Artificial intelligence in finance
From performance-oriented execution to lean, strategic CFO leadership

SAP

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A foreword by the SAP CFO

Dear readers,

Across all industries, CFOs are facing an unprecedented rate of change. Regulatory requirements are becoming ever more excruciating, digital transformation is accelerating, and customers are more demanding than ever. Add to this list the realities of growing geopolitical tensions, shifting socio-economic landscapes, and increased market volatility.

Yet, rather than just challenges, we see opportunities, too—particularly in the area of AI. Today, we find ourselves in the middle of an intelligence revolution that is transforming businesses and economies, not unlike the Industrial Revolution of the 18th and 19th centuries. I'm excited about what AI can do for us, our finance functions, our businesses, and our societies.

As CFO at SAP, I have had the privilege of leading SAP through record-breaking growth—growth that is both accompanied and enabled by SAP Business AI innovations in our portfolio. My teams are among the first to have witnessed, used, and benefited from AI built specifically for finance. Based on this experience, I envision CFOs everywhere transforming from the performance-focused orientation we've maintained for years to new roles, functions, and capacities based on lean, strategic finance operations. This will be a multi-year journey, but we are already beginning to see the fruits of our efforts.

This document shares these AI innovations with you. Each, in their own way, has the potential to bring out the best for your finance team. I hope your organization is inspired by SAP's vision of AI helping power the future of finance, and we look forward to discussing this vision in greater depth with you. Thank you for your trust and partnership.

Dominik Asam
CFO and member of the Executive Board, SAP SE

How CFOs can capitalize on AI
Supercharge your finance functions with embedded AI

CFOs face immense pressure to streamline operations and deliver strategic value. In April 2025, the IMF's 2025 World Economic Outlook revised its January prediction of 3.3% growth downward to 2.8%—a 15% decrease. While 2026 growth expectations are more hopeful at 3%, this recovery erases only half of the 2025 drop. From navigating volatile markets to heading off supply chain disruptions and managing sustainability, CFOs need new tools. Can AI help?

At SAP, we believe it can—if properly deployed.

A 2025 survey by Boston Consulting Group's (BCG) Center for CFO Excellence, "How to Get ROI from AI in the Finance Function," shows that AI adoption in finance is rising. Enthusiasm for the technology is high, with about half of finance leaders expecting breakthrough results over the next three years. Yet for now many organizations are falling short of the meaningful returns they expected—achieving around 10% ROI compared to the 20% they're targeting. The issue isn't lack of interest or effort, but rather how organizations realize value. Those that prioritize value from the outset and focus on practical outcomes are more likely to reap strong ROI.[1]

For AI to be effective in finance, it must be integrated into the right business applications and processes and trained on trusted, relevant data. This is a pre-requisite to making AI an always-on, always-available domain resource for everyone on the CFO team.

This is why at SAP we're embedding advanced AI capabilities into our Cloud ERP solutions. Our aim is to empower finance professionals with powerful, context-aware decision-making capabilities—and our vision is finance transformation with help from AI. With SAP solutions and embedded AI, your CFO team can not only streamline finance operations, but also transition from the role of an internal service provider to that of a strategic partner helping drive business success.

The challenge: AI integration

Realizing the promise of AI for finance teams isn't as simple as flipping a switch.
Finance leaders looking to get the most out of AI face several significant hurdles that must be carefully navigated.

Data quality
AI systems are only as good as the data they're trained on, and many organizations struggle with inconsistent, unreliable, or outdated financial information spread across multiple systems. Without a solid foundation of clean, standardized data, AI implementations risk becoming expensive experiments that deliver limited value.

Organizational readiness
Many finance departments still use on-premises systems that they've customized over the years to meet their specific business needs. These legacy environments can make it difficult to integrate new AI capabilities effectively. Moreover, scaling AI solutions across different regions, business units, and processes requires careful orchestration of technology infrastructure and organizational change.

Regulatory volatility
Global AI regulations are evolving rapidly, with different regions adopting varying approaches to AI governance. Finance leaders must ensure their AI not only delivers business value, but also maintains compliance with these emerging requirements. The swift advancement of technologies like large language models (LLMs) further complicates this picture, as regulations struggle to keep pace with innovation.

Yet these challenges are not impossible to overcome. They simply underscore the importance of choosing the right partner and approach to AI adoption—one that combines robust technology infrastructure with deep domain expertise and a clear understanding of regulatory requirements. Only by addressing these challenges can your finance organization expect to reap the benefits of AI for finance.

