SAP's
Industry
Cloud

Innovation for the Core Business of Our Customers

THE BEST RUN **SAP**

"Industry" Means Core Business

Executives lose sleep over customers and markets, products and production, competition and partners, capital and stock price – but hardly over facility management or payroll processing. SAP wants to be relevant to the core business of our customers and deliver innovations that move the business needle, drive outcomes, and help executives relax.

Our intelligent suite and business networks are a great foundation. They support integrated end-to-end processes for all industries and offer an unparalleled scope of functionality. The concept of an integrated suite always wins – as long as the speed of innovation is compatible with the need for innovation.

But the world is changing. Digital technologies, regulation, crises, market entrants, and data-driven business models disrupt carefully balanced supply networks, dissolve markets, and create or impact opportunities so rapidly that large-scale enterprise systems are challenged to keep pace.

Industry cloud is our strategy to extend the intelligent suite with innovative industry cloud solutions built by SAP and our partners in the cloud – based on SAP® Cloud Platform, running on the cloud infrastructure of SAP and our hyperscaler partners. The result is an open business and technology platform for our customers' core business in their respective industries.

aws   Microsoft Azure   Google Cloud   Alibaba Cloud

>50 Billion Smart-Edge Devices by 2025
Production equipment, household appliances, cars, and trucks are equipped with computing power in search of value-adding use cases. Awareness of location, condition, and the human experience open the field for next business practices that integrate smart-edge devices into end-to-end business processes.

Networked Enterprises
The boundaries of enterprises are dissolving as end-to-end processes run through business networks, connecting suppliers, service providers, and customers.

This opens opportunities for fast and agile players but threatens laggards who hide behind digital walls.

SAP's Industry Cloud: Driving Business Value

SAP's industry cloud is an open business process and technology platform to foster innovation and collaboration between our customers, partners, and SAP. We are jointly creating "next business practices" for enterprises and business networks that will enable our customers to thrive in a transforming world.

The design of the industry cloud reflects our customers' core business needs within their industries. It allows us to define a set of solutions relevant for each industry that we call "SAP Cloud for <industry>" – for example "SAP Cloud for Automotive."

Business leaders can find a compelling selection of industry cloud solutions to extend support for end-to-end processes with the intelligent suite and business networks. These innovative solutions give leaders the ability to:

- Rapidly respond to new business requirements
- Optimize and transform their business
- Extend end-to-end best-practice processes
- Adopt best practices from adjacent industries

Industry cloud solutions are easy to discover, subscribe to, and use, offering unified user experiences, familiar design paradigms, and plug-and-play integration.

Innovating in Ecosystems
SAP's industry cloud is attracting partners who are looking to extend the intelligent suite with innovative industry solutions. They find open APIs, process and data models, and a wealth of digital technologies to innovate at the vertical edge. Attractive commercialization models for industry cloud solutions further enhance the appeal of the SAP's industry cloud.

Efficient Innovation
Many CIOs struggle with the effort to integrate vertical solutions from many different vendors. SAP's industry cloud offers high-value industry cloud solutions that plug into the APIs of the intelligent suite and offer a single support model as well as simple administration and monitoring. Flexible cloud deployment makes the package of the intelligent suite and industry cloud solutions even more attractive.

From Enterprise Resource Management to the Vertical Edge

The intelligent suite offers best practices and support for end-to-end processes for all industries as the foundation for efficient operations of finance, material management, supply chains, or asset management.

With customers and partners, we develop the vertical next practices that move the needle for the core business of our customers. We embed these practices as industry cloud solutions that extend the end-to-end processes and can be adopted by our customers at their own pace and in the areas where innovation for efficiency and growth matters most.

The game changes at the "vertical edge," where new business opportunities are created by players who reinvent themselves and their markets – inspired or powered by digital innovation, interaction with customers and partners, or product and service ideas.

Rapid innovation at the edge is enabled by "borrowing" best practices from other industries by plugging in existing industry cloud solutions – or by creating new custom solutions using machine learning, analytics, and business networks – in the open industry innovation space.

SAP and our partners are jointly creating "next business practices" for enterprises and business networks that will enable our customers to thrive in a transforming world.

Reimagine . . . Mobility
Automotive OEMs have perfected the art of designing, making, selling, financing, and servicing cars – a proven and successful business model.

Electro or e-mobility, urbanization, advanced sensors, and artificial intelligence call for new mobility solutions that transform the industry, reshape supply chains, create new intellectual property, bring in new players, and call for new business models.

