aws marketplace

Agentic AI on the rise: Keys to unlocking value

Understanding agentic AI

Organizations face increasingly complex operational challenges that traditional automation can't adequately address.

AI agents on AWS represent a new approach to these challenges, combining the reasoning capabilities of foundation models with sophisticated orchestration tools.

These agents don't simply follow pre-programmed rules; they can reason, plan, and act to accomplish goals, with limited human involvement.

In this eBook, we explore

- How organizations are transforming with agentic AI through real-world customer examples
- Key resources to help navigate operational and technical implementation
- How AWS Marketplace streamlines discovery, procurement, and deployment of AI agent solutions

Whether you're just getting started or moving quickly to improve operations, drive sales, or increase employee efficiency, it is helpful to create a baseline of your organization's AI maturity.

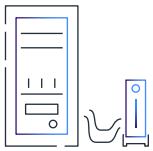
Creating an AI baseline

Establishing a baseline of team skills and technical capabilities helps you gain cross-organization alignment enabling you to set realistic goals for your future AI adoption.

	Emerging	Developing	Mature
Strategic phase	Initial stages of AI adoption	Moderate understanding of AI and its applications	Deep expertise and understanding in AI
Organizational focus	Limited awareness of AI and its potential	Growing investment in AI infrastructure	Significant investment in advanced AI infrastructure
Policies	Undeveloped or basic policies and governance	Policies and governance structures taking shape	Comprehensive governance structures and dynamic policies
Staff skills	Minimal resources with basic skills	Growing investment and increasing focus on staff training	AI proficiency supported by a culture of continuous learning
Implementation	Experimental and infrequent	Regular with some integration into operational and strategic processes	Fully integrated into processes, driving innovation
AI integration	Minimal systematic evaluation or planning for integration	Efforts towards systematic evaluation and continuous improvement of AI initiatives	Strategic decision-making with commitment to ongoing evaluation and improvement

Generative AI, agentic AI, and AI agents

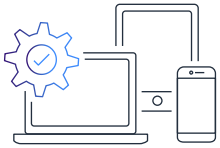
Agentic AI refers to the broad field of developing AI systems, capable of independent and adaptive goal-oriented activities and covering the development of AI agents.