AI barriers range from resources and skills gaps to data quality and infrastructure . . . those who proactively manage these risks are making faster progress.

– BCG, "How to Get ROI from AI in the Finance Function"[1]

73%
of finance leaders face at least 4 major AI barriers[1]

The potential
Better outcomes for the office of the CFO

CFO teams are looking for transformative gains in efficiency, accuracy, and strategic insights. With AI integrated into core finance applications, these benefits are well within reach. The following four areas are the core components of a business case for investing in AI in finance.

When it's embedded into the applications that CFO teams use every day, AI has the potential to reshape finance—and SAP can help you move forward with confidence.
— BCG, "How to Get ROI from AI in the Finance Function"[1]

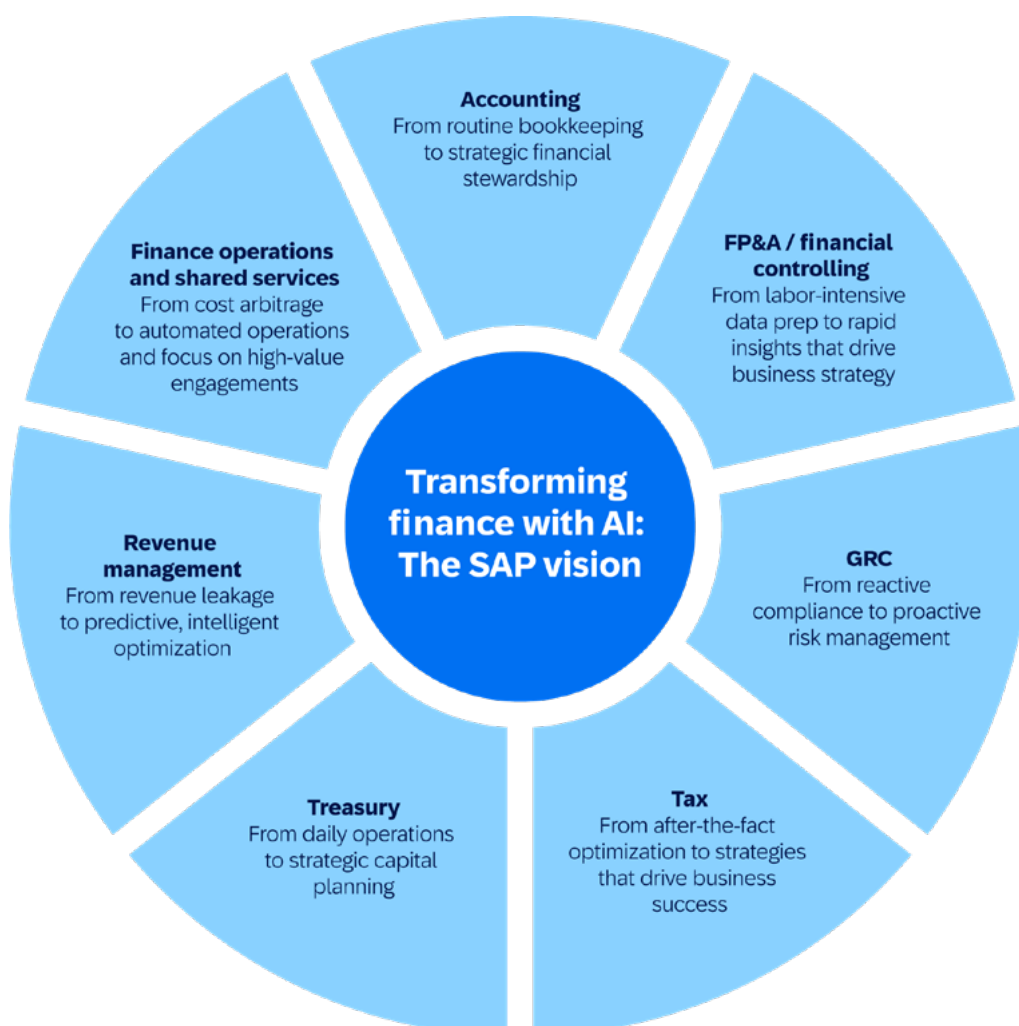| Benefit	How AI achieves it	
Increase productivity	AI helps you do more with less by scanning data and consolidating insights at record speed.	• Improve decision-making • Identify growth opportunities and adjust financial plans • Analyze liquidity, profitability, and sustainability in an instant
Enhance quality	AI delivers high-quality work quickly, helping your business meet the ever-increasing demands of time-pressured tasks.	• Accelerate analysis • Speed financial close and increase accuracy • Generate insights and receive recommendations
Grow your business	AI frees up human resources to focus on growth and improves throughput so you can serve more customers more effectively.	• Focus on long-term strategies • Expand into new markets • Review and operationalize accounting policies and regulations
Increase compliance and reduce risk	AI is best suited to operate in rules-governed processes, enhancing accuracy and reducing risk in finance.	• Implement controls and adjust policies • Monitor for anomalies across all data, all the time • Increase precision in financial reporting

