digital Boardroom.
- In case of nonharmonized pools of spend or for one-off merger-and-acquisition situations, SAP offers the SAP Ariba Spend Analysis solution, which contains data enrichment and classification services.
- SAP S/4HANA, SAP Analytics Cloud, and SAP Ariba Spend Analysis all run on SAP HANA®, which is at the core of the reporting strategy.
- SAP BW/4HANA is available as an on-premise group-reporting tool for collecting data from various sources.

RECOMMENDATION

To uncover savings opportunities for strategic sourcing and to report on disparate sources or uncleansed data that needs to be aggregated to identify synergies – such as during or before mergers and acquisitions – customers should leverage SAP Ariba Spend Analysis.

For deploying SAP S/4HANA and SAP Ariba and SAP Fieldglass solutions, customers should initially leverage the built-in operational reporting capabilities. We have seen several CPOs successfully increase internal buy-in for procurement transformation by setting up “digital boardroom” analytics to outline their new levels of transparency and their abilities to drive savings and reduce supplier risks.

Customers operating in countries that have works councils should pay special attention to their analytics, as any report that references people or teams is subject to works-council approval.

Central Procurement

In an ideal world, every organization would have only a single ERP instance, but this is oftentimes not the case. In practice, many companies and organizations running SAP ERP accumulate more than one instance. Whether through the acquisition of another company, where the SAP ERP environment was not consolidated, or because a division created its own SAP ERP instance due to individual requirements, ERP instances in large, multinational organizations sometimes proliferate.

As a result, distributed procurement landscapes with numerous back-end systems are quite common across larger companies. Companies may also have other third-party ERP systems, complicating the picture even more.

Procurement is particularly impacted by this lack of centralization in a multi-ERP landscape. As a business function, procurement benefits from scale and volume: the more volume a customer puts through a supplier or in purchasing an item, the greater the cost savings and the more efficient the process becomes.

The SAP S/4HANA solution for central procurement provides a unified interconnection point that allows procurement teams to work across multiple ERP systems and global organizations, divisions, and channels as a shared service. It delivers the benefits of a single ERP system without requiring a massive shift in infrastructure and data.

By creating a centralized system that operates across buying channels without the need to

rework them, the solution allows procurement teams to pull all their disparate data sets into one place. Cloud and on-premise SAP systems can be integrated, and systems can be added or removed as merger and acquisition transactions occur – without disrupting procurement operations.

Central procurement delivers company-wide visibility based on roles and permissions across a company's ERP landscape. Lead buyers can access contracts, requisitions, orders, status, and spending across the company. Global controls with regional and local systems help increase transparency. This can lead to cost savings through better negotiations, maverick spending reduction, and better economies of scale.

Usually a professional, operational purchaser works in one or multiple ERP or SAP S/4HANA back-end systems. With central procurement, they can use a single SAP S/4HANA system to monitor and process relevant documents centrally.

The guided buying capability for SAP Ariba solutions is integrated into SAP S/4HANA in a single system deployment, but also into SAP S/4HANA for central procurement in a multi-back-end system deployment. In this case, the integration of both solutions takes place through the purchase requisition in SAP S/4HANA, while the processing of the follow-on purchase order is always in SAP S/4HANA.

Occasional end users can use guided buying directly, connected to central procurement, as the system of choice.

Recent enhancements include the integration of formula-based commodity price conditions into central contracts for scenarios such as the calculation of automatic metal surcharges or the delivery of a configurable automation framework for custom processing of back-end requisitions within the central procurement hub. This places price agreements at the center of the multi-ERP landscape while saving the operational purchaser from tedious, manual tasks by automating processing rules and actions.

Central procurement enables these business scenarios (see [Figure 3](#)):

