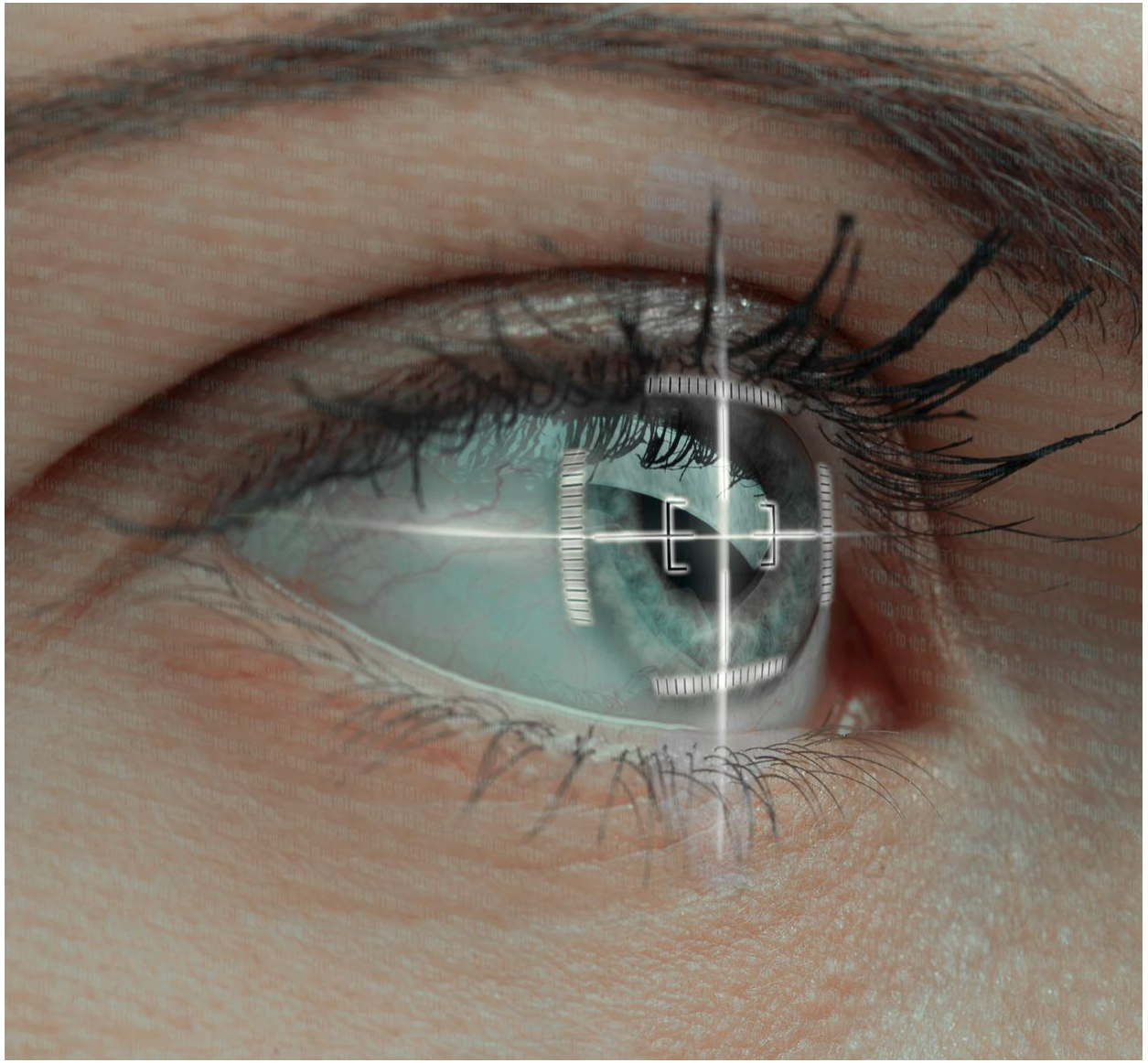
Technology Vision for SAP Solutions 2024

SAP Solutions in the Age of AI

Human-by-design technology is reinventing core business operations



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Foreword

We're delighted to present this year's Accenture Technology Vision for SAP solutions. In it, we explore how human-by-design technology is reshaping interactions between humans and machines, enabling new levels of business productivity and creativity—and what this means for companies running SAP solutions.
In particular, we dive into the potential for generative AI to enhance the way people access and work with SAP solutions and data, as well as drive a pivotal shift towards automated agent-based operations. We explain the numerous applications and use cases that can be implemented now, as well as the likely evolution of the technology in the years to come.

Of course, applying a powerful general-purpose technology like generative AI to a complex and business-critical domain like ERP comes with challenges. It's why we also explain some of the steps businesses will need to take to prepare their data, adopt composable architectures and build the digital scaffolding for an increasingly AI-driven future workplace. Not forgetting the need to ensure rigorous Responsible AI approaches are built in from the start.
It's an exciting time for enterprise technology. Generative AI is opening up a whole new world of possibilities for augmenting and automating work. We look forward to helping our clients capitalize on the many opportunities that await them.