The vision: The CFO team on AI
Helping CFOs transform their teams into lean, strategic finance functions

Finance has always been a frontrunner in adopting digital innovations, which has helped it evolve from a reactive and operations-driven function to today's more performance-oriented finance, which acts as a key partner to the other areas of the business—from procurement to sales.

The AI-enabled future for finance is characterized by greater automation and proactive decision support, with AI providing intelligence on demand to support domain expertise. Connecting high-impact AI use cases in an orchestrated, agentic approach can transform not just individual processes, but the entire finance function.

Finance professionals, accordingly, will have greater freedom to focus on crafting communications, advising the business, and developing strategic foresight. As SAP sees it, in the next phase of lean, strategic finance, the human role is elevated, with the team being reallocated to higher-value tasks. The nature of finance roles as they exist today will likely evolve—with AI not only helping drive efficiency and automation, but also supporting human experts in developing strategic scenarios and prioritizing options and recommending decision paths.

Let's explore how CFO teams can use AI to transform finance.

Transforming finance with AI: The SAP vision

Accounting — From routine bookkeeping to strategic financial stewardship

FP&A / financial controlling — From labor-intensive data prep to rapid insights that drive business strategy

GRC — From reactive compliance to proactive risk management

Tax — From after-the-fact optimization to strategies that drive business success

Treasury — From daily operations to strategic capital planning

Revenue management — From revenue leakage to predictive, intelligent optimization

Finance operations and shared services — From cost arbitrage to automated operations and focus on high-value engagements

Accounting

In today's performance-driven finance, accounting departments strive to reduce cycle time for publishing statutory reports while maintaining the highest level of accuracy and data quality. In our vision of a lean and strategic finance organization, AI helps you orchestrate routine bookkeeping and closing activities, leaving accounting teams to the job of quality control for the end product.

This enables accountants to focus on tasks such as making higher-value, judgment-based accounting decisions, anticipating market responses, and explaining financial results to internal and external stakeholders—supported by AI-augmented commentary and decision support. While accounting today might focus more on internal analysis about such matters, let alone communicating to the market, we will likely see innovative businesses embrace the evolution of such roles.

Financial planning and analytics

FP&A departments spend considerable effort preparing data to compare business execution against business plans. Our vision for the AI-augmented controlling function is zero time spent on searching for, analyzing, or presenting data. AI-embedded controlling applications or AI controlling agents will be able to develop business scenarios based on a wide economic context, accessing the most relevant internal and external data.

From there, they'll pre-populate planning and forecasting exercises so that controllers can focus their efforts on evaluating and deciding among AI-recommended alternatives. This capability is valuable to finance professionals because they can now base strategic business decisions on a much broader analysis of risks, opportunities, and side effects—an improvement over current approaches based on individual human intelligence and expertise.

Governance, risk, and compliance (GRC)

Today, GRC teams are primarily tasked with keeping up with changing regulations. These teams use internal data to identify behavioral patterns and fraudulent activities. But AI can already review 100% of existing transactional data and discern patterns that humans might overlook.

Leveraging this capability, GRC teams will increasingly lean on AI-assisted tools to keep up with ever-changing regulations—automatically and proactively.

GRC professionals will receive suggestions from these tools about policy adjustments and other changes needed to minimize risk and maximize compliance levels. For auditing teams, the story will be similar—one of using AI to move from sample audits to full audits for better assurance.

The same is true for risk management, which can now use AI to take into consideration a much broader data set of externally available data—from the business network and far beyond.

Tax

Tax optimization is traditionally done after the fact, based on a specific business outcome. SAP's vision of the future tax department is a function that has AI-enabled tax assistants at hand to evaluate and predict tax implications of business decisions. Tax experts will actively reshape complex value and supply chains. While continuously being connected with tax authorities, the finance function will play a proactive role in business modeling, instead of just reacting to business realities.

Treasury

Treasurers today spend a significant amount of their time on repetitive processes. One example is gathering, preparing, and analyzing the data required for steering liquidity and assets. Another is orchestrating capital markets activities to maintain desired capital structures. In the future, data collection and market execution will be automated, and decision-making will be augmented with AI-generated recommendations.

