32%

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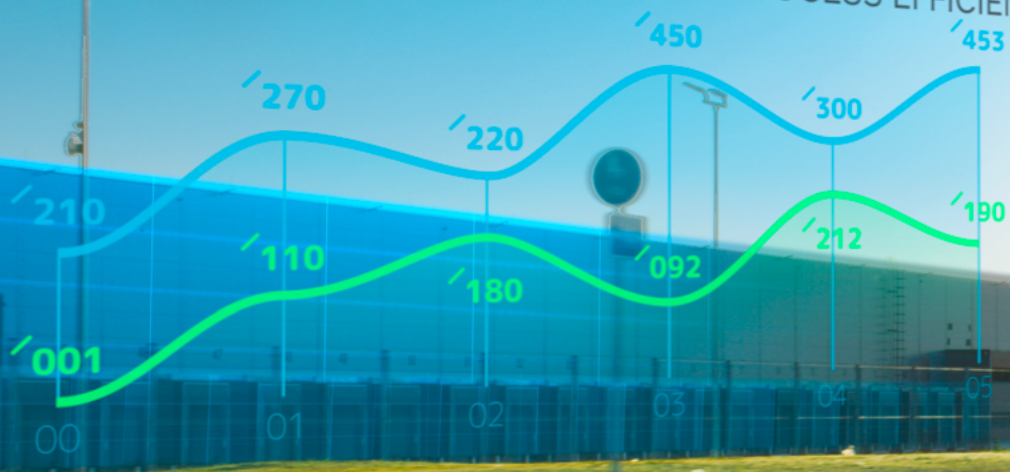
# SAP Business AI

## Reinventing How Businesses Run

**SAP**

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*Here at SAP, we firmly believe that generative AI will fundamentally change the way people and software work together, and we are excited about the opportunities this brings.*

**Christian Klein**
CEO & Member of the Executive Board of SAP SE

# Reinventing How Businesses Run

SAP is at the nexus between technology and business. Since SAP's invention of enterprise resource planning (ERP) in 1972, small businesses and large enterprises have trusted SAP to guide them through the opportunities, risks, and value creation that are enabled by technological disruption.

**Artificial intelligence (AI)**, and above all, **generative AI**, marks a paradigm shift on how computer systems learn from data, solve complex problems, and even provide creativity when it's needed. We believe this paradigm shift will fundamentally change work, business, and society. SAP is committed to helping organizations through this transformative moment by creating business outcomes that were unimaginable before through **SAP Business AI**.

**SAP Business AI** is deeply embedded in our business processes and analytics. Already more than 24,000 businesses globally use and benefit from the AI capabilities that SAP offers. No other technology company can combine the power of AI with the processes and data that run the business world. SAP will help change how people interact with business software and make work more efficient and delightful than ever before.

**SAP Business AI** is relevant, reliable, and responsible. Here is how we define these core principles:

## Relevant

**SAP Business AI** is relevant from day one since it is built in across all SAP applications that customers already use to run their most critical business processes.

With **SAP Business AI**, users will be empowered to interact with SAP software in the most natural way possible, using their own **native languages** through **Joule** – SAP's copilot available across SAP applications. Hundreds of millions of users will be more efficient and more productive through simply describing their ideas, asking analytical questions, or telling the system what to do rather than executing transactions or coding applications. SAP systems will understand what users mean, not just what they say.

**SAP Business AI** will enable SAP applications to **learn** and to **improve and optimize business outcomes**. SAP uniquely combines vast amounts of business process data, best practices across SAP and third-party applications with the power of leading large language models. Business processes such as recruit to retire, source to pay, design to operate, or lead to cash will continuously become more intelligent and automated.

With **SAP Business AI**, we and our partners will provide development and migration tools on SAP Business Technology Platform (SAP BTP) to compress upgrade cycles and simplify IT stacks. For example, by modernizing legacy code through **automated code generation**, we will be able to accelerate time-to-value during cloud transformation projects, reduce maintenance cost, and increase change agility by running a harmonized IT stack.