Generative AI

Learns from historical data and produces new content

Follows a set of rules to automate repetitive tasks



AI Agents

Achieves a singular goal

Addresses broader range of tasks

Automates entire workflows

Agentic AI

Adapts and learns to make real-time decisions

Autonomous – AI Agents collaborate with each other to streamline workflows

Agentic AI capabilities

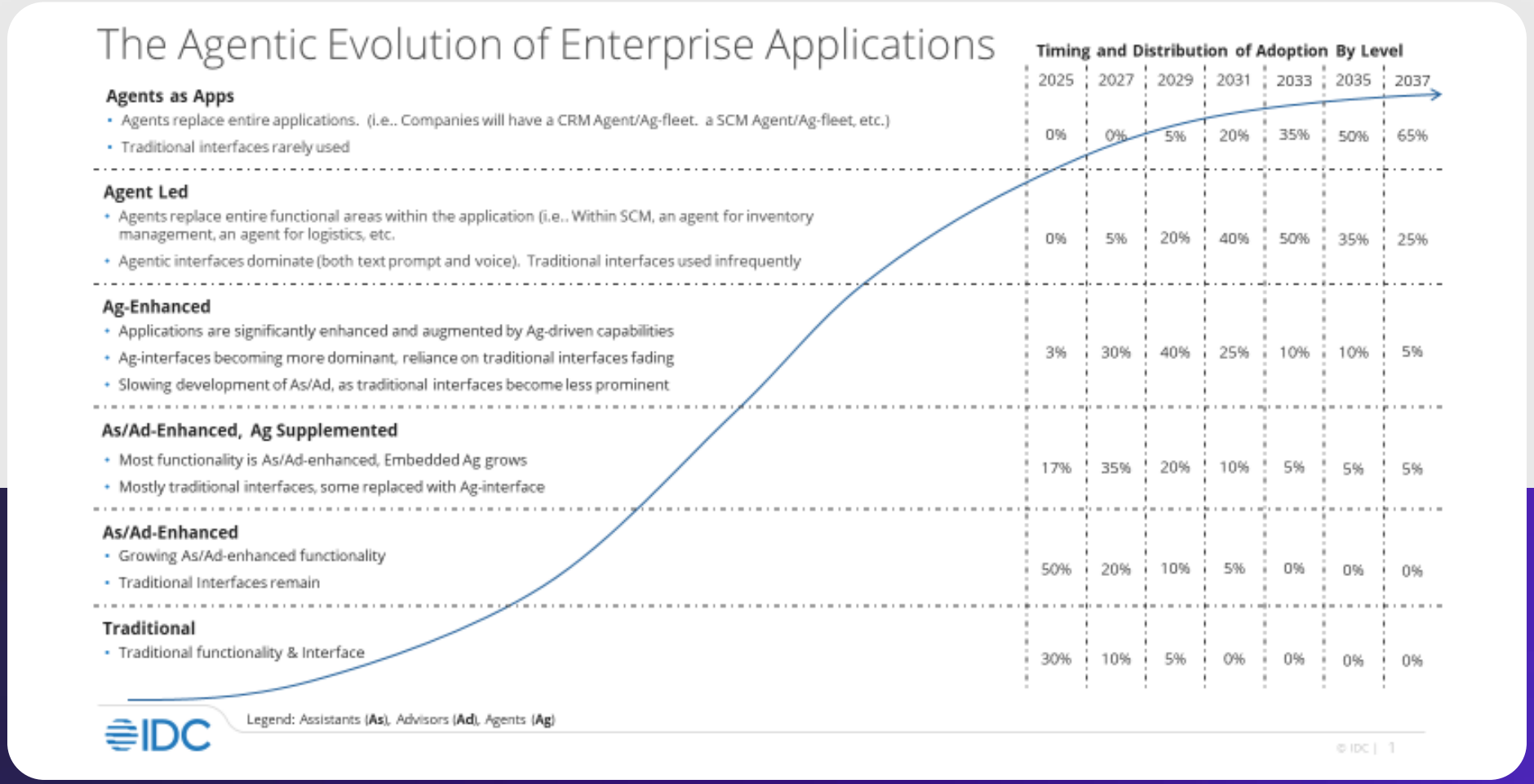
Agentic AI can provide personalized experiences and anticipate user needs, driving customer satisfaction. Here is a closer look at agentic AI.

Agentic AI

- Learns, adapts, and makes real-time decisions to achieve goals
- Evaluates available information
- Consults relevant knowledge bases
- Breaks down complex requests into logical steps
- Orchestrates necessary actions within complex multi-faceted workflows
- Maintains security and compliance
- Implement using AWS native agents, Opensource, 3P enterprises and more

Evolution of AI applications

The following IDC Market Presentation illustrates how generative and agentic AI are expected to transform the way enterprise applications are designed, delivered, and engaged with by users. When it comes to adoption, this framework presents the steps and phases, along with expected timing and level of adoption associated with each stage.



IDC, the Agentic Evolution of Enterprise Applications, doc#US53194625, Feb 2025

Real-world agentic AI on AWS

The journey to implementing agentic AI solutions takes different paths depending on your organizational needs and technical maturity. Through real-world implementations, we can understand how organizations navigate this transformation. See how AWS customers and Partners are innovating with agentic applications.

BLOG

Twitch's ad sales transformation

Twitch faced growing complexity in managing ad inventory and sales workflows in the dynamic digital advertising world. Using Amazon Bedrock Agents, they evolved from basic automation to sophisticated orchestration. Their agents coordinate across multiple systems, analyzing viewer data, managing inventory, and optimizing ad placements in real time.

Explore Twitch's technical implementation journey

ARTICLE

Agentic AI implementation patterns

The AWS community has developed proven patterns for implementing agentic applications. This comprehensive guide examines how organizations approach agent design, from defining action groups to integrating knowledge bases. It covers practical security, scaling, and maintenance considerations from actual implementations.

Access detailed implementation guidance

VIDEO

Salesforce customer experience evolution

Watch an in-depth technical demonstration of how Salesforce integrated Amazon Bedrock Agents into customer service operations. This session covers their architecture decisions, integration patterns, and the technical framework they developed for managing agent interactions at scale.

View the in-depth technical demo

Agentic AI for data-intense jobs

Why is agentic AI more capable and impactful in data-intense industries?

Historically, data-rich industries face a variety of challenges that agentic AI can help solve. Using innovative strategies to harness this technology is resulting in incredible advancements.

Here are just a few examples of agentic AI in action.

Industry	Use case
Healthcare	Assisting in medical diagnosis and treatment planning
Transportation	Self-driving cars and delivery robots that can make autonomous decisions to adjust routes real time
Financial services and insurance	Performing tasks like trading, risk management, and fraud detection based on available data
Manufacturing	Organizing production processes, managing inventory, and predicting equipment failure
Customer service	Providing personalized support and resolving customer issues

Enabling data-rich implementations

Adopting agentic AI in data-intensive scenarios can transform your organization.