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Contents

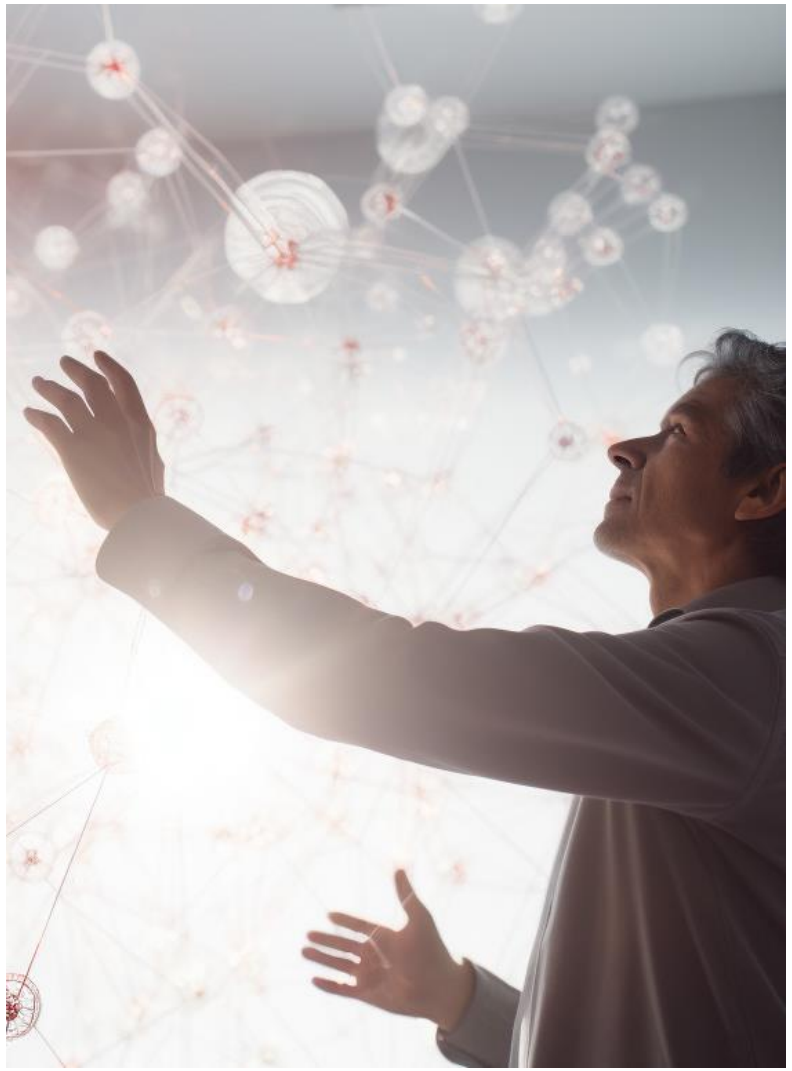
The big picture

Human-by-design AI is transforming next-level enterprise potential

The relationship between humans and machines is changing. Enterprises are acquiring an array of increasingly powerful and intelligent tools and technologies, which are allowing their employees to radically reshape the way they access, use and think about enterprise data. They're allowing operational teams to develop new kinds of automation, including autonomous agents that can act independently and interact with each other. And in the process, they're fostering greater levels of business productivity, human creativity and enterprise potential.

One of the most exciting aspects of these new technologies is the fact they're "human by design". That means they're not only more powerful, but also more intuitive to use, more human-like in their responses, and easier to integrate into the everyday patterns of working life.

An example? Look at the wave of advances made by generative AI over the past 18 months. A whole range of models has emerged, accompanied by a technology ecosystem to utilize them, with OpenAI's GPT, Google's Gemini, Anthropic's Claude, Meta's Llama and Mistral's models among the most significant. Solutions based on these models have taken the world by storm, demonstrating remarkable abilities to converse in everyday language, summarize vast amounts of information into consumable insights, and produce useful and relevant responses to questions.



For businesses, the impact will be far reaching. The technology is allowing people to access information, spark new ideas, bring data together and generate a variety of content faster than ever before. It's massively expanding AI's impact on day-to-day operations, widening the focus from routine automation and data analysis to task augmentation and reinvention.

It's a profound shift in how we all work. And employees know it—in many cases generative AI adoption is being driven organically from the shop floor, not the C-suite. As this shift plays out, it will start to reshape the way entire organizations, even entire industries, operate.

Look, for example, at the impact generative AI is already having in activities like software development, exemplified by tools like GitHub's Copilot for coding. Then consider the massive potential in other industry-specific domains, including emerging applications like MIT's experimental FrameDiff for accelerating drug discovery and Google's Vertex AI search tools for healthcare practitioners.