▶ Read **more**

**1970s**
### SAP R/1
Standard business software.
SAP invents ERP.

**1980s**
### SAP R/2
Personal computer.
Client/server architecture.
SAP pioneers enterprise-grade expert systems ("symbolic AI").

**1990s**
### SAP R/3
Internet, three-tier client-server architecture. Workflow, process modeling, advanced analytics.

**2000s**
### SAP Business Suite
Big Data, smartphones. Predictive analytics, forecasting, optimization.

**2010s**
### The Intelligent Enterprise with SAP S/4HANA and SaaS LoB Solutions
In-memory computing, Industry 4.0, digital network. Narrow AI based on deep learning.

**2023+**
### AI-Powered Business Processes
Generative AI, foundation models, and large language models.

## Reliable

**SAP Business AI** is grounded in the truth of customers' business and leverages generative AI in context with real-time information to help ensure accurate and safe outputs. **Integrating business and process data in SAP software** with the world's leading large language models in a privacy-preserving, secure, and safe manner will lift generative AI to a new level.

SAP upholds our ever-high standards with respect to **data privacy**, **data protection**, and **cybersecurity** to help ensure customer data remains compliant with dynamic local regulations such as the EU AI Act, follows SAP's own EU Access, and is never compromised. In addition, our **world-class business authorization concepts** can be leveraged out-of-the-box so that employees and business partners are protected from unwanted consequences. Customers turn to SAP thanks to a proven track record of high quality in this space.

▶ Read **more**

## Responsible

For decades, SAP customers have trusted us with their most sensitive data and mission-critical processes, and AI is no different. SAP Business AI is designed for people to get their best work done, valuing human oversight and agency to keep humans in the loop. We address **bias and discrimination concerns** when designing AI into our applications. We work to ensure **transparency and explainability** on what the system does and engage in the societal challenges we will face in the years to come. SAP is deeply committed to **AI ethics** in line with our core values.

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# Business AI Infused Across the SAP Product Portfolio

AI is already a central, integrated capability of our enterprise applications and business technology, used by tens of thousands of our cloud customers. Every embedded AI scenario has gone through SAP's rigorous AI ethics process.

### Accenture
**54%** of invoices automatically matched with payments

### Goodyear
**10%** faster resolution of service tickets

### ZF Friedrichshafen
**92%** faster forecasting in operational & demand planning

AI-powered capabilities based on proprietary deep learning and machine learning algorithms drive business value in SAP's cloud solutions. These capabilities include matching, intelligent business document processing, personalized recommendations, natural language processing, forecasting and predictions, and more.

**Cloud ERP**
One customer saves up to US$1.5 million annually by increasing the automated matching rate of invoices to payments with SAP Cash Application.

**Human capital management**
SAP SuccessFactors solutions provide personalized learning recommendations to 4.2 million learners every month.

**Spend management and business network**
AI in SAP Concur Invoice Management helped automate the processing of 40 million invoices in 2022, saving our customers a combined €440 million.

**Customer relationship management**
Each month, AI analyzes 1.9 billion potential cloud intrusion events in the SAP Customer Data Cloud solution, keeping personal data safe.

**SAP Business Technology Platform**
SAP Integration Advisor uses a crowd-based AI approach to offer integration content based on more than 10,000 published and 5,000 scenario-based interfaces and messages.

## AI empowering society

In 2021, project "4W Wizard" implemented by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) leveraged SAP Business AI to automate data processing and analysis, resulting in significant time and resource savings. This project has been successfully tested in various humanitarian missions across the Asia-Pacific region, enabling OCHA to quickly launch a Humanitarian Response Plan for COVID-19 in Nepal, and simultaneously prepare for future crises such as monsoons, while also empowering local NGOs and community-based organizations.

