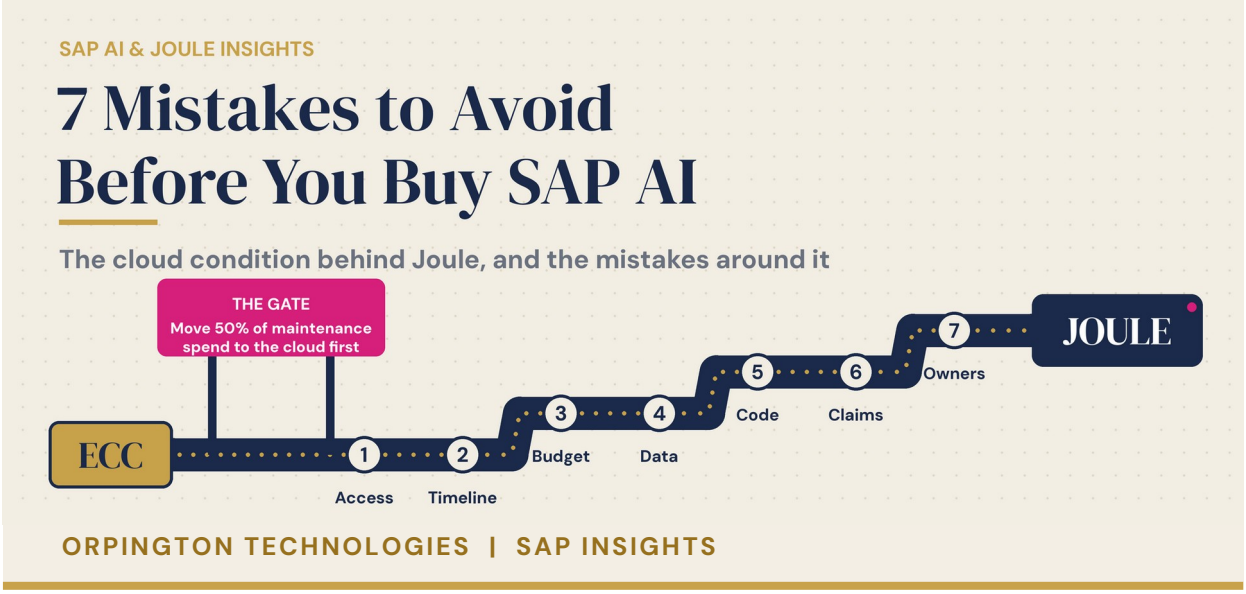
SAP AI & JOULE INSIGHTS

SAP Joule and AI Agents: 7 Mistakes to Avoid Before You Buy

SAP is selling Joule and its AI agents with a condition attached, and most of the costly mistakes are visible before any money is spent. The organizations that avoid them read the fine print, fix their data and staff for the work.



In short: SAP Joule, SAP's generative AI assistant, has grown from a 2023 copilot into a family of assistants, AI agents, a workspace and an agent builder [1], [2]. It is designed for the cloud, and ECC and other on-premise customers can enable its assistants only after moving at least half of their maintenance spending to cloud services [3]. That condition is shaping decisions now, and the mistakes that follow from it are avoidable.

The clock is shorter than it looks. The Joule Studio agent builder is free only until December 2026 and becomes a premium feature afterward [4]. Premium AI is paid for with AI Units, prepaid credits that expire after 12 months if unused [5]. Gartner expects more than 40 percent of agentic AI projects to be canceled by the end of 2027, citing escalating costs, unclear business value and inadequate risk controls [6].

Customers are buying the vision regardless. In the quarter ended September 30, 2026, SAP's cloud revenue rose 26 percent to €6.67 billion and its current cloud backlog reached €24.1 billion [7], and about 45,000 cloud customers now use its AI solutions [4]. Yet McKinsey found 88 percent of organizations using AI and only 23 percent scaling an agentic AI system anywhere [8] (Figure 1). The mistakes that widen that gap fall into three groups: the deal, the data and the people.

Key takeaways

The gate. Joule is designed for the cloud. On-premise and ECC customers can enable assistants only after moving at least 50 percent of their maintenance spending to the cloud.