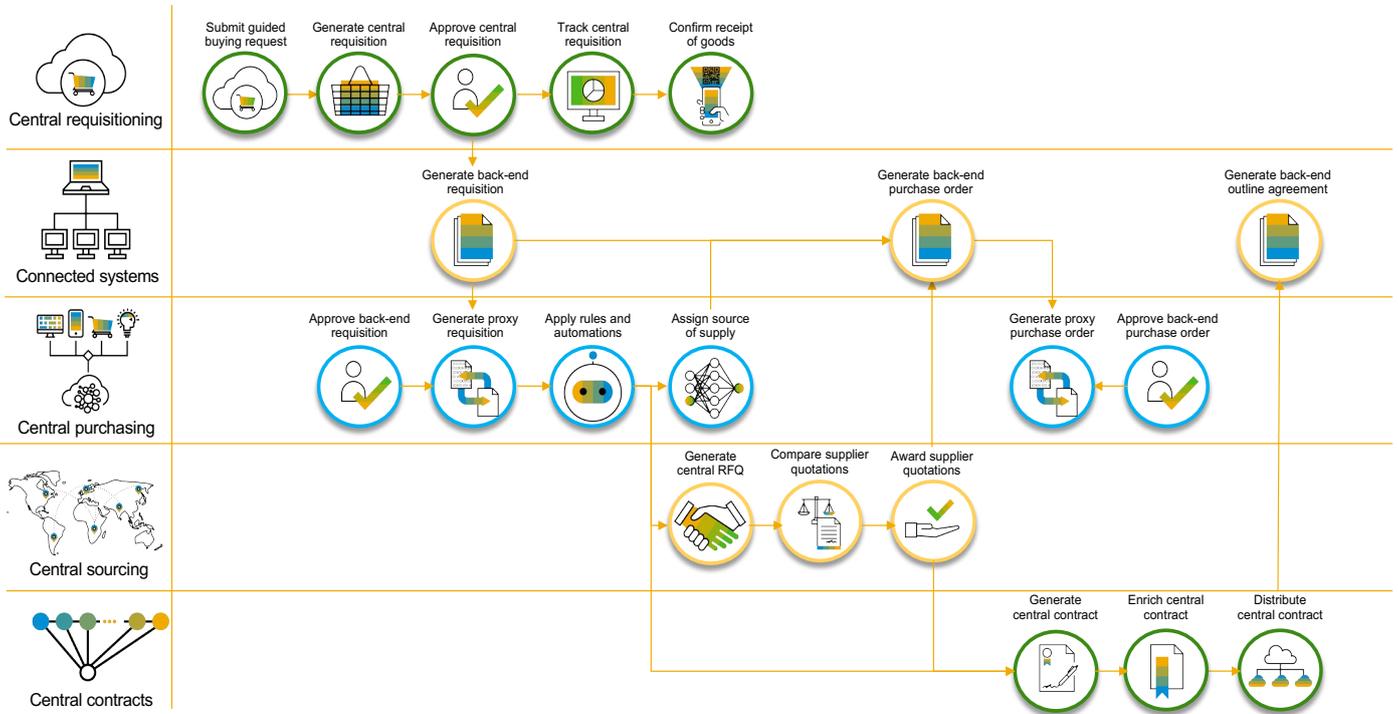
- Central requisitioning
- Central purchasing
- Central purchase contract management
- Central sourcing
- Central analytics

RECOMMENDATION

Customers with multiple back-end SAP software systems should use SAP S/4HANA for central procurement, which is an integral part of an SAP S/4HANA system as the interconnection point and hub between all back-end systems, SAP Ariba solutions, and Ariba Network.



Figure 3: Process Flow Through SAP S/4HANA for Central Procurement

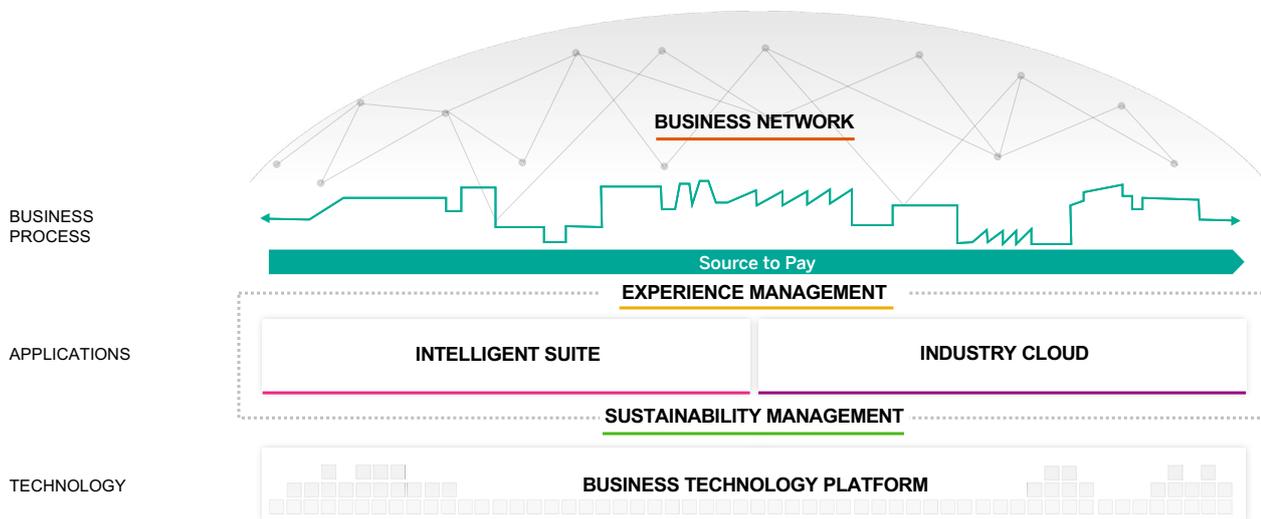


Intelligent Enterprise Processes for Source to Pay

Enterprises seeking to execute an end-to-end business process today must deal with complex heterogeneous systems, multiple platforms, fragmented stacks, poorly integrated software, disconnected or duplicate master data, and an inconsistent user experience, all of which negatively affect time to value, the ability to innovate, and overall experiences and outcomes.

