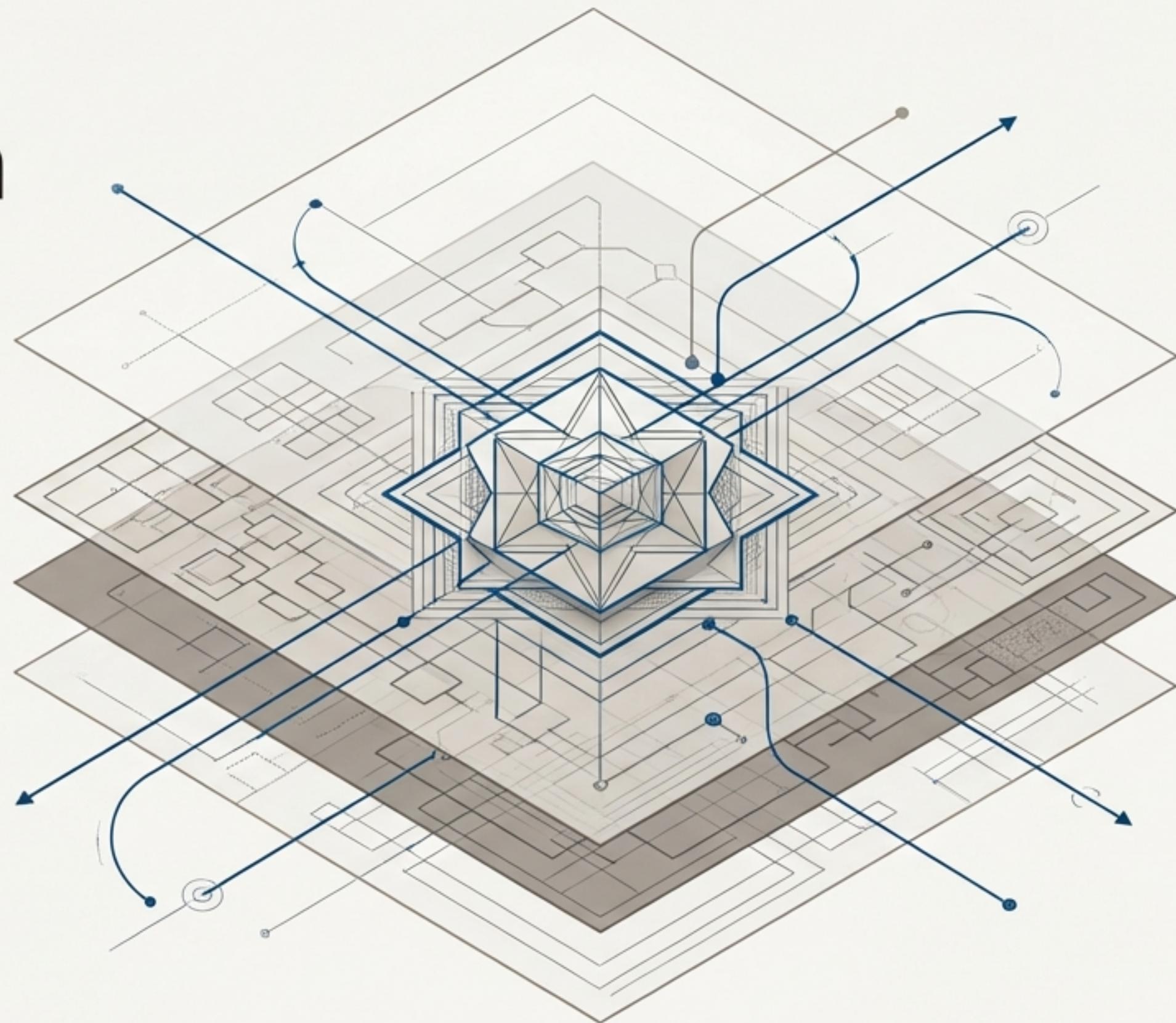


Advanced Agent Development with Copilot Studio

From Simple Assistants to Autonomous Enterprise Orchestrators

This deck outlines a journey of building progressively more powerful AI agents. We will explore how to architect, deploy, and manage agents that can reason, act, and automate complex business processes autonomously.