The pattern. Seven mistakes in three groups: the deal (what you are actually buying), the data (what agents run on) and the people (who is accountable).

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The risk. Gartner expects over 40 percent of agentic AI projects to be canceled by the end of 2027, and much of SAP's roadmap, as announced at Sapphire 2026, is still planned rather than shipped.

The fix. A 90-day phase: map your entitlements, test your data, then pilot one measurable process with a named owner for every agent.

The safeguard. Have someone independent review the plan before money is committed.

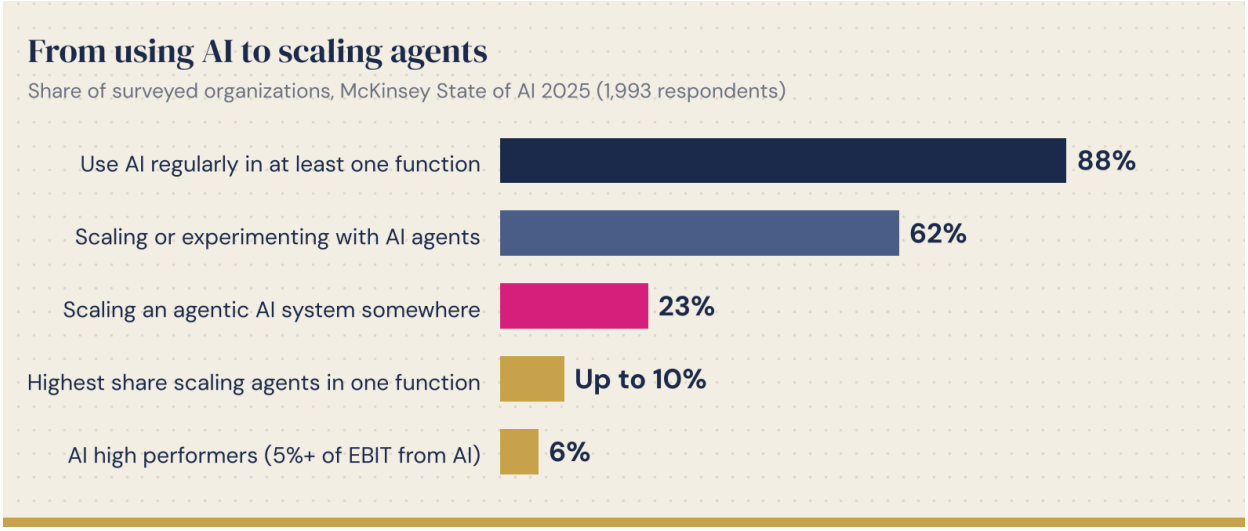


Figure 1. The distance between using AI and scaling AI agents. Source: McKinsey, The state of AI in 2025 [8]. "Up to 10%" reflects McKinsey's finding that in any single business function no more than 10 percent of organizations report scaling agents.

1. What SAP Joule is, and what it now includes

SAP launched Joule in September 2023 as a generative AI copilot to be embedded throughout its cloud applications, starting with SAP SuccessFactors and SAP Start [1]. Today the name covers four layers, and the first question to ask of any AI proposal is which layer it actually touches.

Joule Assistants. Domain helpers for finance, spend, supply chain, HR and customer experience that coordinate groups of agents. SAP's financial closing assistant, for example, uses seven agents [4].

Joule Agents. Specialized AI workers that perform defined steps of a process, such as accounts receivable or tax compliance [4].

Joule Work. An intent-driven workspace that interprets what a person wants and coordinates assistants and agents across SAP and non-SAP systems [9].

Joule Studio. The tool for designing, building and managing custom agents, with no-code and pro-code options [10].

At Sapphire in May 2026, SAP had said its Autonomous Suite would draw on more than 200 specialized agents to power more than 50 assistants, backed by a new SAP Business AI Platform and a €100 million partner fund [2].