43%

of all working hours across end-to-end supply chain activities could be impacted by generative AI.

What does this mean for companies running SAP?

Companies have spent the past year exploring these new AI capabilities. Now, however, the focus is shifting to scalability and ROI. How can business leaders turn all those interesting experiments into scalable solutions that deliver real and sustainable value for the business?

To achieve that value, companies will need to start using their own data to optimize and customize generative AI, enabling it to deliver more accurate, more relevant, more context-specific outputs. That means allowing generative AI to touch core ERP systems and data—including the SAP ecosystem of mission-critical solutions used by so many of the world's large organizations.

There's no question this is a complex undertaking, given the tightly integrated nature of many mature ERP deployments.

The good news? SAP Business AI helps customers achieve real-world results with embedded AI capabilities across their business.

Look, for instance, at Joule, SAP's generative AI copilot designed to accelerate work and provide smarter insights. Then there's the SAP AI Launchpad, a multi-tenant SaaS application on the SAP Business Technology Platform, and the SAP AI Core, which now includes a generative AI hub for experimenting with and managing the lifecycle of prompts given to generative AI models.

In data management, too, SAP continues to innovate. The company has enhanced its SAP HANA Cloud database with a vector engine, an important capability in allowing generative AI models to draw insights from enterprise data. While the SAP Datasphere continues to enhance the way companies bring together data across complex hybrid architectures and cloud environments.

Accenture has also developed a range of generative AI solutions that can be applied to SAP systems. Take Ling.AI, our tool for expediting the translation of business documentation, including SAP-related materials. Able to be hosted securely in any platform and customizable for individual business requirements, Ling.AI allows users to instantly translate documents of any size while preserving formatting. We worked with multinational retailer Metro to implement Ling.AI, saving its teams significant time and effort translating thousands of documents like SAP training materials into multiple languages. We've also worked with Metro to identify and prioritize 35 other generative AI use cases for its SAP transformation program, which we're actively pursuing together.

"Our ecosystem plays a critical role in helping our customers adopt SAP Business AI to get immediate value from these exciting new technologies and solutions.

We very much value our long-standing partnership with Accenture. They are one of our most important partners in the industry for bringing innovation to our joint customers, which includes activating SAP's embedded AI capabilities, such as Joule, and building customer use cases in the SAP Business Technology Platform with SAP AI Core and the generative AI hub.

I look forward to our continued collaboration and the outcomes that generative AI will deliver in both business transformations and operations for our customers."

Dr. Philipp Herzig, Chief AI Officer at SAP

The trends to watch

Accenture's Technology Vision 2024 sets out four of the key trends that enterprises need to pay attention to in the coming years. Of these, we see two being particularly relevant for companies running SAP solutions.

A match made in AI

People are asking generative AI chatbots for information. This is reshaping our relationship with data and transforming the business of search. It's also redefining the software and data-driven enterprises of tomorrow.

Meet my agent

The journey to becoming an autonomous enterprise is being accelerated by advances in AI, including generative AI and large language models (LLMs). Soon this will include ecosystems of AI agents able to operate more independently.

A match made in AI

Reshaping relationships with data

Employees' access to business insights is about to change forever

The "search engine" model of accessing information is now so embedded in everyday life it's become second nature. Almost 70 percent of all website traffic begins with search. And it's no different at work. Whether we're searching through emails, looking up customer details in a CRM or finding a particular document, we're all completely accustomed to the idea that accessing information means asking a "digital librarian" for a list of potentially relevant documents or data points.

Generative AI completely flips that on its head. Because rather than asking for a curated list of search results, people can ask a digital copilot real questions and get useful answers in return. The original vision for internet search engines is finally becoming a reality. And it's already changing the way industries and enterprises think about their data.

An example? Look at the way electronic health record software company Epic has integrated GPT-4 into its products to allow clinicians to speedily generate summaries of patient charts. Or the way Morgan Stanley is applying generative AI to help its analysts access relevant insights in its vast internal knowledge library much faster. Accenture, too, is enabling a centralized generative AI search entry point called Amethyst for all its employees.

Intelligent assistance can deliver ERP insights instantly

How is access to data changing within the SAP ecosystem? Just consider how many business activities involve combining and connecting information across ERP systems, and with data from other sources, in order to take a business decision—in finance, supply chain, manufacturing, or any other function. All these activities stand to gain from the ability of generative AI to bring disparate insights together instantly, in an easily consumable form.

These capabilities are already becoming available within certain SAP applications. Take Joule, SAP's new generative AI copilot, which is being rolled out across its cloud enterprise portfolio, initially embedded in SAP SuccessFactors and SAP S/4HANA Cloud. Using simple everyday language within an intuitive interface, users can use Joule to navigate to the correct SAP functionality for a particular task, explain how to perform certain activities within the ERP system, and retrieve operational insights, such as purchase order status. Users can even complete certain tasks end-to-end, such as updating HR information, approving requests and giving feedback. Designed to integrate seamlessly into everyday work, SAP has created Joule to help teams work faster, gain smarter insights, and achieve better outcomes from SAP systems.

