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The Challenger Consultancy

The end of ERP?

How agentic AI will redefine the digital core of the enterprise



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Executive summary

- ERP as we know it is reaching its natural limit.
- Agentic AI will automate, integrate and optimise processes across systems.
- Enterprises will evolve toward data-centric, AI-orchestrated operating models.
- ERP vendors must shift from control to intelligence and trust.
- The C-suite must lead this change through governance, data and culture.

Provocations for leaders

- What would your operating model look like if your ERP disappeared tomorrow?
- How ready is your data to support real-time, AI-driven decisions?
- Do you trust your systems to act autonomously and if not, what needs to change?
- How will you redefine accountability when AI becomes a decision-maker?

A new question for business leaders

For three decades, executives have asked the same question: Which ERP should we trust to operate our business?

In the next decade, that question will change: Will we need an ERP at all?

It sounds provocative, but it is not far-fetched. Tesla has been working on and evolving its own ERP for over a decade. AI-native startups such as Campfire are creating operating systems with no traditional ERP at the centre, relying instead on intelligent agents that coordinate work across data, systems and people.

*The rise of **agentic AI** is the game changer. Agentic AI is an autonomous AI system that can act independently to achieve pre-determined goals.*

Agentic AI can act, make decisions and orchestrate processes across platforms, which challenges one of the most enduring assumptions in enterprise technology: that a single, monolithic system must sit at the heart of the business.

For decades, we've optimised around the constraints of systems. The next decade may belong to organisations that optimise around intelligence, those who do will be on an entirely different trajectory.

How we got here



ERP was designed to solve a genuine problem. It brought order to fragmented processes and inconsistent data by providing a single source of truth. Over time, however, that order came at the cost of flexibility. Upgrades were painful, integrations multiplied and user frustration grew. And as organisations scaled, they layered ERPs across business units and geographies.

Today, few mature organisations still operate a single integrated ERP. Most have several, surrounded by hundreds of SaaS tools and legacy systems. The complexity is now greater than ever. This continued for years until a disruptor emerged...

ERP's core value of being the central nervous system of the enterprise is now under threat not from competitors, but from a new species of intelligence capable of orchestrating work across systems without relying on ERPs as central platforms.

What an ERP-less enterprise could look like

Picture an organisation in 2035. It has no single ERP. No monolithic system of record. Yet its financials close every night, its supply chain self-balances and its auditors have real-time visibility into every transaction.

How does this happen?

At the heart of this future organisation is not a system, but a network of intelligent agents – each performing specific roles and coordinating autonomously. These agents communicate through a secure enterprise data fabric. The data fabric is what keeps every part of the business connected and in sync, it ensures each piece of information exists as a verifiable, permissioned object.

Essentially, the enterprise operates as an AI-mediated mesh – where data, process and decision are continuously harmonised without a single monolithic application. Embedded cybersecurity ensures that trust, compliance and resilience are built into every interaction.

In this model, the human's main interface is an AI copilot – context-aware, multimodal and embedded in the flow of work. The copilot acts as an orchestrator, delegating to process-specific agents.

While AI is not going to replace your entire workforce, it will help employees pivot efforts to higher-value tasks as they shift from transaction execution to decision supervision. Instead of navigating 20 screens in SAP, they have one conversation with an intelligent assistant that executes hundreds of micro-actions across systems. The ERP doesn't disappear – it's simply broken apart and operates seamlessly behind the scenes. To truly achieve an 'ERP-less' future, a few key conditions need to be in place:

- 1. Universal data accessibility:** Agentic AI relies on frictionless data access. Today's ERPs often lock information behind proprietary data models. AI-native architectures will demand open APIs, common definitions and dynamic data governance. Data quality is key to realise this potential.
- 2. Trustworthy automation:** AI agents must make reliable, explainable decisions within clearly defined governance frameworks. These frameworks will be led by next-generation process owners – who will oversee AI performance, ethics and compliance.
- 3. Continuous learning and adaptation:** Unlike static ERP implementations, AI-driven systems evolve constantly. This demands organisational readiness for continuous change – the same behavioural muscle companies are now building for SaaS and AI adoption.
- 4. Human-AI orchestration:** The workforce will shift from executing transactions to supervising, refining and auditing AI-driven outcomes – the rise of the 'agent boss'.