2. Mistakes in the deal

Mistake 1: Treating Joule as a feature you can switch on

SAP's position is that Joule is designed for the cloud. Joule base comes at no extra charge with an active subscription to a supported SAP cloud solution [5], customers on SAP's Cloud

ERP Private offering get up to three Joule Assistants at no additional cost [3], and SAP has committed to activating three Joule assistants in year one under its RISE with SAP and GROW with SAP offerings [11]. What you receive depends on the contract, not on the brand name. How to avoid it: list the Joule entitlements each subscription already carries before the first AI conversation with SAP, and get the answer in writing.

Mistake 2: Letting AI access set your modernization timeline

At Sapphire 2026, SAP offered on-premise and ECC customers a route to Joule assistants, on one condition: they must first move at least 50 percent of their maintenance spending to the cloud, which SAP confirmed [3]. Analysts see leverage in this. IDC's Mickey North Rizza called AI "the new carrot and stick," and an ASUG 2026 survey found S/4HANA migration is members' biggest challenge, citing budget constraints (61 percent) and integration struggles (48 percent) [3].

The money is already moving. In the third quarter of 2026, the Cloud ERP Suite grew 29 percent while software support revenue fell about 5 percent (Figure 2) [7], [12]. How to avoid it: treat AI access as one input to the timeline, not the whole reason for it, and build the cloud business case on its own numbers first.

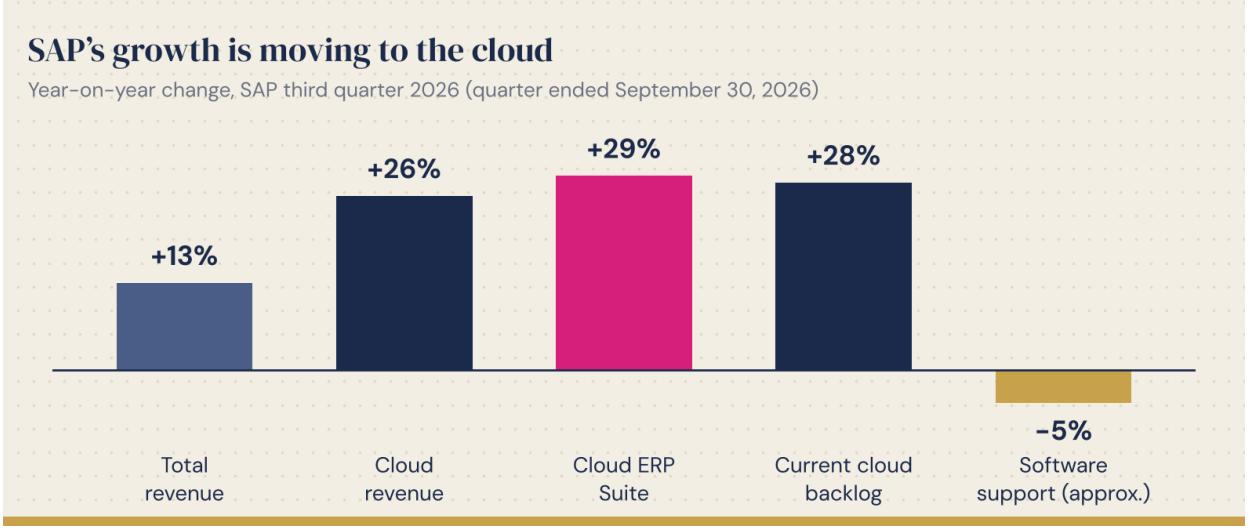


Figure 2. Year-on-year change in SAP's third quarter of 2026. Revenue, Cloud ERP Suite and backlog figures from SAP's quarterly statement [7]; the software support decline is approximate and reported by Tech Times [12]. The statement notes that one-time catch-up effects helped cloud growth.

Mistake 3: Budgeting AI as a license instead of a variable cost

SAP prices AI in two tiers. Base AI, including Joule base, is included in standard cloud subscriptions. Premium AI runs on AI Units, prepaid credits that expire after 12 months if unused, priced per user per month or by consumption. Joule Premium packages use volume tiers from 8 down to 1 AI Unit per user per month, and Document Grounding consumes 0.005 AI Units per record [5]. The Joule Studio agent builder is free until December 2026 and becomes a premium feature afterward [4]. A pilot that looks free in November can carry a price in January. How to avoid it: forecast AI Units for each process before pilots scale, and decide who owns that budget line.