Within SAP Analytics Cloud, SAP also offers a Just Ask feature, which allows users to query analytics data models by asking questions in everyday language. Powered by generative AI, Just Ask interprets the query and returns the results as an intuitive data visualization. It's a simple and easy-to-use solution designed to help increase user adoption of SAP Analytics Cloud for improved data-driven decision making.

Similar capabilities can also help drive a broader change management agenda. Accenture, for example, is integrating a generative AI assistant into its GenWizard offering.

SAP has unveiled the SAP Joule Certified Consultant solution. By drawing insights from a range of relevant documents, the assistant can quickly answer user queries on specific topics such as new functionalities in their organization's ERP transformation.

Powering the supply chain nerve center

With supply chain resilience at the top of the agenda for manufacturing businesses, AI capabilities are coming to the fore. Recent disruptions have exposed significant vulnerabilities across supply networks, while supply chain resilience and responsiveness are becoming increasingly important revenue drivers. Accenture's Resiliency in the Making research estimates supply chain vulnerability is costing the world's businesses a staggering $1.6 trillion in missed revenue growth every year.

To deliver the necessary resilience, leading companies are turning to intelligent supply chain management capabilities. By building supply chain nerve centers based on SAP technologies, they're enabling end-to-end control towers, reconfigurable supply chain networks, autonomous manufacturing, improved demand foresight, predictive alerting and more. And while classical machine learning techniques have been integral components of many of these capabilities for years—including within SAP applications—the introduction of generative AI is opening up new possibilities for supply chain responsiveness.

Consider its practical uses in supply chain planning. Generative AI-powered interfaces with access to relevant data sources allow planners to instantly query, summarize and explain disruption alerts and data triggers as they come in—a task that could historically take hours if not days of painstaking research. Generative AI can also suggest the most effective corrective actions, such as suitable alternative suppliers, for planners to consider.

Its potential extends beyond chatbot interfaces. Accenture, for example, is building a suite of generative AI tools into its Supply Chain Nerve Center offering, including one that extracts insights from a range of different market sources, such as complex unstructured information in analyst reports, to improve forecast accuracy. Another key use case is explaining the outcome of planning runs, a task that is often too complex for human analysts to complete quickly enough to be useful.

Press Release: Accenture Expands Partnership with SAP to Help Clients Establish Responsible and Resilient Supply Chains

Highlight Report: Accenture Builds on its SAP Expertise and Launches the Supply Chain Nerve Center

Customer and sales experience are getting smarter

Customer engagement and sales can also be transformed by this reinvention of human-machine interfaces. Take conversational commerce, a concept gaining traction in retail and consumer goods. By enabling customers to articulate their needs to an AI engine in the form of a natural conversation, brands can radically simplify shopping experiences.

Imagine you want to redecorate your child's bedroom, but you're stuck for ideas... and lack confidence in your painting abilities. By guiding you through a series of questions—the age of your child, their likes and interests, the size and aspect of their room—an AI chatbot can propose suitable paint brands, colors and equipment, as well as provide tips on correct painting techniques.

Similarly, sales representatives can revolutionize customer engagement and increase conversion rates by leveraging generative AI applications during the sales journey. These applications allow them to better understand consumer preferences, recommend suitable products and enhance the overall shopping experience. In industries like consumer packaged goods, these kinds of solutions can not only improve customer engagement, but also deliver a significant productivity boost to employees, freeing up capacity in areas like field sales, administration and customer service. However, the success of such initiatives relies heavily on seamless integration with backend systems like SAP, for crucial data on product availability and lead times.

Finance teams are gaining faster access to insights

Companies are increasingly developing their own generative AI solutions for use within the SAP ecosystem. Look, for instance, at how Accenture has applied it within its own finance function. It's developed a financial advisor tool powered by generative AI which proactively alerts finance teams of any cash management variances, financial exposures, credit utilizations or other issues that need immediate investigation. Because generative AI provides the alerts in clear everyday language, employees can instantly understand the issue and quickly click through to see the relevant report in the SAP system. What's more, by focusing generative AI on a discrete task, and prompting it with data generated through traditional automation methods, the tool ensures accurate insights are generated, minimizing opportunities for "hallucinations" and other inaccuracies that can creep into broader LLM implementations.

Another valuable use case is compiling finance narratives, such as those used in preparing for earnings calls or external regulatory reporting. Historically, producing these narratives requires a huge effort from finance teams who need to bring together a wide range of data sources to produce summaries of business performance that are both accurate and cognizant of potential market reaction. Accenture has created a generative AI tool to streamline this process. It's able to produce an accurate initial narrative based on real financial data, which finance teams can then fine-tune. Likewise, the tool can auto-generate first drafts of certain regulatory submissions.