AI-powered treasury agents will automate day-to-day treasury processes and services, leaving experts to fully focus on higher-value tasks, such as strategic capital planning, supported by AI-augmented decision-making tools. We believe that this level of automation will bring treasurers closer in their collaboration with the CEO to deliver on the long-term financial health and growth objectives for the business.

Revenue management

Many businesses are transitioning away from traditional business models. The chief revenue officer (CRO) or head of revenue management is responsible for revenue generation when piloting new business models such as subscription businesses and usage-based billing. The opportunities are tremendous—but seizing them requires understanding huge and diverse data sets on target markets.

SAP Business AI can help CROs understand the purchasing and payment behavior patterns of customers and propose actions to optimize customer lifetime value. This practice is already established in the business-to-consumer (B2C) context, where streaming media platforms use AI to serve up content and commercial offers based on individualized data—leading to better business results. The same will be possible in a business-to-business (B2B) context using SAP Business AI. This will enable businesses to minimize revenue leakage through intelligent and automated processes with minimal human interaction.

Finance operations and shared services

For years, finance shared-services functions have focused on cost-arbitrage strategies such as offshoring. In our vision, AI will help drive fully autonomous finance operations in areas such as receivables, payables, contracting, and treasury. Shared service automation tools and agents will handle employee, supplier, and customer interactions at unprecedented speed and accuracy, not only saving costs but boosting customer satisfaction levels. In lower-value customer segments, manual interaction will be minimized and reserved for exceptional situations such as dispute resolution. Human finance shared services experts will be elevated to higher-value customer engagements, enabling them to dedicate their time to tasks that fully justify their efforts and skill levels.

Using what's already available from software vendors—

rather than always building from scratch—**can improve ROI**. Getting up to speed is one no-regrets move finance executives can make now.

– BCG, "How to Get ROI from AI in the Finance Function"[1]

40%
of CFOs still don't know what their vendors already offer

The technology: Enablers that drive AI success
Why SAP is embedding AI technologies into our solutions

Machine learning and predictive analytics

By now, training narrow models to predict numerical outcomes or the correct discrete class is hardly anything new. In the finance sector, these approaches have become increasingly common.

Think of forecasting, classifying, and prioritizing open invoices—or predicting cash flows and vendor risk scores. SAP has an established record of integrating this type of machine learning into its applications for finance. Take, for instance, SAP Cash Application, which uses machine learning to automate open receivables matching with incoming payments.

Generative AI

Generative AI—a subfield of machine learning and deep learning—is by now known virtually everywhere for its ability to generate content such as text, images, and code. SAP uses generative AI to turn out management summaries and enable users to interact with their workflows using natural language. Think of a user asking the system to update a transaction and draft a corresponding e-mail to inform a partner.

While LLMs—today's most prominent form of generative AI—provide a vast array of useful capabilities, SAP chooses the right LLM for the task and infuses our usage of that model with the semantic vocabulary of SAP Cloud ERP data structures. This model will overcome many limitations of LLMs, helping the AI understand the context of the tabular data it analyzes and make better predictions to guide customers forward. In the next section, we will introduce several planned innovations that apply this technology directly.

AI agents

AI agents designed to assist and augment human decision-making will be capable of executing multi-step workflows without needing constant human oversight.

Imagine a transition from single AI-enabled applications to "agentic" systems that plan their actions, iteratively reason through problems, use online tools to complete tasks, and interact with other AI agents.

This innovation leap is enabled by the natural-language capabilities of LLMs, which can respond intelligently to problems for which they haven't been explicitly trained. SAP is already investing in AI agents that will be able to handle the long tail of process exceptions that are difficult to automate with today's technology. Given the speed at which the technology is evolving, AI agents might soon be as commonplace as chatbots are today, kickstarting a new wave of innovation and productivity in finance.

Networked applications

Networked applications allow businesses to interact and conduct transactions with their business partners. One prerequisite of the architectures that enable networked applications is the emergence of technical standards for agent interaction patterns—similar to having

publicly available API definitions that enable application interoperability. With AI helping facilitate this integration, we anticipate a step change in finance productivity. Networked applications aided by AI, for example, will free treasurers from the tedious offline discussions often required for liquidity transactions.