SAP Intelligent Enterprise Framework is SAP's approach to connect experiences and operations using experience management solutions, a business technology platform, and a suite of applications – all in a well-integrated manner (see Figure 4). As part of the Intelligent Enterprise, SAP focuses on four key processes: source to pay, lead to cash, recruit to retire, and design to operate.

Figure 4: SAP® Intelligent Enterprise Framework

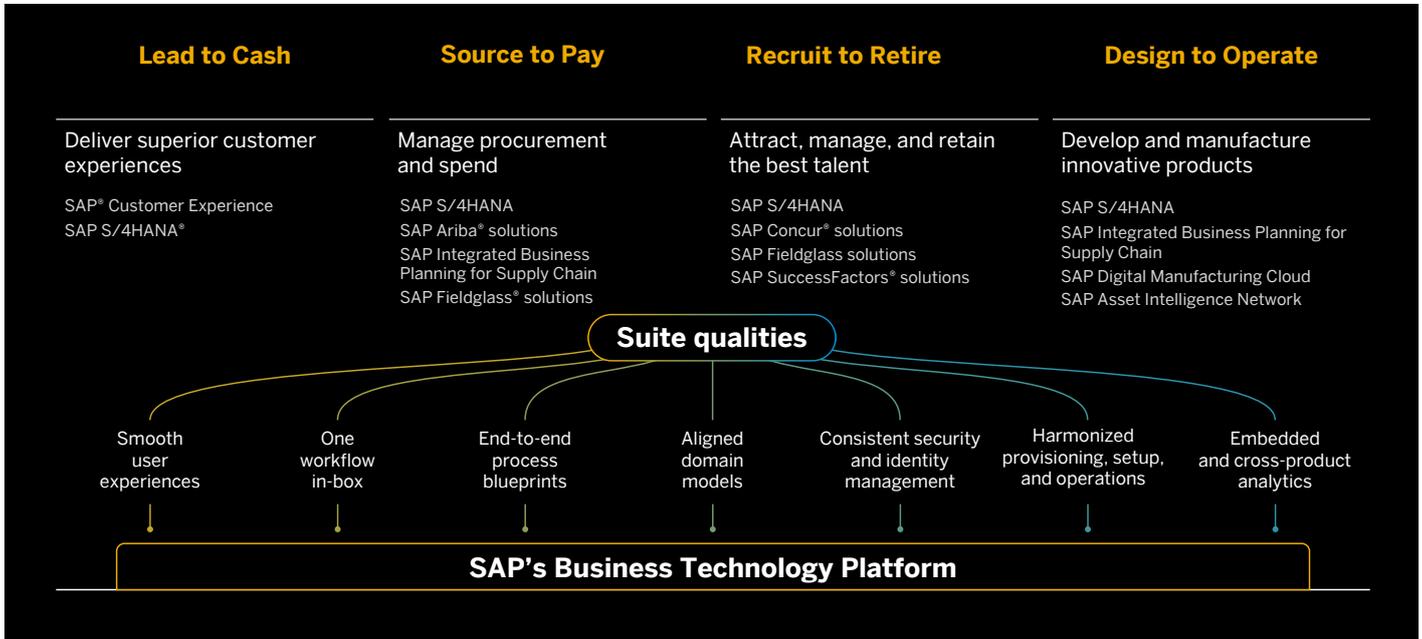


Intelligent Enterprise output is defined with the broader vision of having an integrated suite of products, removing any silos, improving SAP's integration DNA, and executing the complete business process. SAP began delivering business processes powered by a common architectural framework across multiple cloud solutions from SAP on a quarterly basis, and the scenarios will be made available continuously within the hybrid model (SAP S/4HANA and relevant cloud applications).

The architectural framework includes various suite qualities or guidelines that are being

adopted across SAP applications. SAP plans to deliver end-to-end processes going beyond just transactional integration to complete business process integration. This means that already-available integrated scenarios going forward will eventually adopt suite qualities such as a seamless user experience, core integration with aligned business APIs, embedded and cross-product analytics, one workflow inbox, industry reference architecture, an aligned domain model for master data, consistent and out-of-the-box security and identity management, and harmonized provisioning, monitoring, and operations as part of application lifecycle management.

Figure 5: Intelligent Processes



The following end-to-end processes have been rolled out across cloud solutions from SAP:

- Automation of source to pay with Ariba Network – This process lets customers focus on value-driven activities by integrating SAP Ariba Commerce Automation with their suppliers on Ariba Network.
- Sourcing with SAP Ariba Sourcing – This process helps customers extend SAP S/4HANA operational procurement processes to SAP Ariba Sourcing and select the most cost-effective bids from millions of suppliers on Ariba Network.
- Guided buying capability with SAP Ariba Buying – The integration of SAP S/4HANA Cloud and the guided buying capability targets employee self-service procurement. This integration allows procurement organizations to scale their purchasing processes across spend categories while enforcing compliance.

