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**SPOTLIGHT**

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**This Spotlight explores the platform requirements to quickly build and deploy autonomous AI agents within enterprises.**

# Building Autonomous Agents and Digital Coworkers Quickly and Safely at Scale

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## Introduction

The year 2025 has been an inflection point in which enterprises quickly expanded the scope of digital transformation projects to include autonomous AI agents. In the midst of figuring out how to safely move from POC to production for generative AI (GenAI) applications, enterprises are now quickly catching up to the blizzard of new agentic AI offerings. These include agentic solutions embedded in their applications, new agent marketplaces where they can procure "off-the-shelf" AI agents, and builder platforms on which they can build and deploy their own agents. Like prior AI epochs, IDC anticipates that enterprises will want to maintain the capacity to build their own agents to manage proprietary business processes. This paper explores the platform requirements to quickly build and deploy autonomous AI agents within enterprises.

## AT A GLANCE

### KEY STAT

By 2028, 1.8 billion agents will be in operation.

### WHAT'S IMPORTANT

Platforms that make building and deploying agents fast and seamless will be invaluable.

### KEY TAKEAWAY

Enterprises that most rapidly adopt automated business processes with agents will gain sustainable competitive advantage.

### Autonomous Agents: The New Digital Workforce

The rise of generative AI has ushered in a new era of intelligent automation, with autonomous agents emerging as a transformative force across industries. These agents, which draw on large language models (LLMs), retrieval-augmented generation (RAG), and tool orchestration, can perform complex tasks, make decisions, and collaborate with humans and other agents. As enterprises seek to accelerate innovation and improve operational efficiency, autonomous agents are becoming the cornerstone of the new digital workforce.

Generative AI has evolved rapidly, enabling machines to generate humanlike text, code, images, and even strategic decisions. Autonomous agents build on this foundation by combining reasoning, memory, and the ability to act. Unlike traditional automation, agents can adapt to changing contexts, learn from interactions, and execute multistep workflows with minimal human intervention. Of course, platforms that strongly enable human-in-the-loop (HITL) are required for mission-critical business processes and to ensure good governance and risk management.

These agents are not just chatbots but digital workers capable of handling customer service, IT operations, marketing campaigns, financial analysis, and more. Their ability to integrate with enterprise systems and orchestrate tools makes them uniquely suited to augment human teams and drive business outcomes.

## Adoption Trends, Forecasts, and Opportunities

The AI agent arms race is already underway. The number and variety of AI agent offerings in the marketplace announced in 2024 and the first half of 2025 are astounding. There is a huge sense of urgency among enterprises to capture the promised benefits of AI agents and agentic automation ahead of their competition. IDC research shows that the adoption of autonomous agents is accelerating. By 2026, over 60% of enterprises are expected to deploy agentic AI in at least one business function.

Key drivers powering the rise of AI agents include:

- Cost reduction through automation of repetitive tasks
- Productivity gains from faster decision-making and execution
- Enhanced customer experience via personalized 24 x 7 support
- Innovation acceleration through rapid prototyping and experimentation

Opportunities span industries — from healthcare and finance to manufacturing and retail. Enterprises that embrace autonomous agents early will gain a competitive edge in agility, scalability, responsiveness, and operating costs. Adoption is accelerating at a rapid pace.

## Considerations

While the excitement around agentic AI is palpable, there are several considerations for organizations to ponder as they race to build an agent workforce.

### The Need for Speed

In today's hypercompetitive landscape, speed is not optional. Enterprises must move quickly to build, deploy, and scale autonomous agents to capture market opportunities and respond to disruption. The ability to iterate rapidly and deploy agents in days — not months — is a key differentiator.

Building agents is fundamentally different from traditional AI development. This life cycle demands agility, collaboration, and a deep understanding of both technical and business requirements.

### Off-the-Shelf Agents Fall Short

While prebuilt agents offer a quick start, they rarely meet the nuanced needs of enterprise environments. Having a platform to build custom agents is critical. Also, the ability to customize is essential to align agents with business logic, data sources, and compliance standards. Enterprises must invest in platforms that support flexible, scalable agent development. Many of the current builder platforms have limitations.