Instead, AI will suggest how to optimize liquidity and help facilitate these transactions within the applications treasurers use daily. Eventually the AI agents will not be limited by company or system boundaries, and they will negotiate with customers and suppliers in optimized business networks.
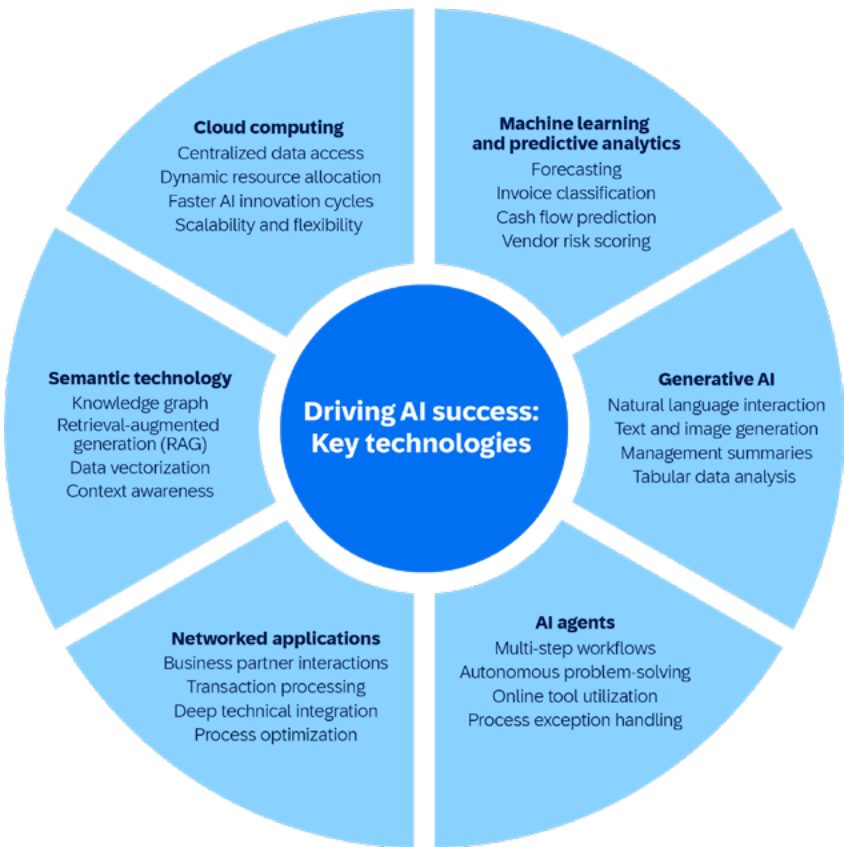
Semantic technology

SAP applies technologies like knowledge graphs, retrieval-augmented generation (RAG), and a vector database to capture the context and meaning of business data. This dramatically improves the reliability of AI models and mitigates problems such as model hallucinations—where LLMs produce responses that are factually incorrect or unrelated to the input.

The SAP Knowledge Graph solution, for example, models the semantic relationships across more than 450,000 tables and 7.3 million fields in our ERP system. Our vector engine uses embedded models to represent every word and field with its full context intact, connecting tabular financial data with natural language. These capabilities enable the system to provide correct responses by inherently understanding the context behind user questions like "Show me views for getting details on contract accounts in SAP" and "What is the CO_2 footprint of my plant?"

Cloud computing

SAP sees cloud computing as a critical enabler for AI success in finance. The cloud makes it possible to centralize data so that embedded AI capabilities can access and analyze information in the appropriate business context.

Compared to on-premises scenarios, the cloud's functional and technical innovation cycles are better equipped to keep pace with and handle the speed and volatility of AI advancements. Regular updates and improvements can be rolled out seamlessly so that customers always have access to the latest AI capabilities without disruptive upgrades. The scalability of cloud infrastructure also allows for the processing power needed to run complex AI models, which can be dynamically adjusted based on demand. This flexibility is particularly valuable in finance, where computational needs can fluctuate significantly during peak periods such as month-end or year-end closing. By embracing a cloud-first approach, SAP is positioning its AI-driven finance solutions to be more agile, powerful, and future-ready.

Driving AI success: Key technologies

Cloud computing
Centralized data access
Dynamic resource allocation
Faster AI innovation cycles
Scalability and flexibility

Machine learning and predictive analytics
Forecasting
Invoice classification
Cash flow prediction
Vendor risk scoring

Semantic technology
Knowledge graph
Retrieval-augmented generation (RAG)
Data vectorization
Context awareness

Generative AI
Natural language interaction
Text and image generation
Management summaries
Tabular data analysis

Networked applications
Business partner interactions
Transaction processing
Deep technical integration
Process optimization

AI agents
Multi-step workflows
Autonomous problem-solving
Online tool utilization
Process exception handling

According to BCG, what's missing isn't effort—it's impact.