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3. Mistakes in the data and the build

Mistake 4: Feeding agents data nobody owns

Agents are only as good as the context they are given. SAP's answer is the SAP Business AI Platform, which combines the AI foundation, SAP Business Data Cloud and SAP Business Technology Platform around a context layer built on the SAP Knowledge Graph. Joule supports the Model Context Protocol and Agent-to-Agent protocols so agents can work with non-SAP systems [11].

None of that repairs the records underneath. Duplicate customer and vendor records, undocumented custom code and unowned processes confuse an agent exactly as they confuse a new hire. How to avoid it: test the data behind each candidate process for duplicates and unclear ownership before choosing the pilot.

Mistake 5: Generating extensions faster than you can govern them

Joule Studio lets users describe a goal in natural language and generates requirements, specifications, code scaffolding and tests. Sony reports that it produced an end-to-end solution in 10 to 15 minutes in place of three to four days of manual work [10]. The tooling also targets the people who deliver SAP projects: Joule for Consultants cites up to 19 percent higher productivity and a 50 percent cut in design iterations and rework, and Wipro reports a 40 percent reduction in development effort [4]. These are vendor-reported estimates and early claims.

When code can be generated this quickly, clean-core discipline matters more, not less. Without it, AI-built extensions simply create technical debt faster. How to avoid it: set extension rules before the first generated line reaches production, and review what the agent built, not just whether it runs.

Mistake 6: Buying announcements instead of outcomes

Announcements are not deployments. Timing is as stated by SAP at Sapphire in May 2026 and in its October 2026 release notes. It may have moved since, so confirm current status before planning around any date.

Table 1. Selected Joule and Business AI capabilities, by SAP's stated timing

Capability	What it does	SAP's stated timing
Joule Studio	Builds agents and skills, no-code and pro-code	Announced May 2026; free design-time access through 2026 [10]
Joule Work (mobile)	Intent-driven workspace across SAP and non-SAP systems	Generally available [9]
Joule Work (desktop)	Same workspace on desktop	General availability planned for the second half of 2026 [9]
Agent-to-agent (A2A)	Lets agents work across systems	General availability planned for Q4 2026 [9]
Autonomous HCM	Assistants for payroll, hiring and HR workflows	Planned for November 2026 [2]
AI Agent Hub	Governance for SAP and non-SAP agents	Registry available; observability and identity planned for Q3 2026 [9]
Mistral models	Run on the SAP Business AI Platform	Available; fully sovereign version planned for early 2027 [4]

Vendor claims need the same scrutiny. Of the thousands of agentic AI vendors, Gartner estimates only about 130 are real, the rest being "agent washing" [6]. McKinsey found that only 39 percent of respondents attribute any enterprise-level EBIT impact to AI [8]. SAP describes its Autonomous Close Assistant as designed to compress the financial close from weeks to days, which is a goal rather than a measured result [2]. How to avoid it: buy outcomes, not announcements, and ask every vendor which parts are generally available today.

4. Mistakes in the people

Mistake 7: Deploying agents without owners or skills

As agents take on process steps, governance becomes a design task. SAP lists assistants for financial closing, accounts receivable, accounts payable, billing, treasury, tax compliance and international trade, each backed by several agents [4], and says the suite is built under an ISO-certified process designed for SOX audit compatibility [11]. SAP's AI Agent Hub, housed in SAP LeanIX, extends governance to SAP and non-SAP agents [11]. Every agent is still a new control owner: someone must be named accountable for what it does.

The scarce resource is people who understand both the process and the platform. McKinsey found only about 6 percent of organizations qualify as AI high performers, and most have not embedded AI deeply enough in their workflows and processes [8]. How to avoid it: name an accountable owner for every agent, map the skills each phase needs, hire for the permanent core and augment the rest.