A Unified Platform for Every Builder



Copilot Studio Lite

FOR 'ME' AGENTS

Quick setup for personal productivity and team sharing. Define with Name, Instructions, and Data.



Copilot Studio

FOR 'MAKER' AGENTS

The full experience. Build autonomous agents with advanced features, tools, and orchestration.



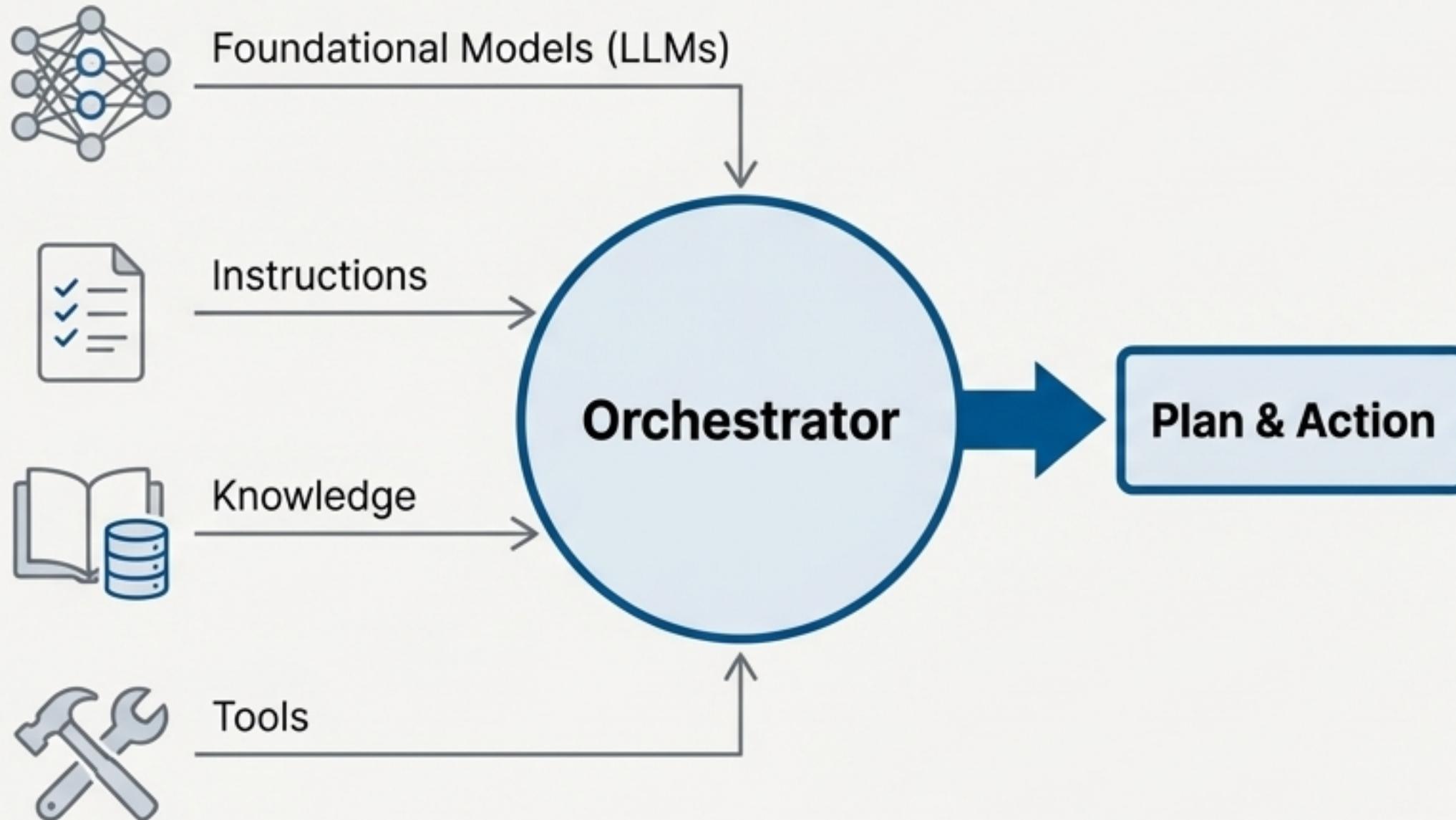
Pro-Code Extensions

FOR 'PRO-DEV' AGENTS

Ultimate customization. Extend with Azure Foundry, Visual Studio, and custom code.