## US$83 million

Worth of lifesaving assistance for more than 9 million people distributed through the solution.

# Transforming Business Applications and Platform with Generative AI

Generative AI enables completely new capabilities in business software. With generative AI, we can create new content, summarize complex information, write computer code, and more. It is a new generation of AI that can reason through business problems and make suggestions that were previously unthinkable. Customers can expect generative AI use cases that bring tangible value across the SAP portfolio.
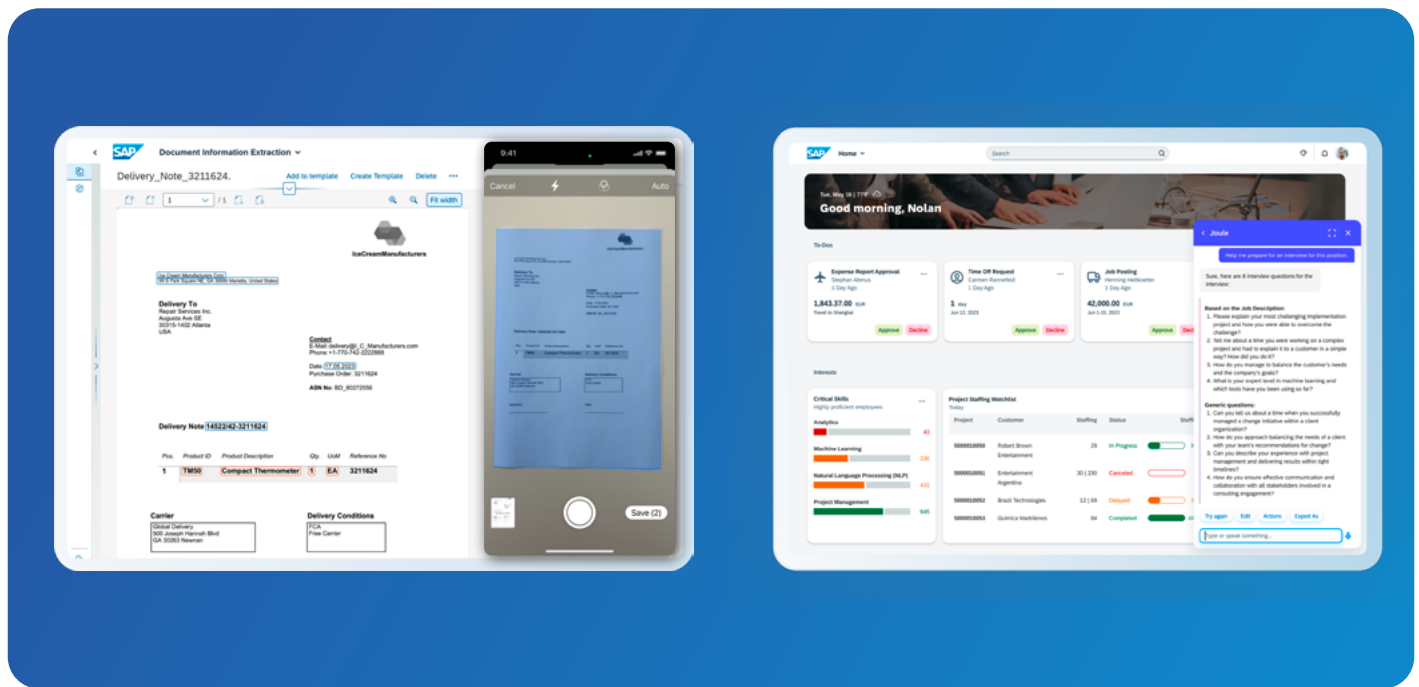


## Cloud ERP

### Reap the benefits of generative AI in core areas of cloud ERP such as digital supply chain.

The time-consuming verification of paper-based delivery notes during the goods receipts process at a factory gate affects every SAP customer with production sites. The Document Information Extraction service, enhanced with generative AI, **automates processing of documents** with greater accuracy and efficiency, reducing the operational costs by up to 55%. We estimate that a customer receiving 50 pages of delivery notes per truck and 1,000 daily deliveries could save €300,000 per factory annually.

