SIGMOID

POV

Agentic AI for businesses

Autonomous AI system that thinks, acts, and evolves

Building autonomous, self-optimizing business systems

Automation is table stakes, but most enterprise systems still depend on static rules and manual intervention, slowing down decision cycles and limiting scale.

The new imperative:

How do you evolve from task automation to true autonomy—where systems can make intelligent decisions, orchestrate complex workflows, and continuously improve without constant oversight?

That's where **Agentic AI** comes in.

What is Agentic AI?

Autonomous, goal-driven AI systems that plan, execute, and refine actions across complex workflows. Think of them as **adaptive digital coworkers** delivering **decision intelligence, process automation,** and **scalable efficiency**— all in one.

Why Agentic AI matters:

By 2028,

33% of enterprise software will incorporate agentic AI

Gartner

By 2028, experts believe that

15% of day-to-day decisions in the workplace will be made using agentic AI

Gartner

90% of executives in the IT believe they have processes in the workplace that could be improved by implementing agentic AI

UiPath

From Generative to Agentic AI – The next leap

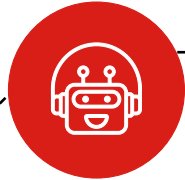|	**Generative AI**	**Agentic AI**
Actions	**Reactive:** Produces content in response to prompts but doesn't take action on its own	**Proactive:** Takes initiative, makes decisions, and executes tasks end-to-end
Autonomy	**No autonomy:** Systems require constant prompts	**High autonomy:** Systems only need a high-level instruction, and they plan and carry out tasks to fulfill it
Multi-Step Reasoning	**Single Step:** Gen AI systems perform only one task at a time	**Multi Step:** Agentic AI systems can autonomously break down high-level goals into a sequence of steps and tool calls
Transformation	**Restricted:** Limited to providing answers to various prompts	**Unlimited:** AI agents can supercharge productivity, extend digital workforce and handle complexity at scale
Competitive Advantage	**Low:** Limited competitive advantage as companies already implemented many Gen AI POCs	**High:** Agentic AI can respond faster & operate at a new level of efficiency thus becoming a differentiator in company operations.

Key components of an Agentic AI ecosystem

Autonomous AI agents
- Self-learning entities that perceive, decide, and act independently.
- Continuously adapt based on real-time data and evolving business needs.
- Examples: Virtual assistants, workflow automation bots, recommendation engines.
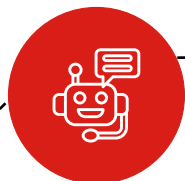
Data and analytics infrastructure
- High-quality, real-time data pipelines fuel AI agents.
- Integration with structured (databases) and unstructured (documents, images, logs) data sources.
- Ensures AI agents learn, adapt, and provide accurate insights.

Knowledge graphs and context awareness
- AI agents leverage structured data relationships for better reasoning and decision-making.
- Enables context-aware interactions and cross-functional collaboration.
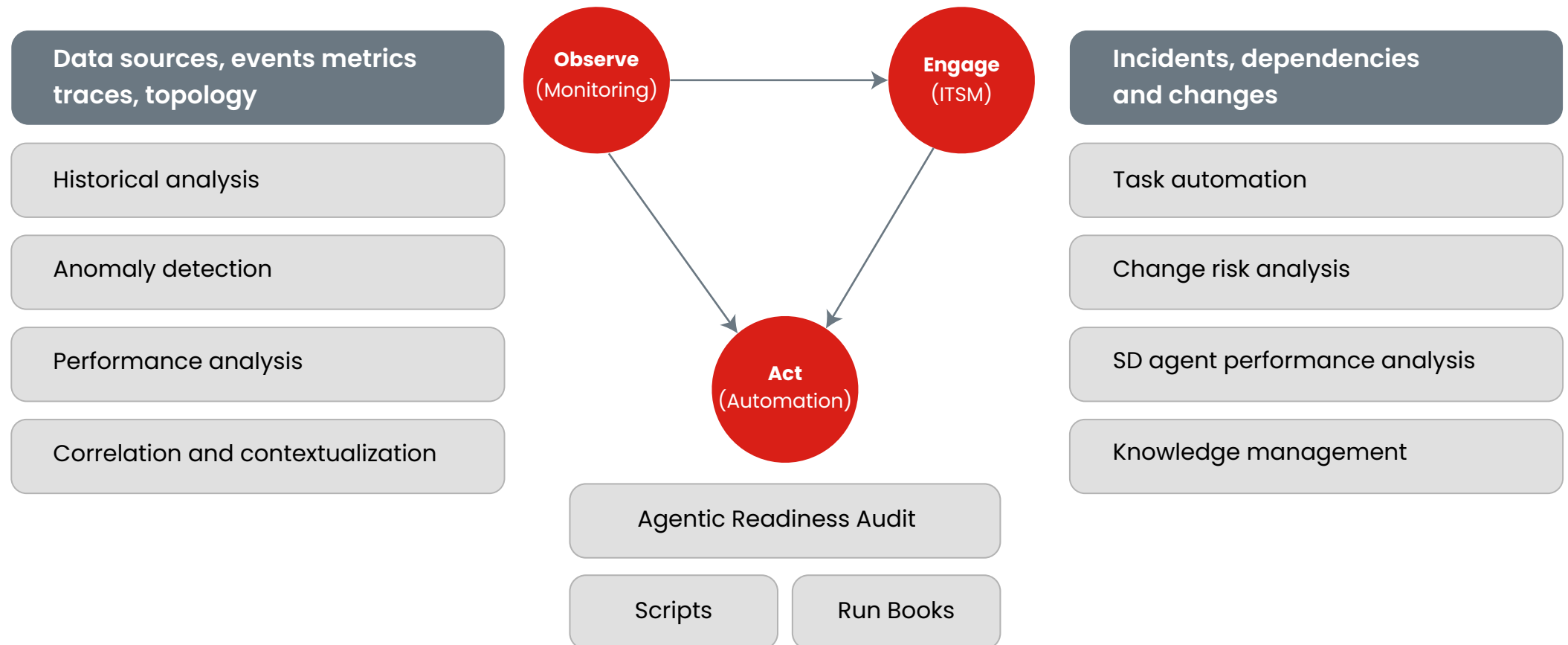- Example: AI-powered customer service that understands historical interactions.