SAP Innovation Awards 2024

What to do now?
Prepare the data

As generative AI starts to be applied across the enterprise, business data has never been more important. Companies are under ever greater pressure to guarantee data quality and data accessibility. The ability to match and combine data from different sources, including SAP solutions, across hybrid IT environments, is becoming critical for a whole range of use cases, including generative AI.

Having a mature and efficient data foundation is therefore a prerequisite for reshaping the way companies access their data with AI. But data management remains a perennial challenge in most organizations, and the scale of the work involved is often underestimated.

The good news? Generative AI itself can help. Accenture, for example, has been developing tools for expediting SAP data migrations with generative AI by helping design migration plans and generating migration code, as well as assisting business users as they validate migrations by comparing before/after outcomes.

Similarly, generative AI can help streamline SAP data cleansing tasks like deduplication and removing personal or sensitive information. It can be very effective at producing context-specific manufactured data for testing purposes. And it can also support data reporting by taking on the technical heavy lifting of putting together different reports and dashboards.

Of course, managing data quality is an ongoing activity, not limited to the data migration phase.

Companies also therefore need the right governance structure and tools to sustain data quality after a system goes live. Again, generative AI can help by making checks and offering recommendations to users during their data interactions. A US-based retailer, for example, is implementing a chatbot that uses generative AI to propose the right UNSPC code during procurement activities, helping ensure the correct code is used. Efforts like these can support a ‘virtuous loop,’ where company data is continuously checked and enhanced as part of an ongoing cycle.

Meet my agent

The road to the autonomous enterprise

The first agent-based enterprises are on the horizon

Companies have been embedding robotic process automation and AI into business operations for many years. As generative AI is added to the mix, machines are acquiring the power to operate increasingly independently. And AI is taking on new roles, evolving from being assistants that offer advice and insights into something potentially more powerful—agents that are able to interact with each other, and take action on their own, in the real world.

Soon it will be commonplace to see entire ecosystems of these agents operating across the enterprise, chaining together different decisions and actions, driving automation to new levels. Already, cases are emerging, where agents can automate activities across scientific research or break down natural language commands into subtasks for controlling physical robots. It's true that there's a lot of work to be done to make this a reality in most organizations. But the journey to the autonomous agent-driven enterprise has already begun. And innovative companies are now building the digital scaffolding that AI agents will operate within, as well as upskilling their workforces for this increasingly automated future. Accenture estimates that 40 percent of all working hours could ultimately be augmented or automated by generative AI models such as GPT-4. As the technology matures, this figure will likely grow. Companies will need to prepare for a future in which AI agents and human employees work side by side to drive value for the business.

96%

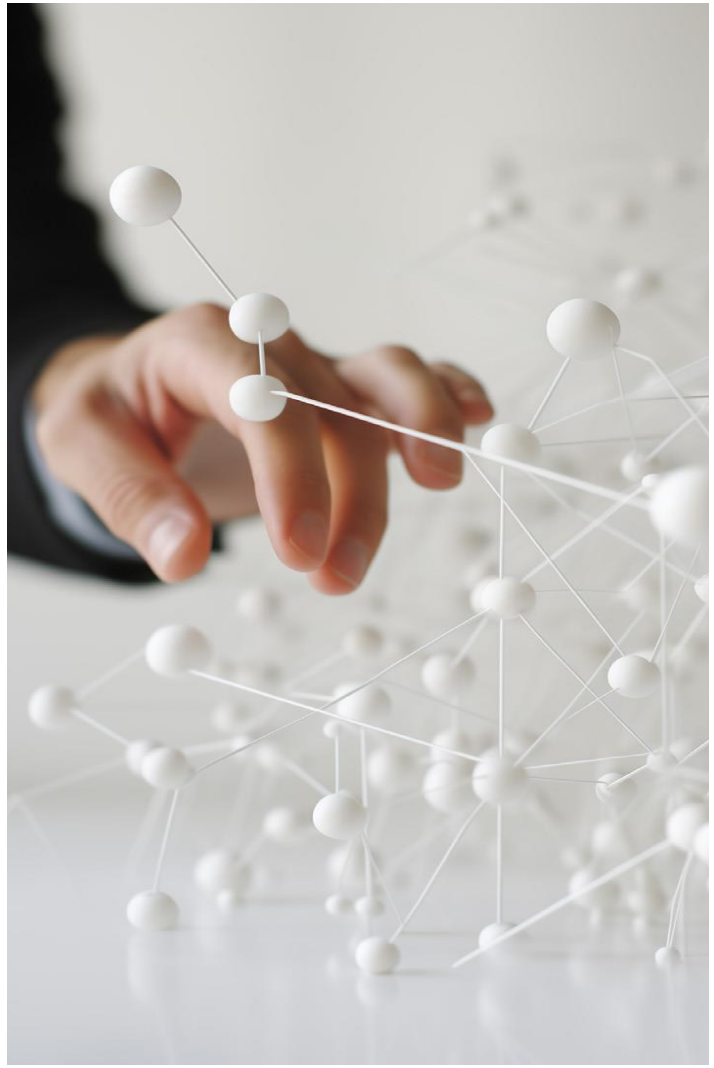
of executives agree that leveraging AI agent ecosystems will be a significant opportunity for their organizations in the next three years