- Contract management with SAP Ariba Contracts – This integration enables customers to run strategic sourcing activities and to integrate prices from SAP Ariba Contracts into operational systems. With enterprise-wide management, customers can identify opportunities to pursue and improve negotiation efficiency.
- Automation of order to invoice with Ariba Network – This process helps suppliers exchange sales data with buyers from Ariba Network automatically. Order requests, advanced shipping notices, and invoice data are received and sent digitally.

Suite qualities that have been adopted so far include:

- Core integration with aligned business APIs across cloud solutions from SAP
- A reference architecture that helps envision a consistent and analyzable set of interlinked processes, with function- or information-related models based on the common reference architecture documentation framework
- A consistent user experience with a harmonized look and feel that helps users seamlessly execute an end-to-end process across all involved SAP applications
- Identity authentication and single sign-on across all SAP applications in the end-to-end process

The next pillar of the Intelligent Enterprise involves supporting the integrated suite with intelligent technologies that transform digital procurement to autonomous procurement. This transformation journey increases process automation and guidance through integrated and intelligent systems. Humans will define the strategies and oversee system-driven execution of those strategies.

Typical user tasks will change during the transformation process as the system takes over more and more operational and tactical activities.

Processes will increasingly be driven by the system without direct human interactions. Ultimately, the system will help ensure compliance and support users proactively, freeing them to focus on their primary tasks.

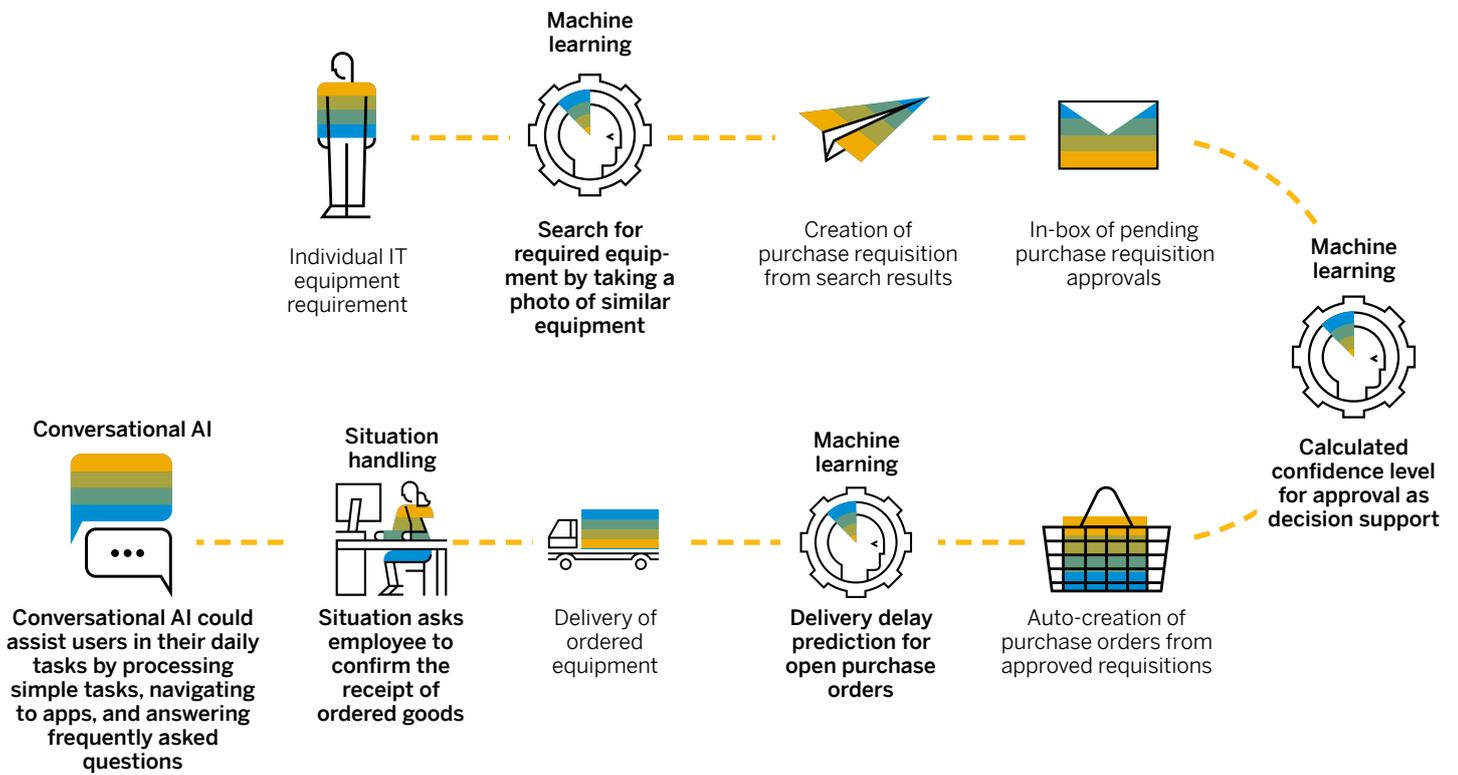
The key to autonomy in procurement lies with information and data, which provide the foundation for autonomous procurement and grow in importance as the system becomes more intelligent and autonomous. Data security and compliance will become even more critical, as trust is a crucial component for system-made recommendations and decisions.