Most finance teams currently prioritize use cases that promise internal efficiency, especially in transactional areas like payables and receivables, policy drafting, or coding.

But AI leaders don't stop there. While they still pursue efficiency, they give greater weight to use cases that unlock business value—things like better decision-making, improved forecasting, or faster time to insight.

The innovations
Embedded AI for finance

SAP is continually delivering new AI capabilities to transform finance with relevant, reliable, and responsible AI built into SAP solutions. Let's dive into our planned innovations along the different areas in finance.

Office of the CFO

Joule, SAP's AI assistant, revolutionizes how finance professionals interact with SAP business systems. Now you can harness the power of advanced analytics and strategic planning simply by conversing with SAP Analytics Cloud using natural language back and forth (Figure 1).

Available since 2023, Joule doesn't simply fetch information—it navigates complex systems and completes transactions on your behalf. This boosts your productivity, improves your overall user experience, and helps you get the work of finance done with greater accuracy and efficiency.
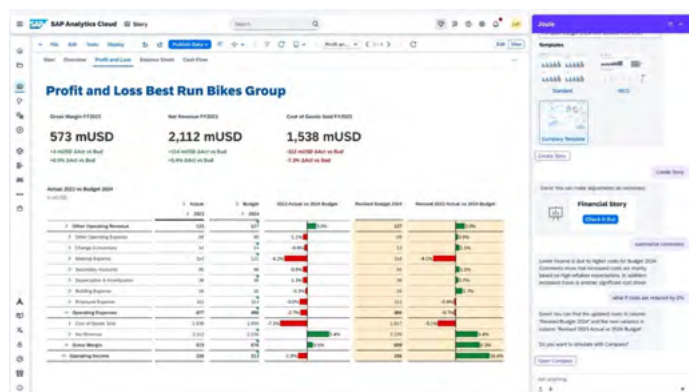
Figure 1: SAP Analytics Cloud with Joule

To support the role of the CFO as a business transformation catalyst, SAP also delivers generative AI capabilities for a new generation of business transformation management solutions—such as the AI-assisted process recommender, a capability of SAP Signavio (Figure 2). Now your experts can move quickly from initial exploration to process design, eliminating the need for consulting-heavy services to initiate modeling activities. With access to a database of 5,000 best practices from SAP, our AI capabilities help your finance team kickstart projects faster and do more in less time.
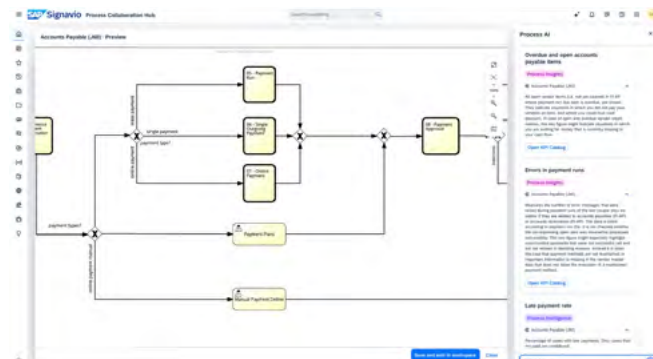

Figure 2: SAP Signavio, AI-assisted process recommender

Head of accounting

When it comes to AI, the low-hanging fruit for accounting is the automation of repetitive manual tasks, such as the postings created at period end. With a recently released innovation, the AI-assisted journal upload capability in SAP Cloud ERP Private (Figure 3), information is taken from a non-structured context and combined with accounting policies. The result is a posting proposal for the accountants' review that saves time and energy for your accountants while also maintaining high levels of quality. Another capability on the horizon is AI agents that can automatically propose postings for accruals.
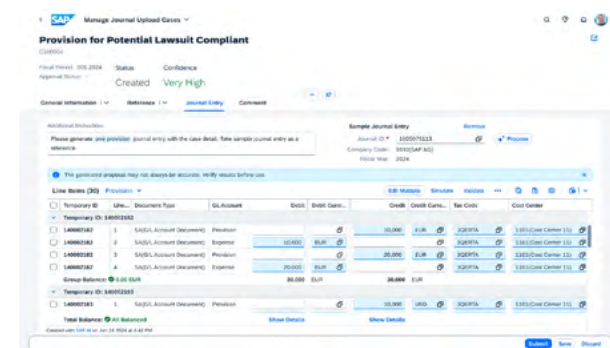

Figure 3: AI-assisted journal upload in SAP Cloud ERP Private

Head of FP&A and controlling

Summarizing information for management reviews is a time-consuming manual task that drains resources. In SAP Cloud ERP, we're introducing AI-assisted financial business insights (Figure 4) to quickly explain and summarize financial information in natural language. This AI-driven solution scans cost center booklets for insights, highlighting dependencies and comparing costs. The result is streamlined insights for management reporting and commentary, enhancing the speed and precision of financial analysis. Discover how you can elevate your own financial analysis by diving into this interactive value journey.