### Platform Limitations: Complexity Is the Enemy

Many builder platforms today struggle to meet enterprise demand because they maintain the complexity of platforms for building traditional AI and machine learning. These limitations hinder time to value and reduce the strategic impact of autonomous agents.

Key platform issues include the following:

- Long development cycles due to lack of integrated, unified software platforms
- Highly technical interfaces that exclude non-developers
- Limited support for tool orchestration and memory
- Slow preprocessing and overengineered RAG pipelines
- Infrastructure bottlenecks that delay deployment
- Lack of intuitive UI for nontechnical and low-code/no-code users

### *The Skills Gap*

According to IDC, 47% of enterprises say the generative AI skills gap will delay new product and service development, while 40% cite delays in digital transformation. The shortage of skilled code-first builders is a major barrier to scaling agentic AI.

To build agentic AI solutions faster, developers require integrated, unified platforms with intuitive interfaces that offer all the required tooling to efficiently build, deploy, and manage agents. These platforms need to enable developers with different skill levels (no code, low code, code first), creating an optimal fit with development teams.

### *The Deployment Challenge: Safety and Compliance*

Deploying agents at scale introduces challenges around safety, compliance, and risk management. Enterprises must ensure agents behave ethically, respect privacy, and comply with regulations. Robust governance frameworks and monitoring tools are essential to mitigate risks and maintain trust. Safety, compliance, and risk management are nonnegotiable. Without proper security, controls, and governance, agents can operate outside defined boundaries and become misaligned with enterprise policies.

## *Selecting Generative AI and Agentic AI Builder Platforms*

### *Model Choice*

Access to the right large language model is critical. Different use cases require different capabilities, whether reasoning, summarization, code generation, or multimodal or multilingual support. Platforms must offer flexibility in model selection and fine-tuning.

### *Ready-to-Build Infrastructure*

Infrastructure readiness directly impacts time to market. This ensures rapid prototyping, testing, and deployment.

Enterprises need platforms with:

- Pre-integrated development environments
- Scalable compute and storage

- Secure data access and management

### Integrated Toolchain

A seamless development experience requires integration across the toolchain — from data ingestion and preprocessing to orchestration and monitoring. Enterprises are increasingly seeking platforms that tightly integrate the tooling needed to build and manage agents in production.

Advantages of integrated platforms include:

- End-to-end build environments
- Unified administration and governance
- Plug-and-play integrations with enterprise systems

### Business Knowledge Access

Agents derive value from business knowledge. Integrated RAG pipelines and fast access to documents, databases, and rich media unlock hundreds of use cases — from legal analysis and financial forecasting to customer support and product recommendations. Integrated RAG pipelines can be instrumental to success.

### Robust Memory and Parallel Workstreams

Advanced agents require the following capabilities:

- Persistent memory to retain context across sessions
- Parallel workstreams to manage multiple tasks simultaneously
- Tool orchestration to execute complex workflows
- Stateful behavior for long-term task management
- Swarming capabilities to coordinate multiple agents

These features enable agents to operate autonomously and deliver high-impact results.

### No-Code/Low-Code Interfaces: A Solution

To address the skills gap and shorten development cycles, adopting no-code and low-code platforms that empower business users to build and manage agents is a solid option. These interfaces democratize AI development, enabling domain experts to contribute directly to agent design and deployment. For deep technical operations, maintaining a COE can be crucial to support capabilities such as AgentOps.

Successful agent deployment requires tight collaboration between business and IT teams. Business users bring domain expertise, while IT ensures scalability, security, and integration. Platforms must support this collaboration through intuitive interfaces, shared workflows, and governance controls.

## Definitions

AI agents are language model–powered autonomous software entities that perceive their environment, make and act upon decisions, and interact with users or other systems like a human. Autonomous agents feature decision-making, continuous learning, adaptability, and planning execution capabilities that distinguish them from AI assistants and enable them to manage complex workflows and make decisions both autonomously and with a tightly integrated human-in-the-loop process.

## Benefits

Those organizations able to rapidly build and deploy agents to automate business processes will gain a competitive advantage. Such enterprises will be in a better position to sustain competitive advantages by quickly iterating on agent performance and innovating business workflows for higher productivity, higher efficiency, faster time to market, and better profitability. Early adopters of unified agent builder platforms will gain significant reductions in cost, complexity, and maintenance. Those advantages will grow as organizations adopt multiple agents managing complex workflows across the enterprise.