On the way to autonomous procurement, SAP is leveraging various technologies. Machine learning helps to recognize patterns in data (such as for clustering free-text orders to propose the creation of catalog items) or give predictions (such as delivery dates of purchase orders or when a contract will be fully consumed).

Situation handling helps proactively inform purchasers when their attention is required. In addition, the system gives related information and proposes actions.

With SAP Conversational AI services, SAP is opening a completely new and intuitive interaction channel with the system. Combining these different technologies enables intelligent procurement through smart triggers such as IoT sensors or machine learning, which can be consumed by situations and lead to smart system recommendations and automations. [Figure 6](#) provides an overview of how intelligent technologies help the operational purchaser.

Figure 6: Intelligent Technologies and the Operational Purchaser



Solution Extensibility

With extensibility options, SAP helps organizations chart their own journeys while delivering innovation at an increasingly fast pace. Extensibility options allow customers moving from on premise to the cloud to realize their key differentiated business processes. Both SAP Ariba solutions and SAP S/4HANA provide a large set of APIs enabling extensibility.

Here are some examples of processes that are often realized as extensions:

- Special user groups – Ability to provide tailored mobile applications and user interfaces for specialized business processes and functions
- IoT – Automated active management and monitoring of inventory, components, machinery, and other resources
- Document management – Access to document management systems, enabling sharing and collaboration on engineering and other critical documents in the sourcing process
- Data behind the firewall – Supplier exposure to systems behind the firewall, such as product lifecycle management and quality management systems

SAP provides four powerful extensibility concepts:

- Side-by-side extensibility with SAP Cloud Platform enables customers of both on-premise and cloud solutions to build completely new user interfaces (UIs) based on the SAP Fiori user experience to integrate with other cloud applications or to build new applications.
- In-application extensibility with built-in tool sets enables customers to adapt the UI layout and context, create custom fields and tables, create and extend analytical reports or forms, and change the business logic.
- The Custom Forms API allows customers to develop whatever forms they want with data collection and approval flow of the collected information.
- SAP Ariba Developer Portal allows customers to explore, define, build, and deploy application extensions to their SAP Ariba solutions using SAP Ariba APIs.

Solution Integration

Most SAP customers have already made significant investments in IT and infrastructure, leading to very complex system landscapes for large enterprises. Many customers using SAP ERP have a long history of customizations and extensions that fine-tune the solution to perfectly fit their specific needs. 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.

The SAP Ariba Cloud Integration Gateway solution, enabled by SAP Cloud Platform Integration Suite, allows customers to unlock the full value of their SAP Ariba solutions by providing an easier way to integrate them to their existing infrastructure. It transforms the integration process by making it simple to connect trading partners, SAP Ariba applications, and back-end systems such as SAP ERP and SAP S/4HANA for touchless, end-to-end transacting. Customers benefit from:

- **Simplicity:** A single gateway with prepackaged mapping content provides what they need to make integrations fast and painless, eradicating the effort and expense of one-off, adapter-based integrations.
- **Self-service:** An intuitive, wizard-based setup and a user-friendly self-testing framework guide customers through a streamlined, three-step process that lets them configure, extend, and test transactions on their own.

- **Speed:** Automated processes eliminate lengthy deployments and manual testing, enabling customers to complete integration in a fraction of the time formerly required – and make stakeholders happy with go-lives that happen in weeks, not months.