From Linear Value Chains to Dynamic Value Networks

Textbooks show supply chains as neat, linear sequences of companies in various industries that provide raw materials, substances, and components, and make products that end up on retail shelves and in the consumer's shopping basket – materials flowing in one direction, money in the other – as shown in Figure 1.
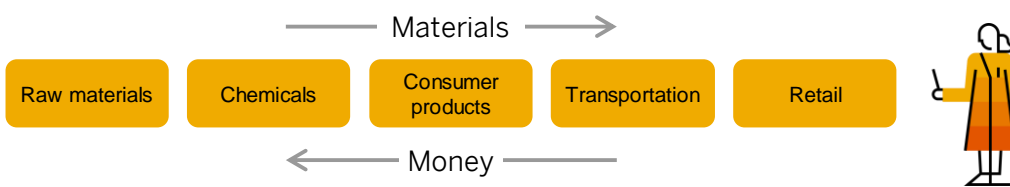

Figure 1: The Idealized Supply Chain

The reality is much messier. Every day, a consumer products company tries to bypass a retailer to get closer to the consumer. Retailers develop their own brands to create added value for customers. Financial services wedge themselves into new spaces where they see demand for their offerings.

As a result, we see dynamic value networks that are continuously changing. Boundaries between industries continue to shift, partnerships are forged and broken, and competitors turn into partners or customers. Next business practices are shaped in this environment.

Enterprise systems need to continuously and rapidly adapt to these dynamics without sacrificing the efficiency and robustness of end-to-end processes while also staying open to disruptive innovation at the edges. This is a key value proposition of SAP's industry cloud.

Competing as Ecosystems

Ecosystems are forged to combine the power of partners to deliver more business value to customers. Rapidly implementing processes across enterprise and industry boundaries requires a common process model and integration technology.

Vertical Innovation Spaces

Business innovation starts with ideas: how to fix a problem or how to discover and unlock new value. Translating an idea into a business process, and then into a solution to support this process, requires an innovation space that comes with all the tools and content necessary to build and deliver fast and predictably – SAP's industry cloud (see Figure 2). This allows developers and business users to focus on what they need to do to push new solutions out the door.
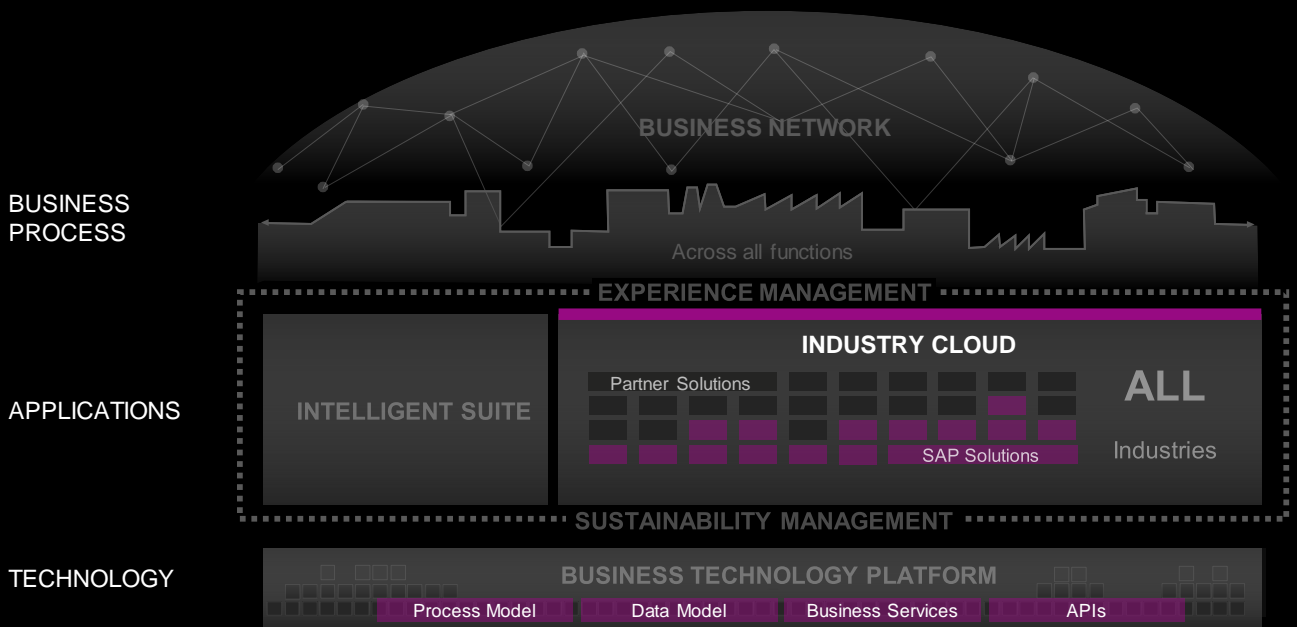