When these foundations are in place, the ERP as we know it may fragment into an intelligent mesh – an ecosystem where agentic AI connects data, systems and users fluidly, with governance and compliance built into the fabric of automation.

Trust without the system

How does a business like this satisfy auditors, regulators and investors?

Every action taken by an AI agent would be logged cryptographically, creating a transparent audit trail. Auditors would no longer test sample transactions; they would test the behaviour of algorithms. Financial data would be reconciled continuously, so the books close every night.

Regulatory compliance would be embedded directly into the system. Rules and thresholds would be enforced automatically and exceptions would surface in real time. In this world, trust moves from a single system of record to a distributed record of every action taken across the enterprise.



Such a model could radically simplify enterprise IT:

- No massive ERP upgrade cycles, reducing the risk associated with transformation.
- No costly integrations between dozens of systems.
- Continuous evolution through modular AI updates.

Yet it also introduces new dependencies on data governance, AI model validation and cyber resilience. The cost of failure shifts from operational inefficiency to systemic trust breakdown. Organisations will need AI insurance frameworks: independent oversight mechanisms that verify the integrity of decisions made by autonomous systems. Think of it as the evolution of financial audit into AI audit.

A new model of corporate governance



A hybrid workforce of humans and machines will demand a new approach to oversight. Boards will need to expand traditional risk frameworks to include algorithmic accountability.

Key questions will include:

- Are AI decisions explainable and reversible?
- Who is accountable when an autonomous process acts incorrectly?
- How do we ensure ethical standards are built into the system itself?

Market defining organisations like Google (DeepMind), Microsoft (OpenAI), IBM (Watson) have embedded AI governance, ethics and trust in their corporate DNA, enabling them to scale safely. New forums and roles have appeared. The Chief Agent Officer or AI Process Orchestrator will manage the collaboration between human teams and intelligent agents, ensuring transparency, compliance and control.

The traditional 'three lines of defence' model – management, risk/compliance and audit – may evolve into three lines of cognition:

- Execution agents performing and logging actions.
- Oversight agents continuously monitoring and testing for compliance breaches.
- Human stewards setting policy, resolving exceptions and making strategic trade-offs. These are the skills of the future that first movers are already cultivating.

A realistic path forward

Will AI completely replace ERP?

Not soon. ERP systems remain the backbone of regulatory compliance, auditability and financial control. Their structured data and embedded process logic will continue to matter for decades. The pace of AI maturity in enterprise contexts (especially in regulated industries) has historically been slower than in consumer or startup ecosystems. Many organisations still struggle with basic data interoperability; AI-native architectures have embedded in their first principles, as a result they require far greater data cleanliness and emphasis on consistent data definitions. Auditors and regulators remain deeply tied to deterministic systems; distributed AI oversight is still theoretical.

However, the locus of value is shifting. ERP will evolve from being the 'brain' of the enterprise to being its 'memory.'

Within 5-10 years, expect AI copilots to mediate 60–70% of user interactions with ERP systems. Within ten, the term 'ERP' may fade, replaced by enterprise intelligence platforms where ledgers, agents and analytics coexist on a shared data mesh. A FTSE 100 enterprise could plausibly reach that stage by the mid-2030s: not ERP-free but ERP-abstracted.

This vision is closer than it may appear, but not every organisation will get there at the same pace. Early adoption will come from digital-native, high-growth businesses that value speed and flexibility over legacy control. Think technology, consumer platforms, logistics innovators, or AI-first manufacturers. These companies:

- Have relatively simple legal structures and faster risk tolerance.
- Operate on cloud-native data platforms, making them ripe for federated AI orchestration.
- Value adaptability over legacy control.

Tesla, which is building its own AI-driven operating system rather than buying an ERP, is a prototype of this mindset. So are frontier startups in supply-chain optimisation and biotech that build their data models first and process logic second.

For large, regulated enterprises such as those in the FTSE 100, the future is likely to be hybrid. The ERP will remain the official system of record for financial integrity and reporting. Agentic AI layers will sit above it, orchestrating processes and user interactions. Employees will work primarily through copilots rather than traditional interfaces. Over time, ERP will become invisible – essential but no longer dominant.