Figure 4: AI-assisted financial business insights in SAP Cloud ERP

Head of compliance

Today, the work of compliance involves manually sifting through oceans of data to detect and prevent fraud and errors. SAP Business Integrity Screening changes this, deploying AI and predictive analytics to uncover fraud patterns by using adaptable, self-learning rule sets.

To add to the complexity of compliance, global organizations often face hundreds of changes each year. This is why SAP is planning to introduce capabilities for AI-assisted regulatory insights with SAP Cloud ERP Private (Figure 5). This innovative feature will highlight which controls and policies need adjustment, helping you stay ahead of regulatory demands.
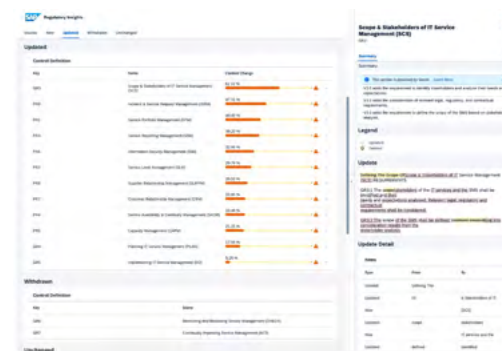

Figure 5: AI-assisted regulatory insights in SAP Cloud ERP Private

Head of tax

Another new capability from SAP focuses on AI-assisted configuration for U.S. tax jurisdictions (Figure 6). The goal is to dramatically reduce the manual effort involved in tax setup. Using generative AI, this capability processes information provided in natural language—such as data from spreadsheets—to automatically establish jurisdiction-based tax configurations. The result is streamlined processes with enhanced accuracy, greater efficiency, and less reliance on manual interventions to complete configuration processes.
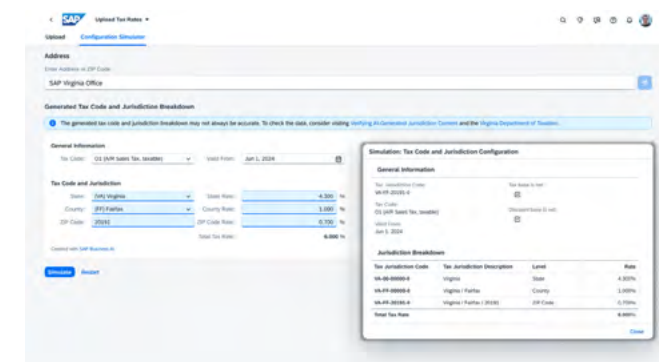

Figure 6: AI-assisted configuration for U.S. tax jurisdictions in SAP Cloud ERP

Head of treasury

Monitoring invoices and orders can predict cash flows for only a few months out. To help treasurers and cash managers see further into the future, SAP delivers SAP Liquidity Planning (Figure 7) with SAP Analytics Cloud. This solution uses rule-based AI to convert financial plans into liquidity forecasts. Now analysts and planners can analyze trends and variances across different forecast versions (medium, optimistic, pessimistic) and predict liquidity for the year ahead.

Another challenge for treasury is making realistic and achievable action plans to hit working capital targets. SAP Taulia solutions will soon be releasing a working capital management assistant to SAP customers to aid in this effort. This solution uses generative AI to simplify access to insights and empowers teams to quickly adjust their working capital management strategy.

Enabling easier access to insights through a natural language chatbot, this AI-based assistant democratizes the exploration of complex working capital scenarios, helping improve decision-making across your treasury team.
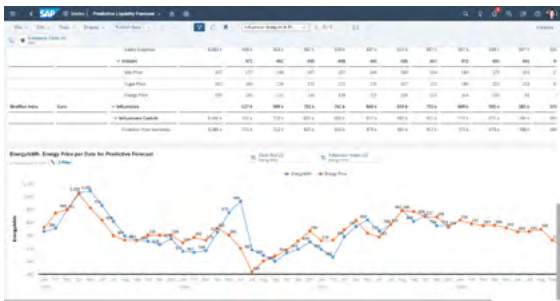