## Considering Vertesia

Vertesia provides generative AI development solutions, including a low-code platform for building GenAI applications and agents. The Vertesia platform features an Autonomous Agent Builder, an environment to rapidly build and deploy agents, and agentic RAG for streamlining and accelerating access to enterprise knowledge and optimizing accuracy and relevancy of model outputs.

### Agent-Building Platform

Vertesia offers a suite of features and a foundational architecture designed specifically to meet the rigorous demands of enterprise-grade AI agent development. Vertesia addresses the core challenges of scalability, governance, and operational complexity.

One of Vertesia's value propositions is the company's emphasis on enterprise readiness. Building autonomous agents for production use requires a robust, secure, and scalable infrastructure. Vertesia's unified, low-code platform accelerates the journey from prototype to production. The company's API-first design allows for seamless integration with existing business systems, while compatibility with major cloud infrastructures, including AWS, GCP, and Azure, provides flexibility and scalability. The platform's SOC 2 Type II compliance and comprehensive security protocols, including robust data management and access control policies, are a benefit for industries handling sensitive data, such as finance and healthcare.

The core of Vertesia's offering lies in the company's sophisticated Autonomous Agent Builder and growing library of tools. Vertesia provides a powerful prebuilt toolset that enables agents to perform a wide range of complex tasks. These capabilities extend beyond simple text generation to include advanced functions like spreadsheet manipulation, parallel workstreams, and intelligent document and image processing. The platform's ability to orchestrate multistep journeys is particularly valuable for automating intricate business processes, such as insurance claims, contract analysis, and supply chain optimization. The "Think and Plan" tools, for example, allow agents to analyze problems, create structured plans, and track progress autonomously.

Vertesia's approach to RAG helps improve the accuracy and relevance of AI agents' outputs. The Vertesia platform automates and accelerates the RAG process through advanced techniques like intelligent content preparation and semantic chunking. Agents can effectively retrieve and analyze long-form documents and unstructured data, leading to more accurate and context-aware responses and significantly reducing the risk of LLM hallucinations.

### *Challenges*

There is significant competition among agent builder platforms with hyperscalers, model providers, data management platforms, applications vendors, and AI infrastructure players rapidly introducing many new agentic development platforms and tools in the past 18 months. As a result, enterprises are grappling with tool sprawl and the complexities of managing disparate development environments. As a low-code, unified platform, Vertesia will need to continually educate enterprises about the value of unified, end-to-end builder platforms to break through.

## *Conclusion*

Autonomous agents represent a paradigm shift in enterprise automation. As digital workers, they offer unprecedented capabilities to augment human teams, accelerate innovation, and transform operations. However, realizing their full potential requires speed, collaboration, and the right platform.

Enterprises must move beyond off-the-shelf solutions and invest in flexible, scalable builder platforms that empower both technical and business users. By addressing the skills gap, integrating business knowledge, and ensuring governance, organizations can build a resilient, intelligent agent workforce that drives sustained competitive advantage.

Realizing the full potential of autonomous agents requires speed, collaboration, and the right platform.

# About the Analyst

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Tim leads AI and Automation, which is responsible for GenAI life-cycle tools and technology coverage at IDC. Tim's coverage includes the evolution of large language models, generative AI, and agentic AI tooling for orchestration, evaluations, and agent AI development.

## MESSAGE FROM THE SPONSOR

Vertesia is a SaaS platform built to accelerate how organizations develop and deploy custom generative AI (GenAI) applications, agents, and services. Designed for speed, scale, and simplicity, Vertesia combines enterprise-grade infrastructure with a low-code environment to reduce complexity, lower costs, and shorten time to value.

With its API-first architecture, the platform integrates easily with existing systems, streamlines intelligent content preparation, and offers powerful tools for building and managing autonomous agents.

Vertesia helps businesses move beyond GenAI experimentation—turning AI initiatives into strategic, scalable capabilities.

To learn more about Vertesia's autonomous agents, please visit: vertesiahq.com.

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