BLOG

Transforming Patient Care Coordination

Healthcare organizations face unique challenges in coordinating patient care while maintaining strict compliance requirements. This technical exploration shows how providers implement agents to automate complex workflows while ensuring HIPAA compliance. We examine the specific agent configurations, knowledge base structures, and security controls that make this possible.

Explore healthcare implementation patterns

BLOG

Accelerating Research Through Intelligent Automation

High-performance computing environments generate massive amounts of data that requires sophisticated analysis and management. This technical analysis demonstrates how research organizations implement agents to automate simulation management, data analysis, and resource optimization. The discussion covers specific agent architectures for handling complex scientific workflows.

Learn about HPC agent implementations

VIDEO

Building Production-Grade Agentic Applications

This technical workshop walks through the complete process of building an agentic application with Amazon Bedrock. From initial configuration to production deployment, learn how to structure agents, integrate knowledge bases, and implement proper monitoring and maintenance procedures.

Start your implementation journey

Choose your path to implement agents on AWS

AWS is committed to being the best place to build and deploy the world's most trusted and useful agents. Whether you need ready-to-deploy solutions or fully customizable frameworks, AWS provides flexible options to meet your organization's unique needs and capabilities.

Agentic AI applications

AWS offers ready-to-deploy agents with further customization opportunities to meet business and use-case specific needs.

Amazon Q Business and Amazon Q Developer are specialized agents that allow you to immediately test and deploy agentic AI or further customize to meet your specific needs.

Kiro is an AI integrated development environment (IDE) that helps developers go from concept to production with spec-driven development.

AWS Transform is the first agentic AI service developed to accelerate enterprise modernization of .NET, mainframe, and VMware workloads.

AWS Marketplace offers pre-built agents, software with embedded agentic capabilities, and specialized professional services from AWS Partners to help you accelerate innovation.

Build custom agents

Custom agents integrate with your systems and data, giving you the flexibility to test different foundation models in a secure managed environment.

Amazon Bedrock is a flexible, comprehensive service for generative AI application and agent development.

Amazon Bedrock AgentCore (preview) is a set of services that enables you to deploy and operate highly capable agents securely at scale using any framework and any model.

Strands Agents is an open-source python Software Development Kit (SDK) for building agents using just a few lines of code. Combining the streamlined agent development of Strands Agents with the enterprise services of **AgentCore** provides a balance of development freedom and production-grade reliability.

AWS Marketplace offers agent tools, development solutions, and infrastructure from AWS Partners that allow you to build your own agents.

Deploy and operate agents: Amazon Bedrock AgentCore

Amazon Bedrock AgentCore (preview) helps developers accelerate AI agents into production with the scale, reliability, and security, critical to real-world deployment. It offers infrastructure purpose-built for dynamic agent workloads, powerful tools to enhance agents, and essential controls for real-world deployment.

Faster time to value

Accelerate from prototype to production with fully-managed services that eliminate infrastructure complexity, so you can bring groundbreaking agentic solutions to market faster.

Flexibility and choice

Build agents your way using any framework, model, or tool—while maintaining complete control over how your agents operate and integrate with existing systems.

Security and trust

Deploy with confidence using enterprise-grade security, complete session isolation, and comprehensive controls that help your agents operate reliably and securely at scale.

Key resources for Amazon Bedrock AgentCore

Learn more about AgentCore | See how AgentCore works | Explore code examples and integration guides

Bedrock AgentCore services

Bedrock AgentCore services can be used together or independently and work with any framework, including CrewAI, LangGraph, LlamaIndex, and Strands Agents. These services also work with any foundation model in or outside of Amazon Bedrock, giving you ultimate flexibility.

AgentCore Runtime	Provides low-latency serverless environments for agent deployment with session isolation and multimodal support
AgentCore Memory	Manages session context and long-term memory, helping agents learn from past interactions
AgentCore Gateway	Transforms existing APIs and AWS Lambda functions into agent-ready tools, offering unified access across protocols
AgentCore Identity	Enables secure access to AWS services and third-party tools with controlled permissions
AgentCore Observability	Delivers comprehensive monitoring and debugging capabilities across all components
AgentCore Browser	Provides managed web browser instances for web automation workflows
AgentCore Code Interpreter	Offers isolated environments for executing agent-generated code

Popular OSS frameworks used for building agents

Deploy your agents built on these leading open-source frameworks on AgentCore for enterprise-grade security and reliability.