## Human Capital Management

### Focus on human interactions rather than administrative tasks.

Managers' time should not be consumed by spending hours on job postings or sourcing candidates. SAP's generative AI-infused HR solutions allow managers to **spend their time with humans, not their workflow**, saving up to two hours per job description. For a 50,000-employee company posting thousands of openings per year, this results in estimated productivity savings of up to €400,000. Job descriptions are only the start – there is endless potential for streamlining the writing of annual goal plans, interview questions, and more while removing bias.

## Spend Management & Business Network

### Scale the category management discipline to achieve better business outcomes.

Category managers strategically drive procurement by grouping similar products or services and managing them collectively. However, the effort spans the collection and structuring of diverse information sources often across hundreds of categories. With SAP Business AI, category managers can be equipped with the necessary information to **jump-start their category plans applying market dynamics and cost structure insights**. Experience up to 56% reduced onboarding time, 70% more category coverage, and 2.3x realized cost savings.
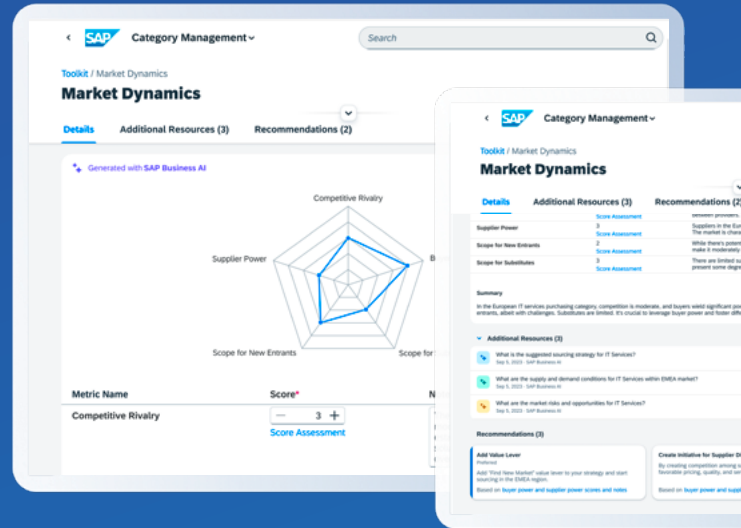
## Customer Relationship Management

### Take customer engagement to entirely new levels with generative AI.

Sales teams can gain sales advantages by accessing **customer preferences** and **purchase history, enabling personalized interactions** and improved customer satisfaction. Customers can further enhance service efficiency through **tailored recommendations to inquiries**. In internal pilots, SAP's sales teams and solution advisors saved 16%–20% effort using generative AI for daily tasks such as preparing e-mails and account briefings.
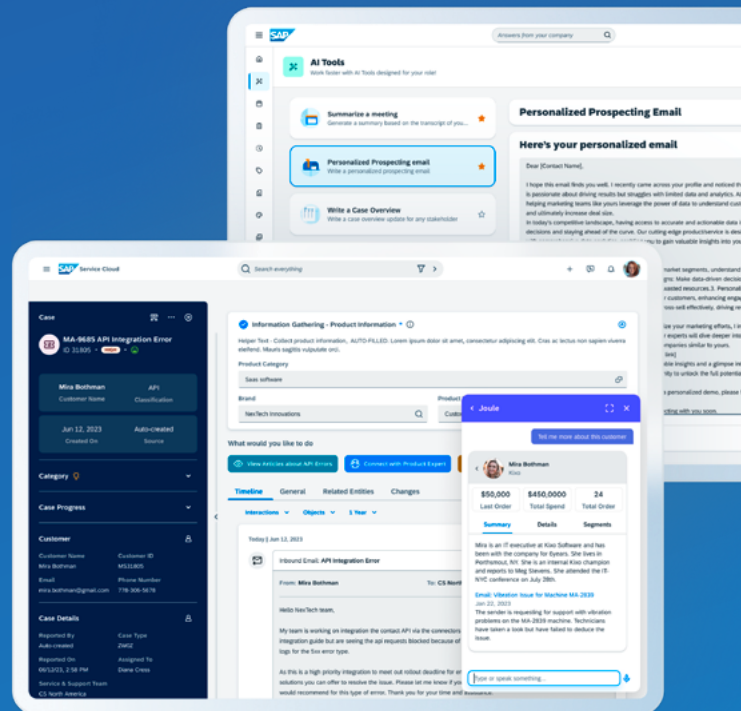
## SAP Business Technology Platform