Key Takeaway: Copilot Studio is a high-productivity platform that scales from simple personal copilots to complex, pro-code enterprise solutions.

The Orchestrator is the Brains of the Operation



The "Gifted 6-Year-Old" Analogy

Foundational Model

A brilliant but unsupervised mind.
Capable of amazing things, but needs guidance.

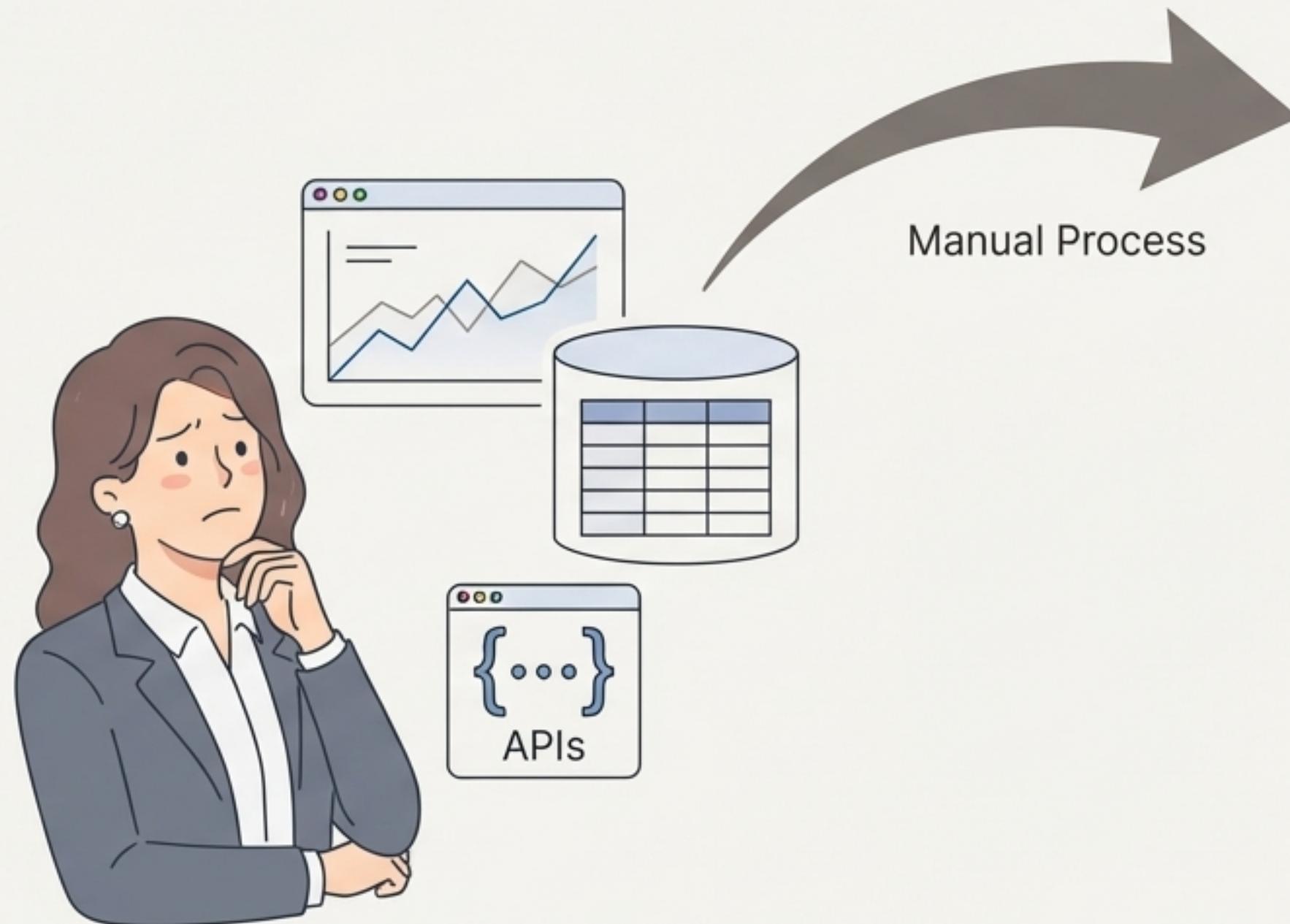
Orchestrator

The expert supervisor. It provides the necessary context, guardrails, and tools to turn raw intelligence into reliable action.

