Agentic AI Framework Comparison

Core Framework Comparison

Framework	Primary Philosophy	Autonomy	Control	Orchestration Style	MCP	Recovery Behavior	Best For	Tradeoff
Claude Agent SDK	Autonomous orchestration	High	Lower	Model-driven loop	Native	Adaptive retries & replanning	Exploration agents	Less deterministic
LangChain	Composability-first	Medium	High (manual)	Prompt + executor	No (Adapter)	Manual recovery	RAG & integrations	More glue code
LangGraph	Deterministic state machine	Low–Medium	Very High	Graph (nodes + edges)	No (Adapter)	Architectural recovery	Regulated workflows	Higher complexity
Google ADK	Structured session autonomy	Medium	Medium	Session lifecycle	Partial	Bounded autonomy	Enterprise apps	Heavier setup
OpenAI Agents SDK	Governed execution	Medium	Medium	Schema-driven	Via MCP	Schema validation	Production governance	Schema rigidity

Strengths & Weaknesses Summary

Framework	Strengths	Weaknesses
Claude Agent SDK	Native MCP, minimal integration, autonomous, built-in recovery	Less transparent reasoning
LangChain	Extremely flexible, strong ecosystem, RAG support	No native MCP, manual recovery
LangGraph	Deterministic, traceable, auditable	Higher architectural complexity
Google ADK	Strong session model, structured lifecycle	Less flexible than LangChain
OpenAI Agents SDK	Strict schema governance, clean tool system	Schema rigidity

Autonomy vs Control Positioning

Framework	Built-in Autonomy	Developer Control	Positioning
Claude Agent SDK	High	Lower	High Autonomy, Lower Control
LangGraph	Low–Medium	Very High	High Control, Lower Autonomy
LangChain	Medium	High	High Flexibility & Control
Google ADK	Medium	Medium	Structured Autonomy
OpenAI Agents SDK	Medium	Medium	Governed Execution

Conceptual Model Comparison

Concept	Definition	Represents
High Autonomy	Runtime LLM-driven planning & adaptive recovery	Claude
Low Autonomy	Predefined execution paths	LangGraph
High Control	Explicit state transitions & determinism	LangGraph
Low Control	Model decides flow dynamically	Claude
Structured Autonomy	Autonomy within defined structure	Google ADK
Governed Execution	Strict schemas & tool validation	OpenAI SDK
Flexibility	Ease of integration & ecosystem breadth	LangChain

Standardization & Ecosystem Efforts

Standard	What It Standardizes	Level
MCP	Tool communication interface	Tool-level
A2A	Agent-to-agent communication	Agent-level
Agent Protocol	Structured task delegation & coordination	System-level

Executive-Level Interpretation

If You Prioritize	Choose
Maximum autonomy & self-healing	Claude Agent SDK
Deterministic workflow & auditability	LangGraph
Integration flexibility & ecosystem	LangChain
Enterprise session lifecycle & state	Google ADK
Strict governance & schema control	OpenAI Agents SDK