Strands Agents

- The AWS native open-source framework for building AI agents
- Streamlined development with Python SDK
- Built-in support for AgentCore services
- Ready for enterprise deployment

Learn more >

crewai

- Specialized in multi-agent orchestration and collaboration
- Direct integration with core CrewAI package
- Supports diverse LLM integrations via LiteLLM
- Deployable on AgentCore for production scaling

Learn more >

LangChain

- Comprehensive framework for LLM application development
- Rich ecosystem of tools and integrations
- AWS-managed community package support
- Enterprise-ready with AgentCore deployment options

Learn more >

Model context protocol (MCP)

MCP is an open standard to enable seamless integration between LLM models and external tools, databases, and APIs. It acts as a universal connector, allowing LLM-based systems to access real-time data and perform actions in external systems.

- AgentCore Runtime enables secure and scalable hosting of MCP servers
- AgentCore Gateway converts APIs into MCP compatible tools
- AWS Marketplace offers ready-to-use MCP tools with optional AgentCore integration
- Amazon Bedrock supports MCP tools through inline Agents API
- Amazon Q Developer CLI includes MCP support
- Run MCP servers and clients on AWS using open source MCP libraries

MCP makes it easier for teams to work together on AI-powered applications

Developers

Simplify integration with external tools, reducing dev time.

End Users

Enable powerful and context-rich generative AI applications. Create better user experiences.

Enterprises

Fosters a standardized ecosystem. Easier to maintain and extend LLM integrations.

Key resources to accelerate MCP

- Learn how to deploy MCP servers on AgentCore Runtime
- Learn to convert APIs into MCP compatible tools using Gateway
- Build MCP with Amazon Bedrock Agents
- Best Practice Guidance for deploying MCP servers on AWS

Discover AI agent solutions in AWS Marketplace

Pre-built agents

Start innovating fast with pre-built AI agents that help automate processes and improve productivity

accenture | Automation Anywhere | ANTHROPIC | karini

Agent development solutions

Solutions that offer the tools, frameworks, and infrastructure to build, deploy, and manage AI agents

accenture | Agentforce | lyzr

Agent tools

Guardrails, model context protocol (MCP) servers, and knowledge bases that help make sure agents work within your rules and with the right data

brave | CONFLUENT | Saviynt | tavily

Agent infrastructure

Build reliable, scalable AI agents with infrastructure that provides the backbone for memory, context, real-time communication, and complex task execution

DATADOG | Pinecone | splunk>

Professional services

Develop and implement an AI strategy with specialized AWS Partners that strategically design, implement, and scale AI agent solutions to meet your goals