AI Model orchestration and adaptability
- Multi-agent coordination for seamless task execution and optimization.
- Continuous learning mechanisms with feedback loops for improvement.
- Example: AI agents collaborating in supply chain optimization.

Sigma AIOps - Sigmoid's operations framework to build AI agents

AIOps platform enabling continuous insights across IT operations monitoring (ITOM)

Data sources, events metrics traces, topology

Historical analysis

Anomaly detection

Performance analysis

Correlation and contextualization

Observe (Monitoring)

Engage (ITSM)

Act (Automation)

Agentic Readiness Audit

Scripts

Run Books

Incidents, dependencies and changes

Task automation

Change risk analysis

SD agent performance analysis

Knowledge management

Agentic AI use cases across industries

CPG and Retail

- Demand forecasting
- Auto-replenishment
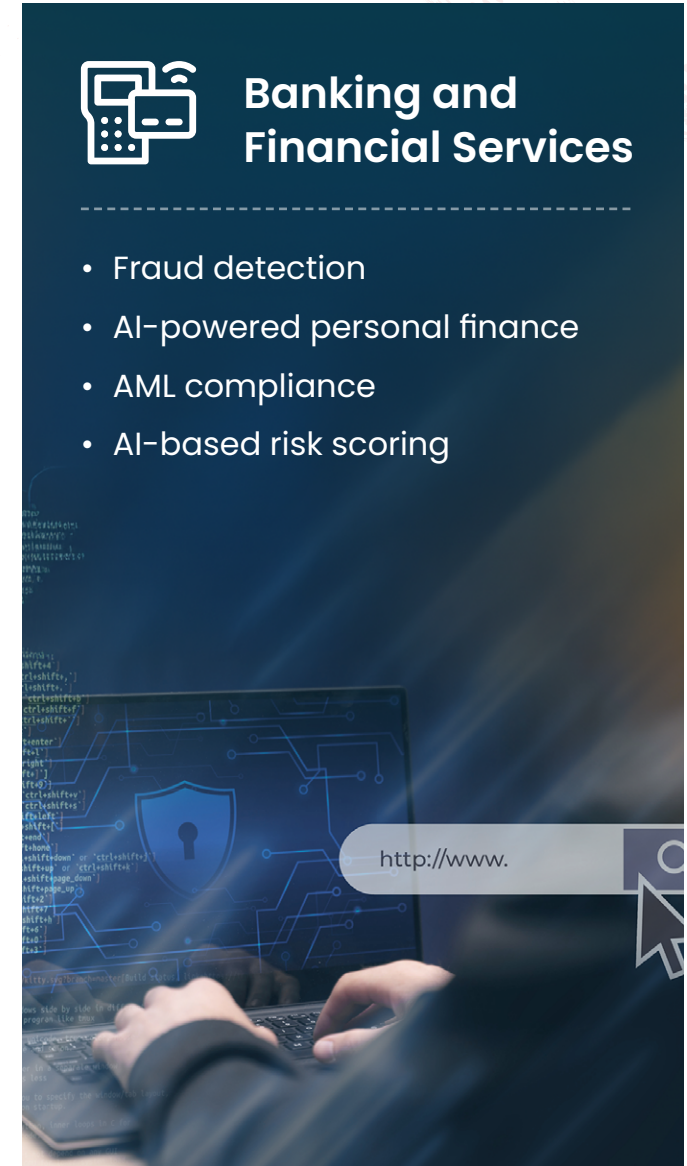- Dynamic pricing
- End-to-end shopping assistance

Life Sciences

- AI "researchers"
- Clinical trial optimization
- Patient care
- Automate compliance reporting

Banking and Financial Services

- Fraud detection
- AI-powered personal finance
- AML compliance
- AI-based risk scoring

Conclusion

Agentic AI represents the future of business automation, enabling organizations to build intelligent, self-optimizing systems that not only perform tasks but continuously evolve to meet the dynamic demands of the marketplace. By incorporating autonomous AI agents, real-time data infrastructure, and adaptable learning mechanisms, businesses can significantly reduce manual intervention, optimize workflows, and enhance decision-making across industries.

At Sigmoid, we empower businesses to leverage the power of Agentic AI by providing cutting-edge data and analytics solutions that seamlessly integrate with autonomous AI systems, driving optimized decision-making and operational efficiency across industries.

About Sigmoid

Sigmoid enables business transformation using data and analytics, leveraging real-time decisions through insights, by building modern data architectures using cloud and open source. Some of the world's largest data producers engage with Sigmoid to solve complex business problems. Sigmoid brings deep expertise in data engineering, MLOps, and deep learning.

Visit www.sigmoid.com to know more.

Let's Get Started!

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to enable high quality data for your business.

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