Figure 2: SAP's industry cloud

Built for Integration
Stand-alone applications that deliver relevant business value are few and far between. Enterprise applications always need access to essential business domains such as products, cost centers, employees, and customers. SAP provides direct access to business domains and processes in the intelligent suite through APIs, while business and technology services provide the tools and infrastructure to create and run innovative industry cloud solutions.
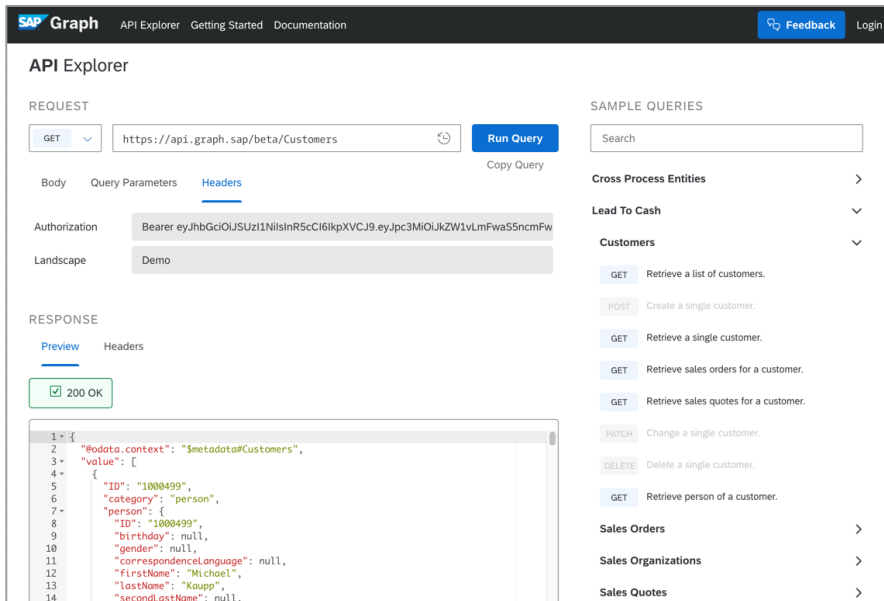
API Framework

Innovative industry cloud solutions need simple access to business domains and processes of the intelligent suite and to business networks that connect customers and suppliers.

The API framework of the industry cloud provides this transparent access to the key entities of the intelligent suite, simplifying the development of innovative industry cloud solutions. (See Figure 3.)

Figure 3: API Explorer in SAP® Graph

SAP Graph – APIs Simplified

Exploring and understanding an API framework can be frustrating. SAP Graph software makes it easier to access the business domains of the intelligent suite and business networks with the basic create, read, update, and delete operations.

An instance of the intelligent suite running as a test and development system greatly simplifies creation of industry solutions.

Try SAP Graph API Explorer

https://beta.graph.sap/explorer

Business Domain Model

Building industry cloud solutions requires a clear understanding of the business domain and data model. The business domain model in Figure 4 shows the business entities and their relationships that are managed in the intelligent suite, business networks, and in other industry cloud solutions.
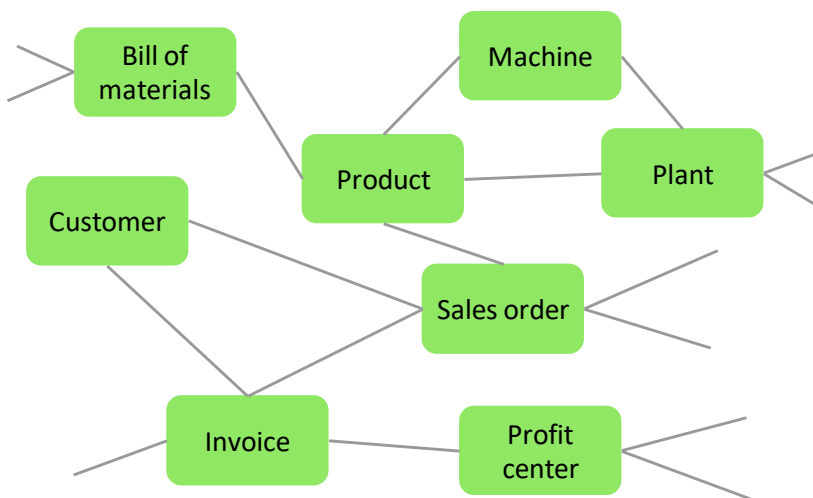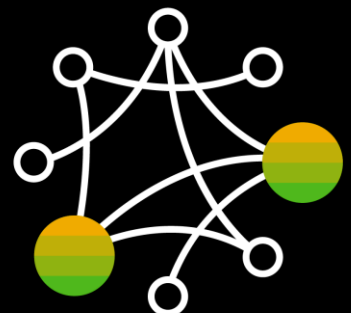

Figure 4: Business Domains and Their Relationships

On APIs and Business Domains
When you try SAP Graph, you will see that the APIs reveal the business domains they make accessible for industry cloud solutions.