### Create applications by simply providing textual descriptions.

Writing code is hard and requires advanced learning. Even experienced developers regularly need to consult documentation, slowing down the development process. Through AI-powered code generation, test script creation, and the like, **application development effort can be reduced by 30%**, enabling developers to concentrate on the more intricate aspects of their tasks.
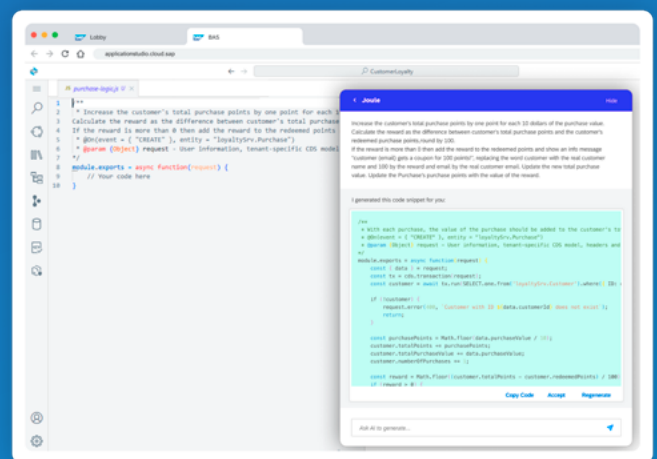
## Joule

**Access SAP solutions and processes with our new AI-powered copilot.**

Many of these exciting capabilities will be accessible using Joule, SAP's copilot, offering an **entirely new experience for interacting with SAP applications**. Users will be able to easily navigate across applications, find information, execute transactions, collaborate with colleagues, and receive proactive recommendations.

Stop searching – just start asking and receive intelligent answers on the wealth of business data and insights available across the SAP portfolio, reducing average search and query time by up to 80%.
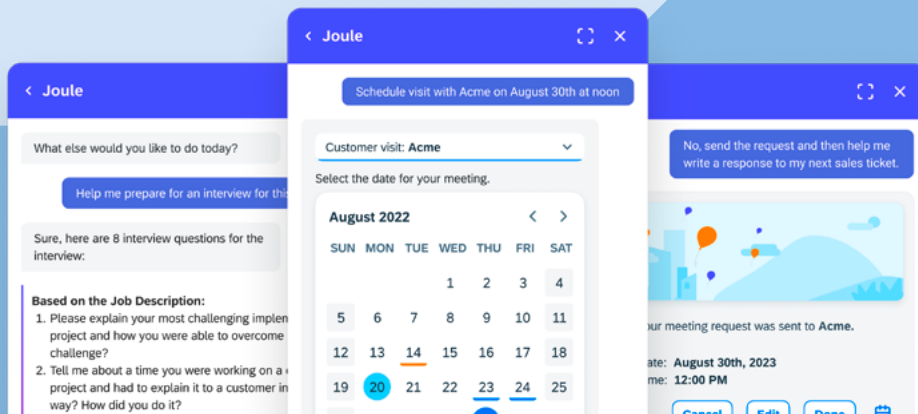