Figure 7: SAP Liquidity Planning

Head of revenue management

Effective dunning is essential for clearing open items with minimal manual intervention, particularly in high-volume businesses. SAP Billing and Revenue Innovation Management elevates this process by utilizing AI-assisted behavioral insights (Figure 8) for contract accounting. This powerful tool analyzes and determines the payment patterns of customers, enabling you to streamline dunning activities, improve overall efficiency, and optimize collections.
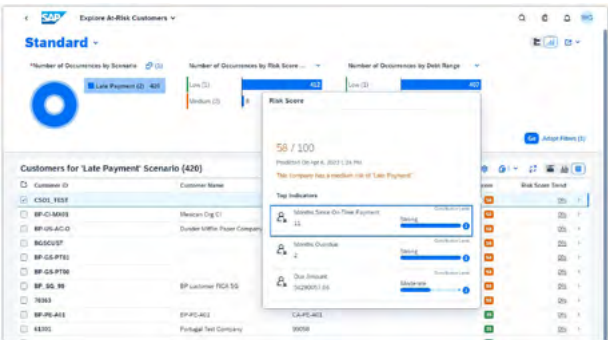

Figure 8: AI-assisted behavioral insights

Head of finance operations or head of shared services

Communication with customers who have outstanding payments is often a labor-intensive, manual task provided by finance shared services.

New AI-assisted dispute handling in SAP Enterprise Service Management (Figure 9) significantly automates this process. Leveraging LLMs, it analyzes text, captures the context of each correspondence, prioritizes it, and generates appropriate proposed responses. This innovation enables finance service centers to manage a higher volume of responses with greater efficiency, increasing both productivity and customer satisfaction.
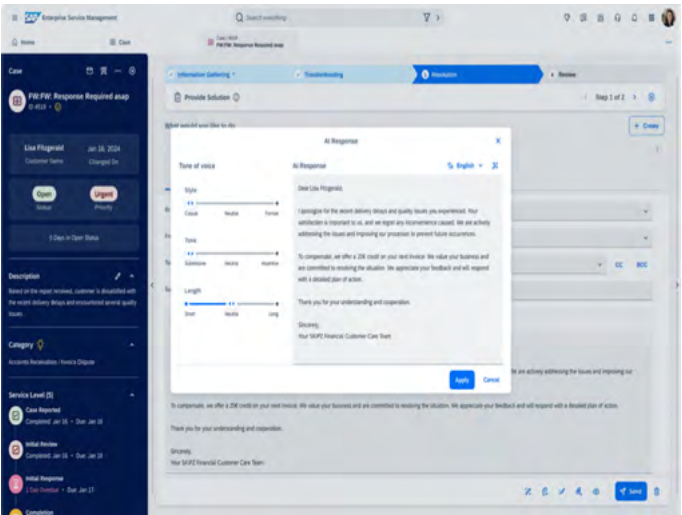

Figure 9: Shared services automation with SAP Enterprise Service Management

The future
Leading the way to finance excellence with AI

Financial operations are on the brink of a transformation driven by the integration of AI. SAP's vision, outlined here in detail, highlights how AI can empower CFOs and finance professionals to move from traditional, reactive roles to lean, strategic finance functions that advise the rest of the C-suite on critical business decisions.

The integration of AI within SAP solutions provides a powerful toolkit for increasing productivity, enhancing quality, facilitating business growth, and driving compliance. From automating manual, repetitive tasks in accounting to delivering AI-assisted insights in regulatory compliance, each innovation is designed to address the unique challenges faced by modern finance teams. SAP's embedded AI capabilities, including natural-language agents and predictive analytics, are already helping leading finance teams realize strong returns.

With the potential to help liberate finance professionals from data-heavy, mundane tasks, AI can help your CFO team focus on the higher-value activities that drive strategic growth and innovation. By embedding advanced AI capabilities into core finance functions like FP&A, GRC, tax, treasury, and revenue management, SAP is unlocking new levels of efficiency and accuracy, facilitating a holistic transformation of financial operations.

The future of finance, as envisioned by SAP, is lean and strategic—bringing unprecedented opportunities for growth and innovation. Embedded AI can help your CFO team confidently navigate the complexities of today's business landscape and position itself as a pivotal driver of transformative success. With the right approach and tools, the value is within reach.

How to Get ROI from AI in the Finance Function
Explore Boston Consulting Group's latest survey of AI leaders in the finance function and learn the proven strategies CFOs are using to deliver value at scale.
Read the BCG article

Want to learn more?
Explore our solutions in artificial intelligence for ERP and finance on the SAP Business AI page.

SAP Bring out your best.