An ecosystem of AI automation techniques

Companies already have numerous options for building autonomous ecosystems. Because the journey to the autonomous enterprise doesn't begin and end with generative AI, significant gains can be made by combining various kinds of automation, including classical machine learning and robotic process automation (RPA) as well as generative AI, in a broad ecosystem of automation techniques.

This can be particularly valuable in situations where accuracy is paramount, such as SAP financial reporting. In financial close variance reporting, for instance, Accenture's finance teams use classical AI to generate variance insights from SAP S/4HANA Cloud as a first step. Then they layer generative AI on top to summarize and explain those variances. This combination ensures both high accuracy and high usability.

Likewise, in transportation and logistics, companies can build generative AI capabilities on top of their existing AI-powered predictive alerts. For instance, when a disruption alert is triggered in any SAP solution, instead of being passed immediately to a human employee, that alert can be supplied to a generative AI solution that can evaluate the various responses the company could take and present them to the employee in an easily consumable form, saving time and effort. Similarly, generative AI can be combined with other cutting-edge deep learning techniques in supply chain optimization to make valuable insights available to supply chain planners in an actionable way.



The evolution towards agent-based operations

As AI agents mature and their capabilities grow, companies will have even further opportunities to drive efficiency, productivity and innovation. Generative AI will increasingly be used to help orchestrate entire processes, breaking down decisions into discrete steps and calling other tools, agents and physical robots to use its output and take the required action.

Take the transportation example described above. Ultimately, AI agents will enable almost completely autonomous responses to these kinds of inbound logistics disruption. Having identified the initial disruption, one agent will assess various alternative responses by analyzing operational data from the ERP, scheduling and manufacturing execution systems. The next agent will then trigger communication with alternative suppliers and/or logistics providers, while another updates planning and scheduling for production and warehousing. Such intelligent processes will not be entirely autonomous, of course. To ensure Responsible AI principles are rigorously adhered to, it will be essential to retain a human in the loop to validate the actions agents are taking and maintain ultimate control over operational decisions.

Another example is internal audit and policy compliance. For finance teams in particular, determining if a particular activity is permitted within the terms of the company's policies can be a difficult and time-consuming task. Increasingly, however, organizations are looking to expose their repositories of policy documentation to generative AI. In the short term, this will allow employees to ask an AI agent via a chatbot interface for a reasoned explanation of whether an action is compliant or not. Longer term, however, it opens the door for other AI agents to access these policy determinations autonomously before deciding whether or not they should take a particular action.

New human-machine interfaces

Generative AI is also fundamentally changing how people interact with physical machines. Look, for example, at the researchers who put ChatGPT on board a Boston Dynamics robot, allowing people to use natural language to command the robot or ask it about its previous tasks and receive a clear response in plain English. It's easy to see how this might be applied to robotics in an industrial setting.

Increasingly, site operators and engineers will use generative AI to interact with systems in a more intuitive and efficient way—without even having to use screens. They'll be able to ask voice assistants simple questions like "I'm stuck here, what should I do next?" and the system, understanding the context, who the individual is, and where they are, could then allocate them the most suitable task.

Operations will become not only more efficient but also safer by ensuring that workers receive the right information at the right time, without the need to navigate through complex interfaces or perform multiple transactions.

Workplaces themselves will become more adaptive and responsive. By leveraging the data model of a plant's operations and applying generative AI, it's possible to create a dynamic and self-updating system that not only guides the operators through their daily tasks but also anticipates needs and adjusts to changes in real time. Plants will be able to operate increasingly autonomously, much like modern airplanes, with minimal human intervention, while machine learning algorithms continuously learn, predict and optimize based on the real-time data generated.

Streamlined ERP implementations

One area generative AI is already having a visible impact is custom code development. This has significant implications for ERP implementation and maintenance. Accenture, for example, has been leveraging LLMs to optimize the customization process integral to large SAP ERP deployments. By specifying their various technical requirements through a chat interface, developers can receive contextualized code suggestions, whether that's for custom reporting, a particular user interface or form, a new workflow, or similar customizations.

Applicable to both greenfield and brownfield deployments, as well as application maintenance scenarios, the solution aims to accelerate the routine side of development work and improve code consistency and quality. It also adopts a multimodal approach and harnesses multi-agent capabilities, with individual AI agents for specific types of programming, data analysis, code reviewing and more. This will allow developers to simply upload a document containing business requirements and functional information—and have the ecosystem of agents work collaboratively to translate it into a set of programming requirements and associated code. These capabilities will transform automation across the ERP software development lifecycle, including testing as well as coding.