## SAP Signavio

**Generate process models and get recommendations for process improvements.**

It can be difficult to redefine and enhance processes and to identify the best-suited key performance indicatory (KPIs) quickly. With a large language model trained on expert knowledge and SAP best practices, process AI saves 50%–60% effort for process modeling and KPI selection and an expected €120,000 per year for eight processes.
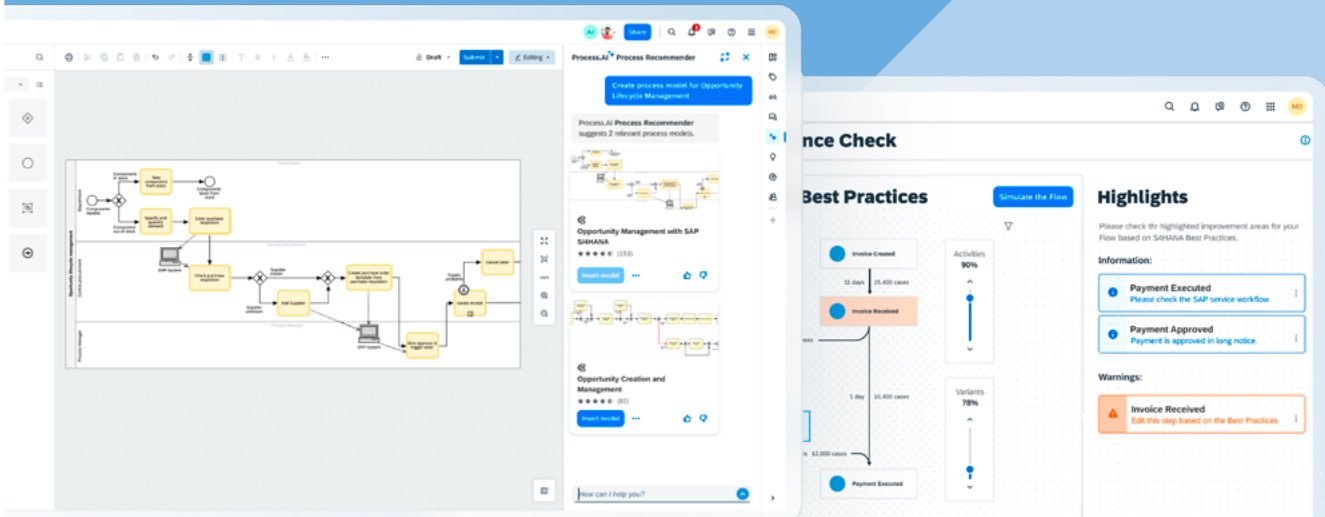
# Trusted AI Foundation

An AI foundation, as part of SAP Business Technology Platform (SAP BTP), is how we infuse AI into our products and enable customers and partners to create AI-powered extensions and applications.

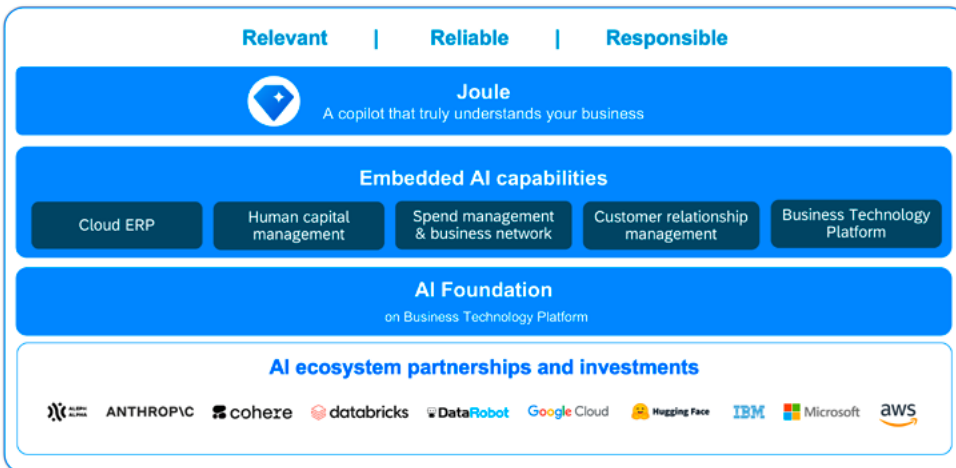**SAP BTP provides a foundation to infuse reliable, secure, and scalable generative AI across business applications and beyond.**