The provocative idea of 'no ERP' works best not as a literal prediction but as a lens: a way to imagine what operating models would look like if integration, process and decision all became intelligent, adaptive and human-centred. That's the practical takeaway: the future isn't the death of ERP, but its quiet absorption into the fabric of enterprise intelligence.

What it means for the ERP vendors

ERP providers are facing an inflection point. Their business model, built on control through centralisation, must adapt to a world that prizes autonomy and modularity.

Some vendors will transform into intelligence platforms, offering the data foundations, governance and security that enable autonomous operations. Others will retreat into narrower roles as providers of auditability and compliance assurance.

The most successful vendors will be those whose products quietly underpin the enterprise without being visible to the user. Their value will come from trust, not from control. Imagine something like:

- **The orchestration layer:** They'll position themselves as the AI operating systems of the enterprise, providing the secure data layer, governance and connectivity that agentic systems need to function. SAP's Business Technology Platform and Oracle's Autonomous Database are already steps in this direction.
- **Embedded intelligence:** Rather than owning the end-to-end process, they'll focus on embedding proprietary AI agents that plug into wider ecosystems. Think of them less as all-encompassing suites and more as ecosystems of specialised, self-updating capabilities.
- **Trust infrastructure:** Compliance, auditability and explainability will become differentiators. ERP vendors may reinvent themselves as providers of trust frameworks – guaranteeing the integrity of data and algorithms across a mesh of agents.

Agentic AI may signal "the end of ERP", but it does not signal the end of ERP vendors. The ERP giants like SAP and Oracle are already recognising this shift and making changes to their business model. Alongside the big names, a new generation of players to the ERP ecosystem is emerging:

- **Agentic platforms** like Campfire or Cognition Labs, which build micro-agent ecosystems capable of orchestrating business processes end-to-end.
- **Data-fabric companies** such as Databricks or Snowflake, evolving to become the de facto enterprise data layers upon which AI agents operate.
- **AI governance startups** focused on ensuring explainability, traceability and algorithmic compliance – this is a market ERP vendors will either acquire or be displaced by.

Start-ups will challenge incumbents by driving agentic & point solution innovation, but ERP incumbents may continue to own the rules, trust and infrastructure that make an AI-orchestrated enterprise possible. This isn't the end of ERP but rather the evolution of ERP.

The challenger's view

The challenger's view

Perhaps ERP was always an interim solution – a product of its technological time. It's true purpose was not to consolidate data, but to teach us the value of connected processes. Agentic AI offers a chance to realise that vision more fully: frictionless, adaptive, human-centric process orchestration across the enterprise.

For today's executives, this is not a technology debate but a strategic one.

- **Challenge assumptions.** Stop thinking of ERP as permanent. It is a component of a wider ecosystem, not the ecosystem itself.
- **Prototype new ways of working.** Deploy AI copilots and agentic automation on top of existing systems to understand what can be achieved today.
- **Modernise governance.** Develop policies and ethical frameworks for algorithmic decision-making.
- **Invest in new skills.** Create roles that combine process expertise with AI literacy. Future leaders will manage both people and intelligent agents.
- **Prioritise data readiness.** A unified, high-quality data fabric is the foundation for any AI-enabled enterprise.

At Elixirr, we believe the next wave of transformation won't be another ERP upgrade – it will be the reimagining of ERP itself. The future of enterprise technology will be driven by intelligence, not systems. The winners will be those who prioritise simplicity, agility and human experience over technical limitations. The winners will benefit from reduced business complexity, accelerated decisions and will both future-proof and unlock new capacity for growth.

In the age of agentic AI, the enterprise no longer needs a single digital core. It needs a thinking fabric that learns, adapts and acts across every part of the business. The real question for business leaders is no longer when to upgrade your ERP, but whether it is even relevant anymore.

Authors



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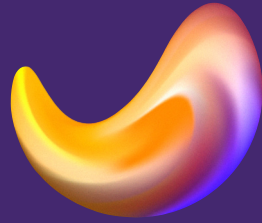
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