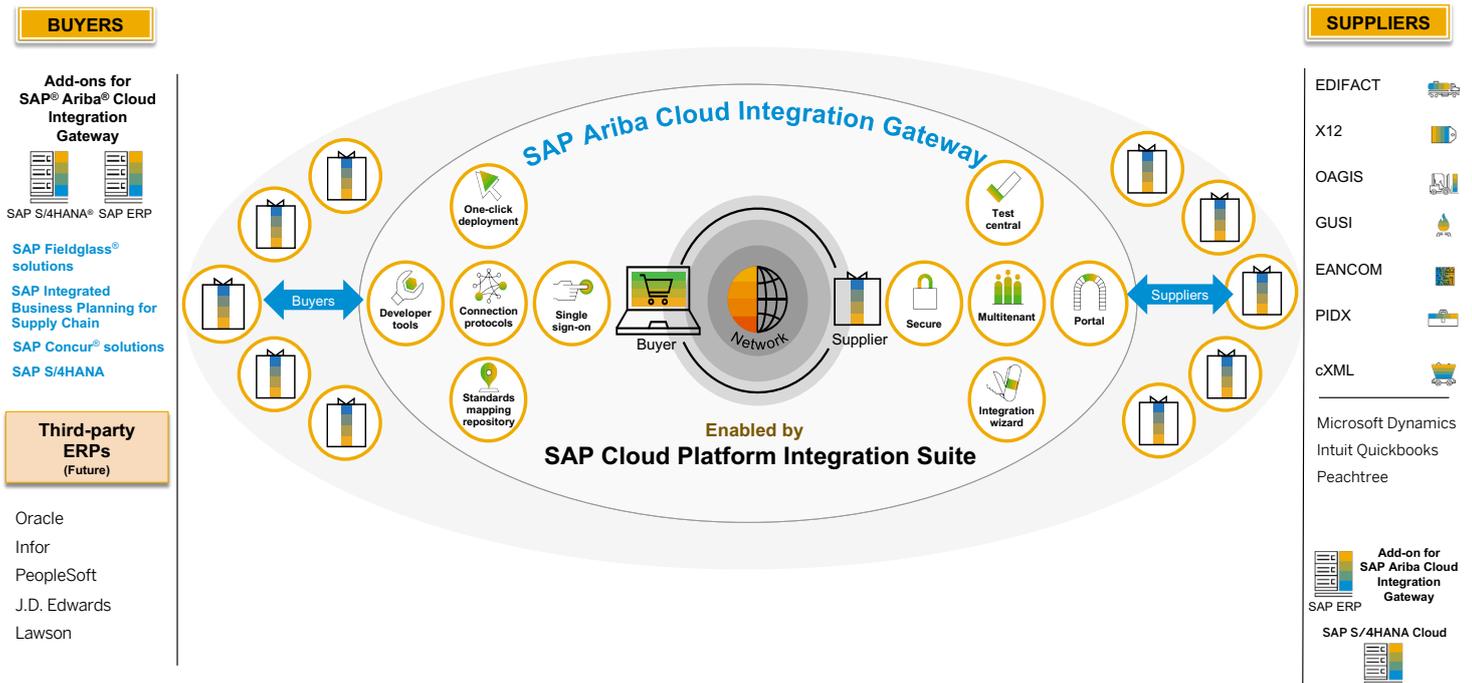
The way SAP Ariba Cloud Integration Gateway supports SAP Ariba solutions can be divided into two key areas:

- **Ariba Network** – SAP Ariba Supply Chain solutions, payment capability, and SAP Ariba Commerce Automation
- **SAP Ariba applications** – SAP Ariba Strategic Sourcing Suite and SAP Ariba Procurement solutions

The integration solution framework using SAP Ariba Cloud Integration Gateway (as shown in [Figure 7](#)) consists of two components:

- **SAP add-ons** (SAP Ariba Cloud Integration Gateway add-ons for both SAP ERP and SAP S/4HANA) available from the SAP Service Marketplace extranet for all customers who currently have a support contract with SAP. These contain the necessary data, extract and import programs, and configuration programs.
- **A comprehensive infrastructure** that provides all standard and custom mappings, connections, and conversions to connect Ariba Network and SAP Ariba applications with SAP ERP, for example, with SAP S/4HANA. (Connection to other SAP and third-party cloud and on-premise applications will be available in the future.)

Figure 7: Cloud Integration Strategy



Integration through SAP Ariba Cloud Integration Gateway is designed to work in conjunction with existing means of integration to Ariba Network and SAP Ariba applications, providing flexibility and ease of use for a variety of integration scenarios as well as easy migration to simpler integration through the solution. For example, it can coexist with adapter-based cloud integration, where some business processes are integrated through SAP Ariba Cloud Integration Gateway and others through adapters for the SAP Process Integration offering or SAP Process Orchestration software.

RECOMMENDATION

Customers should use SAP Ariba Cloud Integration Gateway as a single solution to integrate with Ariba Network and SAP Ariba applications. They should also leverage the lightweight add-on offered by SAP as a standardized, streamlined way to deliver and maintain integration software and tools, which will allow them to benefit from smoother upgrades, simpler configurations, and easier testing and monitoring.

Deployment Options

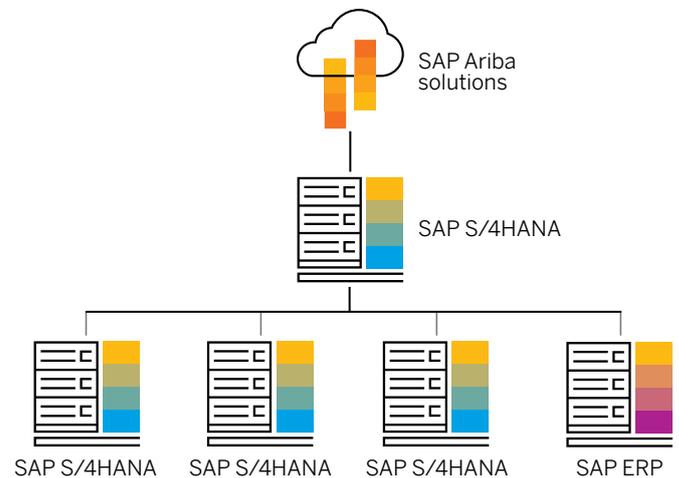
The type and landscape of a procurement system can vary depending on size, organizational setup, and the organization's business requirements. SAP supports various deployment options for SAP Ariba solutions, SAP ERP, SAP S/4HANA, and SAP SRM, giving customers flexibility and choice – and supporting their digital transformations.