SAP itself is also now offering generative AI development solutions. SAP Build Code, for example, is an environment enabling application development with Joule copilot. Optimized for Java and JavaScript, it's been designed to help developers with tasks such as coding, testing, integrations and application lifecycle management through natural language prompts. SAP Build Code includes Joule copilot, which allow developers to generate artifacts for the SAP Cloud Application Programming Model.

"The vision is to have touchless testing…with AI writing the scripts and documenting the results in a format that our IT teams can instantly understand and use."

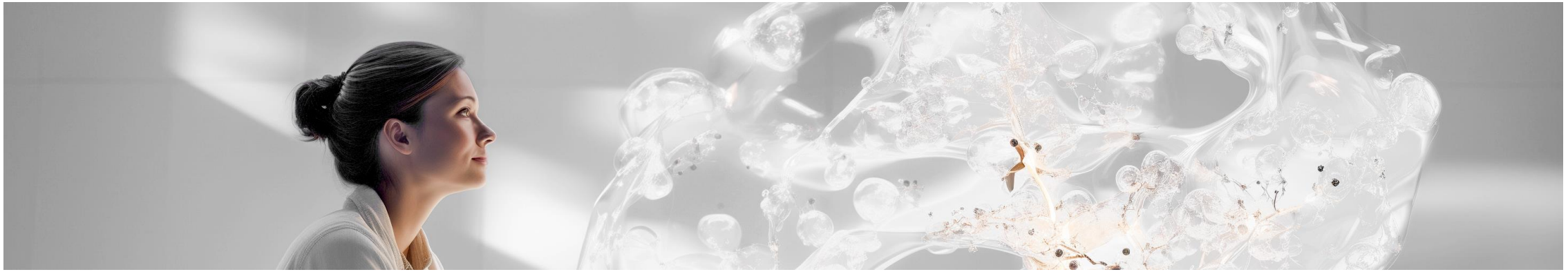
Sharmita Srivastava, Head of Global ERP at Bristol Myers Squibb

Fine-tuning offers a foundation for greater relevance

Some companies are thinking bigger than simply using LLMs like GPT-4 and are customizing pretrained models or even building their own. Fine-tuning generative AI on a company's data allows generative AI to develop the context-specific expertise that's critical for supporting day-to-day operations. Whereas creating an LLM from scratch can deliver even greater relevance and competitive advantage, the resources and time involved mean this option is only typically available to the largest companies with the deepest pockets.

Global businesses, for instance, are looking to build their own LLM, leveraging its extensive proprietary sources of biomedical data in order to improve generative AI's performance in specialized tasks.

Such LLM models can be trained on the company's corpus of both human language and business data, including text and multimodal data as well as public sources.



What to do now? Adopt composable architecture to deliver critical flexibility

As they look to prepare the ground for agent-based operations and next-level automation, more and more companies are adopting composable IT architectures. These architectures allow organizations to mix and match modular components within hybrid environments, supported by a strong governance model for managing component lifecycles from selection to implementation to operation to decommissioning. This is designed to maximize flexibility, interoperability, extensibility and innovation potential. Such architectures also enable a modular "building block" approach to implementing generative AI—especially important given the rapidly accelerating maturity curve for this technology.
Many mature ERP implementations are highly complex, extensively customized and tightly integrated, adding to the challenge of introducing more modular approaches.

> "The challenge is that ERP environments can be perceived as a complexity monster. There's a lot of 'table stakes' work to be done, and scaffolding to be built, to enable generative AI use cases."

Sharmita Srivastava, Head of Global ERP at Bristol Myers Squibb

However, composable architectures are now a key feature of the SAP ecosystem. The SAP Business Technology Platform (BTP), for instance, allows companies to shift many of their ERP customizations out of the core SAP S/4HANA Cloud solution into modular components.

It enables them to bring together data and analytics, artificial intelligence, application development, automation and integration into a single environment. Meanwhile, the SAP Business Accelerator Hub provides a framework for accessing and exchanging innovations between SAP and other solutions.

New capabilities within SAP BTP will allow companies to start building agent-based ecosystems. For example, SAP now offers a generative AI hub as part of SAP AI Launchpad and SAP AI Core. The hub provides access to a range of different LLMs, including those from market frontrunners like Azure OpenAI as well as startups like Aleph Alpha, which offers an EU sovereign solution. The ability to orchestrate and switch between multiple models allows companies to keep pace with the rapidly evolving generative AI ecosystem. With the generative AI hub, companies get an SAP-managed legal and commercial framework for faster adoption of LLMs while maintaining the ability to select the right model for the right use case. The generative AI hub also offers tooling for prompt engineering, comparing the outputs of different LLMs and infusing generative AI into SAP BTP applications.