Start in a familiar corner and explore the APIs and business domains.

Business Process Model

The data model, domain model, and APIs are important to give industry cloud solutions access to the end-to-end process support in the intelligent suite. Understanding the effects of invoking an API that creates, deletes, or changes an object in the intelligent suite requires a business process model that describes the side effects of those operations.

SAP provides the business architecture framework serving as the foundation that helps developers design, build, test, and validate industry cloud solutions.

Each industry cloud solution also comes with content from SAP Model Company services and content that describes how to configure the intelligent suite to enable plugging in the solution.
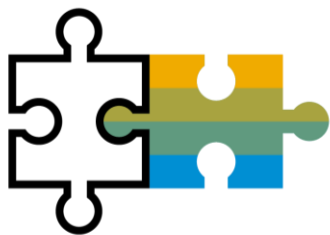
An easy-to-navigate and easy-to-understand business domain model is important to design, build, and test new solutions.

Understanding Side Effects
Before you use an API to increase the quantity in a sales order line item, the solution designer needs to understand what will happen in the intelligent suite: Will the customer be notified? Is there an available-to-promise check, and what happens if that comes up empty-handed? Will the invoice be updated and the transportation order checked? The process model must provide these answers based on configuration assumptions.

Business and Technology Services

Industry cloud solutions have ready access to a broad range of business and technology services that make life easy for developers.

These range from simple business services such as currency or unit conversion to leading-edge artificial intelligence and machine learning libraries. With user experience libraries, solution designers can give users a seamless experience as they run end-to-end processes that span multiple industry cloud solutions, the intelligent suite, and business networks.

Subscription management, invoicing, usage monitoring, and application support are also managed through integrated central services.

Customers get the unified experience they want from industry cloud solutions – and that makes them come back for more.

SAP's Industry Cloud – The Business Operating System
Operating systems such as Apple iOS or Microsoft Windows expose a wealth of reusable services to the application developers, from basic file handling to network and user interface functions to speech recognition.

Our business and technology services follow this paradigm and create an environment that fosters rapid innovation, reduces adoption hurdles, provides a unified and enjoyable user experience, and keeps total cost of operations low.

SAP Model Company and Configuration Content

Each industry cloud solution comes with information about the intelligent suite and business network environment it requires to run. This includes the set of individual SAP and partner products and solutions – for example, SAP S/4HANA® or Ariba® Network.

Industry cloud solutions also provide content from SAP Model Company services for integrating, customizing, and configuring intelligent suite and business network solutions. This means that customers can easily find out whether their solution environment is already suitable for plug-and-play adoption of an industry cloud solution, or whether preparatory steps are needed to ensure that an industry cloud solution fits into their overall application landscape.
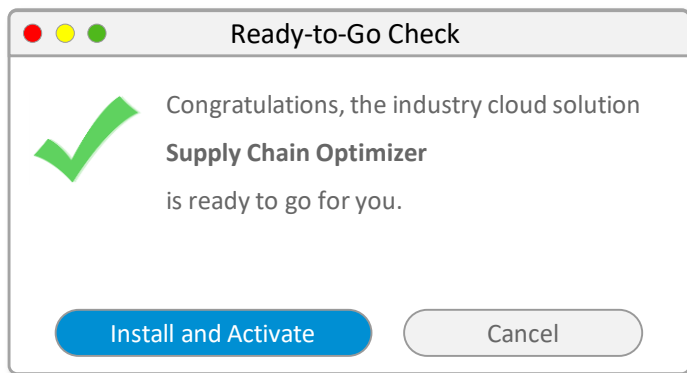
Figure 5: Ready-to-Go Check, Verifying that an industry cloud solution will run in a customer environment

Ease of Adoption

The intelligent suite and business networks offer a wide range of end-to-end processes and business capabilities that are used and adapted by our customers to match their requirements and strategic priorities.

Industry cloud solutions need to fit into the environment found in a customer solution and process landscape.

This is not a trial-and-error adventure but a straightforward, tool-supported "ready-to-go" check to help ensure easy adoption (see Figure 5).

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