Customers can extend the core capabilities of SAP S/4HANA with SAP Ariba solutions in a single-instance deployment, receiving business documents from SAP Ariba solutions in SAP S/4HANA and executing the end-to-end processes visualized in this document.



As an extension to this for customers that run multiple back-end software systems, a single SAP S/4HANA software system will act as a central hub. It handles central purchase requisitions, central confirmations, return deliveries, and central contracts created in SAP S/4HANA with corresponding follow-on documents in SAP ERP application systems (versions beyond SAP enhancement package 6). In addition to this, local purchase requisitions and purchase orders can be accessed and processed in SAP S/4HANA for central procurement. A holistic analytical offering completes the central procurement scenarios.

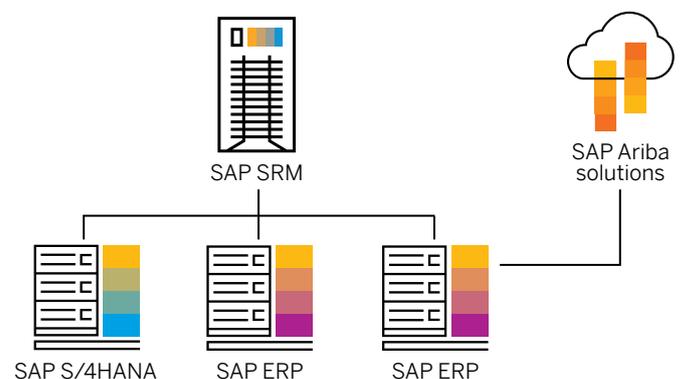
This concept is especially applicable for customers running multiple back-end setups of SAP SRM, as they can transform their existing deployments to the central hub for SAP S/4HANA.



Beyond central requisitioning, contracting, purchasing, sourcing, and analytics in SAP S/4HANA, additional scenarios together with SAP Ariba solutions and APIs for heterogeneous back-end systems are planned.

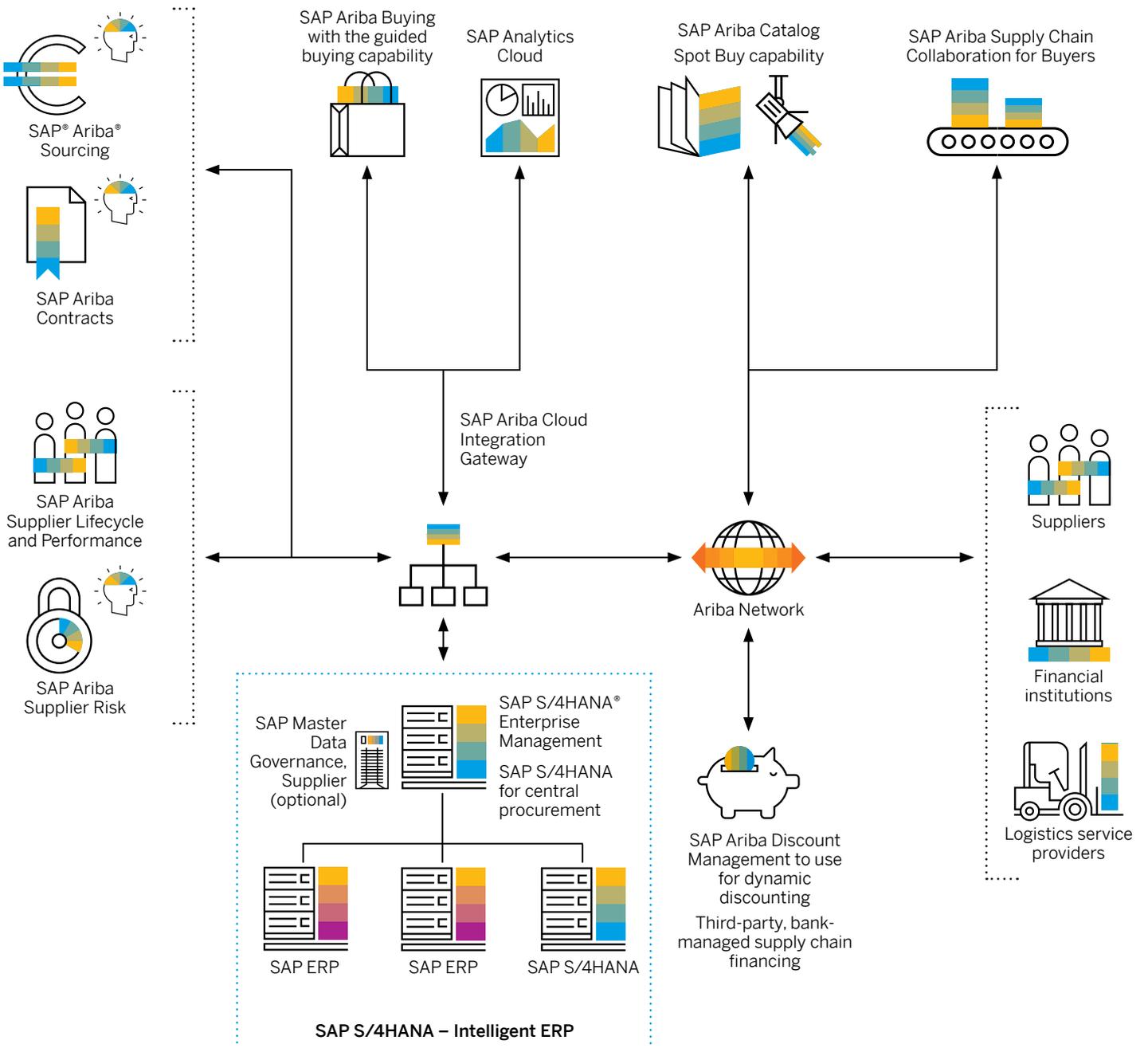
As a step in their transformation to SAP Ariba solutions and SAP S/4HANA, customers of SAP SRM can continue to run SAP SRM and:

- Connect SAP Ariba solutions to SAP ERP and back-end SAP S/4HANA systems (enabling collaborative sourcing, supplier collaboration, supplier management, and catalog management)
- Connect SAP SRM to back-end software systems already transformed to SAP S/4HANA
- Implement SAP Ariba solutions for guided buying on top of SAP SRM (with SAP SRM sustained to leverage existing integrations to back-end systems)



For a full picture of an SAP S/4HANA and SAP Ariba solution landscape, please see Figure 8.

Figure 8: SAP S/4HANA and SAP Ariba Solution Landscape



Benefits and Next Steps

Today, more than 20,000 SAP customers use SAP ERP for use in materials management or SAP SRM for use in procurement and sourcing. To help them take advantage of our procurement strategy and innovations, we have developed an approach to jointly review their business processes and solution infrastructure and develop their procurement road map.

To execute on procurement transformation, customers can implement the following suggestions and SAP services:

- Identify expected value and benefits. Participate in our world-class benchmarking program. Attend a value discovery workshop. Uncover business priorities (including combination with SAP S/4HANA) and define a target cloud scenario (cloud or hybrid). Have experts from SAP develop a collaborative value assessment centered around optimization potential for cost reduction, process efficiency, fiscal control, and cash management.
- Plan the migration and transition. Define the migration and implementation strategy, including dependencies and prerequisites for the target cloud scenario. Address security and privacy requirements. Create a migration and transformation plan, including a timeline, service levels, and priorities.

- Execute the technical implementation including system integration. Run technical tests. Migrate data and implement functions based on ready-to-use business-process templates. Perform system checks and business-process tests, and analyze operational impact.
- Execute change management. Enable suppliers to successfully adopt collaborative business commerce practices and tools by conducting administrator and user training. Innovate business processes and model a buying channel in a guided buying scenario to expose preferred suppliers or empower end users with three bids and a buy.

For customers of SAP SRM, SAP and our partners offer a wide range of migration services to start the digital transformation journey. [Find out more.](#)

SELF-FUND DIGITAL TRANSFORMATION

Many companies recognize the need to modernize procurement and plan to adopt a combination of SAP S/4HANA and SAP Ariba solutions. While the timeline of rolling out SAP S/4HANA is defined by the IT strategy, companies can start realizing benefits delivered by SAP Ariba solutions and use those to help fund the transformation to SAP S/4HANA. For instance, customers can deploy SAP Ariba Sourcing or Ariba Network against their SAP ERP application, realize early benefits, and switch over to SAP S/4HANA once it is deployed.

CUSTOMER VALUE OPPORTUNITIES*

4%–15%

In average unit price reduction

Cost Reduction

- Rationalize supply base through spend visibility and centralized sourcing
- Negotiate better pricing using consumption history
- Save on ad hoc purchases through demand management and spot quoting

\$20 million

Reduction in contract leakage per \$1 billion of spend

Fiscal Control and Compliance

- Control maverick spending and fraud through use of contracted suppliers and preferred specs
- Help ensure supplier compliance to preferred terms when reconciling invoices, POs, receipts, and contracts

40%–60%

In operating cost reduction

Process Efficiency

- Drive sourcing productivity through deep spend analytics and immediate supplier discovery
- Reduce supply chain operation costs
- Increase supply chain resilience through risk management
- Reduce cycle times and increase procurement and accounts payable productivity through invoice process automation and supplier collaboration

\$1 million–\$2 million

In savings per \$1 billion of target

Cash Management

- Avoid unintended cash flow constraints with a formalized payment-terms strategy
- Realize early-payment discounts or take advantage of supply chain–finance margin sharing through shorter invoice-processing cycle times

*This data does not provide a guarantee of results; it is, instead, an example of the benefits a customer might realize.



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