We partner with the leading general-purpose AI vendors and large language model (LLM) providers to help ensure that our customers keep up with the fast pace of innovation and have the flexibility they need.

To manage the new challenges that come with generative AI, we are introducing a **generative AI control plane** as part of SAP BTP. This will provide **access** to large language models and the required **trust** and **orchestration** between SAP business data and generative AI models. Integrating these assets into SAP's proven AI services that are already used by thousands of organizations gives our customers the enterprise readiness that they expect.

We make generative AI reliable by ensuring correctness, enterprise-readiness, safety, and security. This deep integration allows real-time, up-to-date information to make AI relevant for your business. We will do this through offering innovative approaches in SAP BTP such as "intelligent agents" that can access tools and APIs, SAP context-specific prompt engineering, and "embeddings" trained on SAP content.

## SAP Business AI approach



## What is generative AI?

"Generative AI" is emerging as a catch-all term for various foundation model technologies.

**Foundation models** are neural networks trained on massive volumes of data using self-supervised learning, such as predicting the next word in a text. They are a breakthrough in AI. They demonstrate emergent capabilities, with a single model often able to write poems and business documents, create images, and pass reasoning tests. Their ability to be adapted to multiple tasks lowers adoption barriers.

**Large language models (LLMs)** are a subcategory of foundation models for text and computer code.

**Generative AI**, based on foundation models such as LLMs, creates novel output such as text and code by processing input (called "prompts").

## SAP Foundation Models

To get the most value in traditional business areas such as finance, sales, or supply chain, our customers require foundation models designed for business context. SAP will fine-tune generic large language models on SAP anonymized data as well as create proprietary foundation models based on our vast structured business data. These models will be able to address questions we face every day in business that large language models cannot, such as predicting invoice payment dates and supplier delivery quality or proposing efficiency improvements to a business process.

# Simple Consumption & Empowered Ecosystem

## SAP Business AI easy to consume

While generative AI offers tremendous value, these massive AI models also require significant hardware resources for training and usage. Therefore, SAP will introduce a single metric called **"AI units"** that allows consumption of AI use cases across SAP SaaS solutions in a simple way. These AI units can be purchased and then used flexibly with SAP solutions. Customers and partners will be able to view and track their quota and consumption from the "SAP for Me" site. In addition, certain bundles will already ship with a predefined amount of AI capacity to get started right away.

## Unparalleled opportunity for SAP's ecosystem

A solid AI foundation empowers our large partner ecosystem to build an array of generative AI-powered solutions and extensions on SAP BTP to jointly help our customers in the following key areas:

**Create the most relevant AI-powered software partner portfolio**.
As part of SAP's partner programs, developers, start-ups, scale-ups, and partners large and small can build innovative apps by leveraging our unique assets on SAP Business Technology Platform and reach SAP's large customer base through our trusted channels. They build cutting-edge generative AI capabilities and innovations that will enable our customers to accelerate their AI and cloud road maps. Already today, customers can choose from hundreds of AI-powered partner solutions available on SAP store.

**Build innovative AI use cases and extensions.**
Advisors and partners like systems integrators, management consultancies, and service providers can build custom, AI-powered extensions, add-ons, use cases, and intellectual property for SAP cloud solutions on SAP BTP. We support this through targeted enablement for our partners including a range of AI-focused learning journeys, coaching services, hands-on support models including dedicated Hack2Build initiatives, and new certification and free tier options to test AI services on SAP BTP.