Deloitte. | genpact | IBM

Software with embedded agents

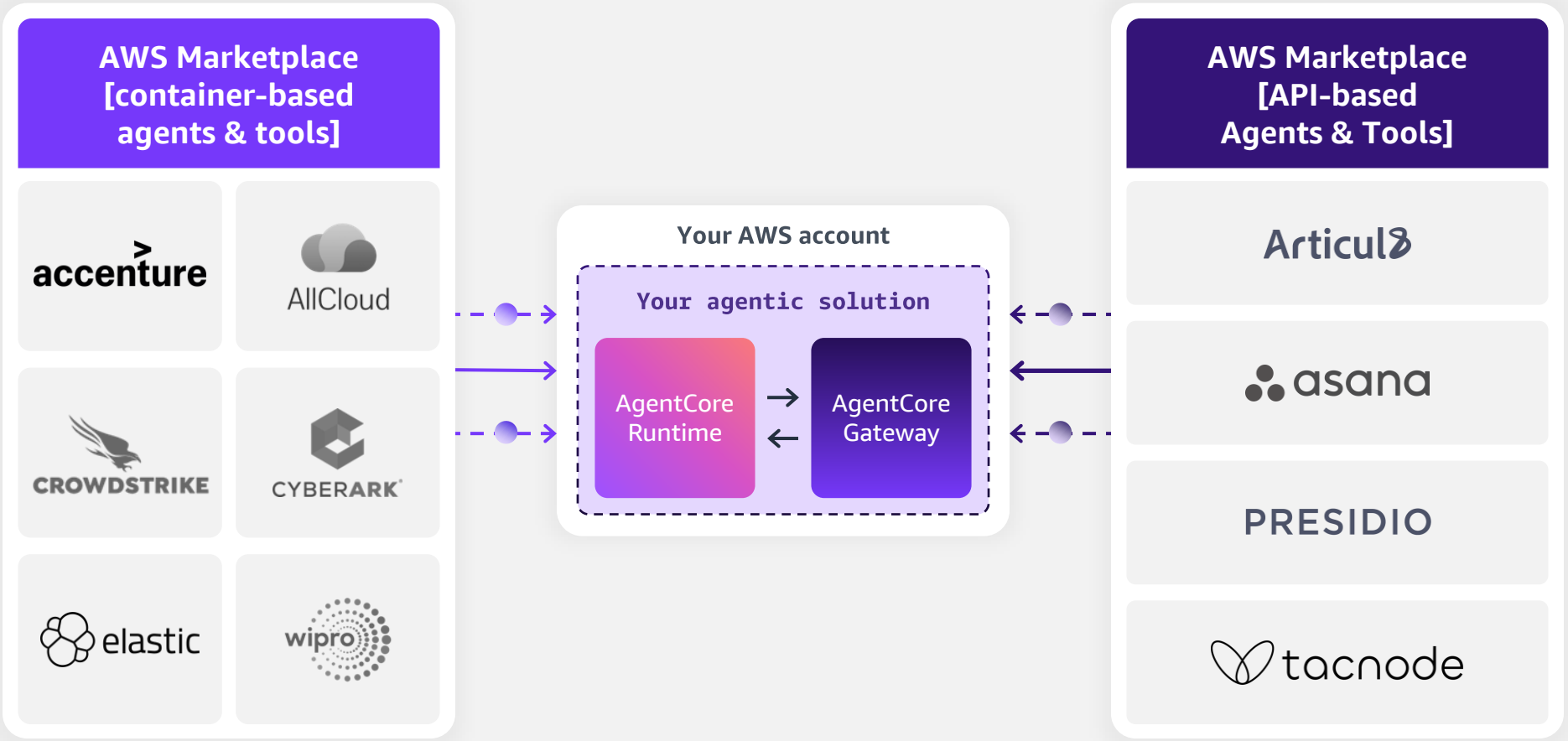
Software with embedded agents that can perform tasks and adapt to user needs within the software environment

nlx | servicenow | snowflake

This is not a complete list. To view all products listed in AWS Marketplace, visit AWS Marketplace. This list is current as of July 23, 2025.

Deploy agents and tools from AWS Marketplace on Amazon Bedrock AgentCore

Run select pre-built agents and tools from AWS Marketplace with AgentCore Runtime. Quickly allow your agents to securely connect to API-based agents and tools from AWS Marketplace with AgentCore Gateway.



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Accelerate AI agent innovation with AWS Marketplace

The technical complexity of implementing AI agents requires careful consideration of tools, resources, and support systems. AWS Marketplace is your trusted source to discover, buy, deploy, and manage AI agents, tools, and solutions from AWS Partners.

Centralized catalog

Streamline your search in a centralized catalog of hundreds of AI agent solutions from Partners.

Get started quickly with pre-built agents, build your own agents with tools, development solutions, and infrastructure, and get expert consultants to guide your journey - all in one place.

Use the new AI-powered search to find the product that best fits your use case.

Streamlined procurement and deployment

Add the latest agent solutions from AWS Partners to your stack fast.

Try, subscribe, and scale with pay-as-you-go pricing, and negotiate custom pricing that meets your enterprise requirements.

AWS Marketplace supports multiple deployment methods that help meet your security and technical requirements. Run agent solutions on trusted AWS services or in your AWS environment, where you maintain control over security and access.

The API-based deployment method allows you to streamline integrations with data, tools, and agents that support model context protocol (MCP) and agent-to-agent (A2A) standard protocols.

Trusted marketplace

Backed by a decade of procurement excellence, AWS Marketplace extends its reliable curation to AI agent solutions and provides options for deploying on secure AWS infrastructure.

Confidently purchase agent solutions through AWS Marketplace, where the product catalog is scanned regularly for vulnerabilities.

As you scale, benefit from centralized billing and software license management on AWS.

Conclusion

In this eBook, we shared how agentic AI is changing organizations along with real-world transformation paths taken by AWS customers across various industries.

You can find resources that provide an overview of AWS agentic services and hands-on learning to upskill your workforce.

Find agents, tools, and solutions to meet your organizational needs and implement them quickly with AWS Marketplace.

Whether you're just getting started or moving quickly to adopt solutions to improve operations, drive sales, or increase employee efficiency, AWS is here to help.

Key resources to get started

Explore agentic AI on AWS

Discover AI agents, tools, and solutions in AWS Marketplace

Learn essential AI skills with AWS AI League