Going beyond

How TotalEnergies innovates with SAP

Global multi-energy company TotalEnergies takes a proactive approach to innovating with its SAP solutions. As Johnny Rahme, Innovation Lead for TotalEnergies' APS division explained, it's about choosing priorities and focusing your innovation efforts where they're most likely to pay off. "The way we went about it is to focus on and prioritize user needs. Some of those needs are foundational. And for those, we took the view that 'if it ain't broke, don't fix it'. Whereas other needs are more differentiating. And that's where the real value is to be made."

The key to TotalEnergies' approach is to target these differentiating needs with concrete innovation proposals. Examples include everything from faster updating of pricing lists to optimizing raw materials logistics. TotalEnergies also sees huge promise in AI, especially when it comes to navigating through SAP systems and extracting insights—whether that's finding a purchase order or advising on plant-wide maintenance. Rahme also expects generative AI to have a key role in areas like IT helpdesk, guiding business users to find their own solutions faster.

But, as Rahme explains, there's no room for delay: "The timeframe is now. And if you miss now, it's going to be a hard scale-up afterwards. Either you become a passive client of someone else's innovation, or you become an active player developing solutions that work for you."

"Innovation is never-ending. It's an infinite game… But you need to have tangible, concrete innovation which speaks to the business."

Johnny Rahme, Head of Innovation at TotalEnergies APS

Secure the SAP ecosystem with AI

The age of AI brings new risks as well as rewards. Consider emerging threats like data poisoning, where malicious data is introduced into AI training sets, and prompt injection vulnerabilities, which can significantly impact the integrity and performance of AI systems. Not to mention known issues around data leakage and false outputs ("hallucinations") associated with generative AI.

Companies have a growing array of intelligent tools and solutions for securing their ERP environments without impacting performance. For instance, by integrating AI-powered security features like SecurityBridge, security teams can enable continuous monitoring of SAP environments, including automated alerts of anomalous and/or risky behavior and preventative actions like temporary user account locks.

AI can also help identify and monitor potential system permissions risks, such as users that are able to both change supplier bank details and post invoices. This can then generate automated responses, including triggering alerts or halting transactions as well as providing a clear audit trail. Similarly, AI can conduct regular user access reviews based on patterns of user behavior and suggest access changes.

What about security across the supply chain? SAP's Decentralized Identity Verification enables seamless and secure collaboration between different organizations, such as a company and its suppliers. This collaboration is increasingly critical for businesses, not only in demand planning and risk management activities, but also in meeting requirements around Scope 3 emissions reporting and human rights due diligence.

Using self-sovereign identity (SSI) concepts, companies can exchange trustworthy and verifiable data in a secure and seamless manner—creating an ecosystem of trust across the supply chain.

A new human interface

Take a look at the ongoing advances in immersive enterprise technologies. In practice, this is not about finding use cases for expensive goggles or exploring virtual worlds. It's about the practical on-the-ground use of existing technologies to overlay digital information onto companies' digital twins. Real-world examples include giving engineers tablets equipped with RFID scanning or geolocation capabilities that allow them to explore 3D models of equipment to be inspected or repaired, complete with all relevant data from SAP and other similar systems.

Simple but intuitive interfaces like these enable workers to access vital data about assets, maintenance records, quality issues, production details and environmental conditions from multiple different systems, exactly when and where they need it on site.

This can lead to significant efficiency gains by reducing the time engineers spend searching for information or returning to the office. These solutions can also be used to enhance site safety by providing environmental warnings directly to operators around the site. Increasingly, such scenarios will be augmented with new kinds of human-machine interfaces. NUIA, for example, is an offering from 4tiitoo, a partner in SAP's curated startup ecosystem. It allows users to control any software on a screen with their eye movements and voice rather than a keyboard or a mouse, saving significant repetitive effort over time. It also has numerous potential applications in manufacturing or industrial sites, where hands-free operation can offer material productivity gains.

Big picture? Today's enterprises must recognize the distinct strengths and possibilities of all these different technologies and understand how they can best be brought together with the SAP ecosystem of solutions within a flexible and modular architecture to leverage innovation and maximize value for the business.

Conclusion

Conclusion

As advancing AI rapidly reinvents business operations, companies are recognizing the need to apply the latest evolution of AI solutions within their core ERP systems.

There are huge pools of value to be tapped by doing so. Initially, these will be centered around transforming employees' access to business data and insights—in finance, supply chain, human capital management and elsewhere—making their experiences more natural, more intuitive and more human by design.

Increasingly, these capabilities will be extended to allow autonomous agents to take on a more significant role across the business, delivering next-level automation with strict responsibility safeguards and human oversight.

By combining SAP solutions and data with new technologies, companies can make a strategic shift and achieve competitive advantage in the new age of human-by-design AI.

Make the strategic shift to human-by-design AI.

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