**Accelerate cloud transformation value realization.**
We see great potential for partners to apply generative AI to condense cloud transformation projects and maintain a clean core. SAP and our partners will offer AI-powered development tools and content on SAP BTP to enable automated code generation and harmonize data silos through intelligent migration tools.

## SAP is making bold investments in the AI ecosystem

Sapphire Ventures committed more than US$1 billion to invest in the next generation of AI-powered startups, and SAP invested in leading large language model providers **Aleph Alpha GmbH, Anthropic, and Cohere**. These partnerships build on announcements with **Microsoft**, **Google Cloud**, and **IBM**. We will bring these new partnerships into the SAP ecosystem and make these AI innovations available to SAP customers.

> "
> *SAP Business Technology Platform (SAP BTP) is THE choice for infusing SAP and partner applications with business AI. With our strong and reliable Business Technology Platform, we are going to bring powerful generative AI capabilities to all our products and services. Our trusted partners and customers will be able to use the very same platform to build relevant, reliable, and responsible generative AI solutions in the SAP context, and beyond.*
>
> **Jürgen Müller**
> CTO and Member of the Executive Board of SAP SE

# AI Ethics

At SAP, we care deeply about the impact of AI on the well-being of people, the health of our customers' businesses, and SAP's impact on society and economies.

Organizations need to ensure that their technology partners live up to the highest standards of AI ethics. Slips in privacy or a biased AI model can severely damage a company's reputation, and many people are concerned about the impact of AI on their lives as well as the associated uncertainty and risks. We acknowledge AI's profound impact on decisions, fairness, transparency, privacy, and dignity.

In 2018, SAP announced a robust ethical framework that guides our development and operations around AI. The ethical principles are anchored in a commitment to human rights, designing for people, striving for bias-free business, transparency, upholding quality and safety, data protection, and engaging with broader societal challenges and regulators.

## SAP brings these principles to life through

- SAP's **Global Artificial Intelligence (AI) Ethics Policy**, which is mandatory for all SAP employees.

- The installation of an internal **AI Ethics Steering Committee** to govern SAP Business AI development and an external **AI Ethics Advisory Panel** comprised of cross-disciplinary experts.

- A governance structure to operationalize our guiding principles, provide guidance for high-risk use cases, and align with governmental policies such as the upcoming EU AI Act and Blueprint for an AI Bill of Rights in the United States.

- SAP's active participation in public and private AI initiatives, such as the AI Ethics label by the Digital Trust Forum, and numerous standardization initiatives around trustworthy AI help ensure that practices are not only compliant but also contribute to shaping a responsible AI landscape across industries.

Ultimately, SAP's AI ethics put the **well-being of people** at the center of everything we do. We lead in AI ethics because it's the right thing to do and a core part of SAP's culture.

## Principles

We are driven by our values

We design for people

We enable business beyond bias

We strive for transparency and integrity in all that we do

We uphold quality and safety standards

We place data protection and privacy at our core

We engage with the wider societal challenges of AI

> " *Our customers trust in our ability to build, deploy, and use AI in a responsible and ethical way. The rapid rise of generative AI has further increased the need for the highest levels of ethical standards – and that's what we deliver.*

**Thomas Saueressig**
Member of the Executive Board of SAP SE
for SAP Product Engineering and Sponsor for AI Ethics

# Get Ready for the Future Now

AI plays a pivotal role in SAP's commitment to enable every organization to become a network of intelligent and sustainable enterprises. Learn how you can accelerate your journey to achieve this vision.

- Artificial Intelligence | SAP Business AI
- AI Solutions on SAP Business Technology Platform
- AI Ethics
- SAP Community: Artificial Intelligence and Machine Learning at SAP
- SAP Learning: SAP Tutorial Navigator | Tutorials for SAP Developers

The future of AI is here; don't miss the opportunity to be a part of this revolution with SAP. **Together we can do it today!**