Table 2. The seven SAP AI mistakes at a glance

Mistake	Early warning sign	How to avoid it
1. Feature switch	No list of Joule entitlements by contract	Map entitlements in writing first
2. AI-driven timeline	Cloud move justified by AI access alone	Build the case on its own numbers
3. License thinking	No AI Unit forecast per process	Forecast and assign the budget line
4. Unowned data	Duplicates and no data owners	Test data before choosing the pilot
5. Ungoverned extensions	No rules for generated code	Set clean-core rules; review output
6. Buying announcements	Features not yet generally available	Buy outcomes; confirm availability
7. No owners or skills	Agents with no accountable owner	Name owners; map skills by phase

5. Your first 90 days with SAP AI

Days 1 to 30: map the starting point

Confirm which SAP edition and cloud subscriptions you hold and which Joule entitlements already come with them [5]. List three candidate processes, such as financial close, accounts payable or procurement, and test their data for duplicates, undocumented custom code and unclear ownership. Decide whether your current ERP landscape belongs in the move to the cloud, and on what business case. Orpington Technologies' free **Implementation Confidence Diagnostic** offers a 15-minute first look at implementation risk [13].

Days 31 to 60: pilot one process

Choose one process with a measurable result, name an accountable owner for every agent, and define guardrails and escalation rules before go-live. Budget AI Units and design-time costs up front, since pricing moves from free to premium for some tools after 2026 [4].

Days 61 to 90: decide with evidence

Stop pilots that cannot show value, because cost, unclear value and weak risk controls are the reasons Gartner expects projects to be canceled [6]. Plan the skills for the next phase and align the AI roadmap with the cloud timeline. Have someone with no stake in the outcome review the plan before more money is committed.

6. How Orpington Technologies supports your SAP AI decisions

An independent first look. The free Implementation Confidence Diagnostic takes about 15 minutes with no sign-up and returns a confidence score with the top three risk flags [13].

Evidence, not opinion. The Full ERP Diagnostic Report checks every self-reported answer against real evidence, and a certified platform expert reviews the result [14].

A cost you know in advance. Pricing is a fixed fee per stage, with no day rates or retainers, so the cost of each decision is known before it is made [14].

Delivery or oversight. The Full ERP Implementation Partnership provides independent oversight from platform selection through hypercare, and Orpington can lead the migration as the accountable delivery partner [14].

Skills on demand. Three matched, credentialed candidates join through **ERP staff augmentation** roughly four weeks after the engagement fee is confirmed, working remotely under the client's project lead, backed by a 90-day replacement guarantee and a single monthly invoice [15].

Before the next AI conversation with SAP, ask one question: if we said yes today, could we name the owner, the data and the budget for the first agent? If the answer is "not yet," the free 15-minute Implementation Confidence Diagnostic will show which of the seven mistakes you are closest to [13].

7. Frequently asked questions about SAP Joule and AI

What is SAP Joule?

SAP Joule is SAP's generative AI assistant, launched in 2023 and now a family of assistants, agents, a workspace (Joule Work) and an agent builder (Joule Studio) [1], [9].

Is SAP Joule free?

Joule base is included at no extra charge in standard SAP cloud subscriptions. Premium capabilities use AI Units, priced per user per month or by consumption [5].

Do I need to move to the cloud to use SAP Joule?

Joule is designed for the cloud. SAP said at Sapphire 2026 it would enable many assistants and agents to work with on-premise S/4HANA and ECC for customers committed to transformation [11], and it confirmed they must first move at least 50 percent of maintenance spending to the cloud [3].

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What are Joule agents?

Joule agents are specialized AI workers that perform steps of a business process. SAP says more than 200 of them sit behind more than 50 Joule assistants in its Autonomous Suite [2].

What is the SAP Business AI Platform?

It combines SAP's AI foundation, SAP Business Data Cloud and SAP Business Technology Platform around the SAP Knowledge Graph, to build, deploy and govern agents [2], [11].

Will AI replace SAP consultants?

SAP's own figures point to augmentation: Joule for Consultants cites up to 19 percent higher productivity [4], and Gartner expects 15 percent of day-to-day work decisions, not all of them, to be autonomous by 2028 [6]. Orpington Technologies' view is that value shifts toward practitioners who can judge what an agent proposes.

Is agentic AI ready for SAP production use?

Partly. Some assistants are generally available, others are planned, and McKinsey found only 23 percent of organizations scaling agents anywhere [8]. Start with one measurable process.

Sources & Further Reading

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[14] Orpington Technologies – Services overview

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