Key Takeaway: The orchestrator is what transforms a powerful LLM into a useful and reliable agent by intelligently selecting and combining instructions, knowledge, and tools to form a plan and execute it.

Meet Cat, a Supply Chain Manager Overwhelmed by Repetitive Tasks

The Scenario: Automating Supply Chain Monitoring for the 'Java' Company



The Challenge

Cat manually monitors dashboards and systems to track inventory. When stock for an item falls below 20 units, she must cross-reference sales data from the last 30 days to decide whether to issue a restock alert. This is a repetitive, time-consuming, and manual process.



The Goal

Build an autonomous agent that performs this monitoring and alerting process automatically.



Grounding the Agent with Instructions and Knowledge

1. Instructions (The "How")

"Monitor for low stock (< 20 units).

Find total sales over the last 30 days for those items.

If sales are high, flag the item for restock."

2. Knowledge (The "What")

The agent is grounded in specific, internal data sources to ensure relevance and prevent hallucinations.

Agent Knowledge

- Java Dataverse Database ✓
- SharePoint
- Salesforce
- Upload a file

General Knowledge

Web Search

General Knowledge



Critical for focusing the agent and ensuring reliability.

Equipping the Agent with the Right Tool for the Job



MCP Servers

Dynamic & Context-Aware

The 'C' is for Context. Tools and parameters are described in natural language, allowing the agent to dynamically discover what tools are available and how to use them.

Example: Agent uses the database MCP to [list_tables](#), [describe_table](#), and then [read_query](#) to understand the schema on its own.



Orchestrator



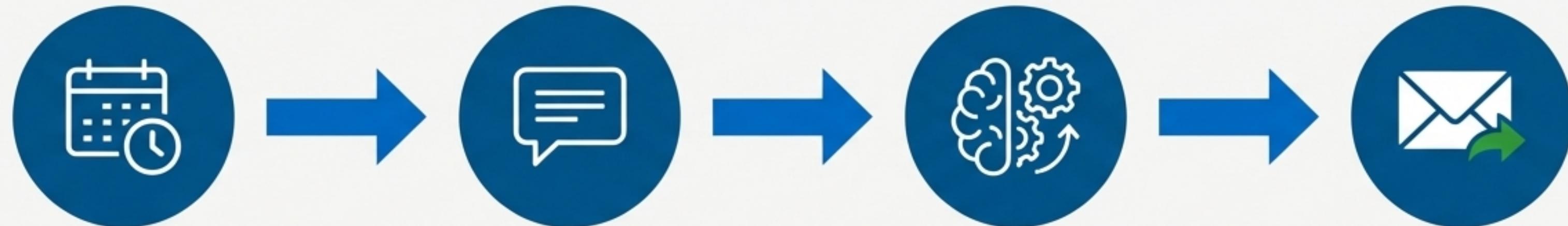
Connectors

Specific & Pre-Defined

Established, pre-defined actions for well-known systems. Best for specific, repeatable tasks that don't change.

Example: Use the standard Outlook connector with the simple instruction [send an email](#).

Achieving Autonomy: From Conversational Bot to Proactive Worker



1. Add a Trigger

Set the agent to run on a schedule (e.g., "Every Day at 9 AM") or in response to an event (e.g., "When a new row is created").

2. Provide an Initial Prompt

The trigger initiates the agent with a command, just as a user would: "Check for product alerts and if there are any, send a product alert email."

3. Agent Executes Plan

The agent runs independently, queries the database, and reasons over the data based on its instructions.

4. Autonomous Action

The agent sends a formatted email alert—all without human interaction.

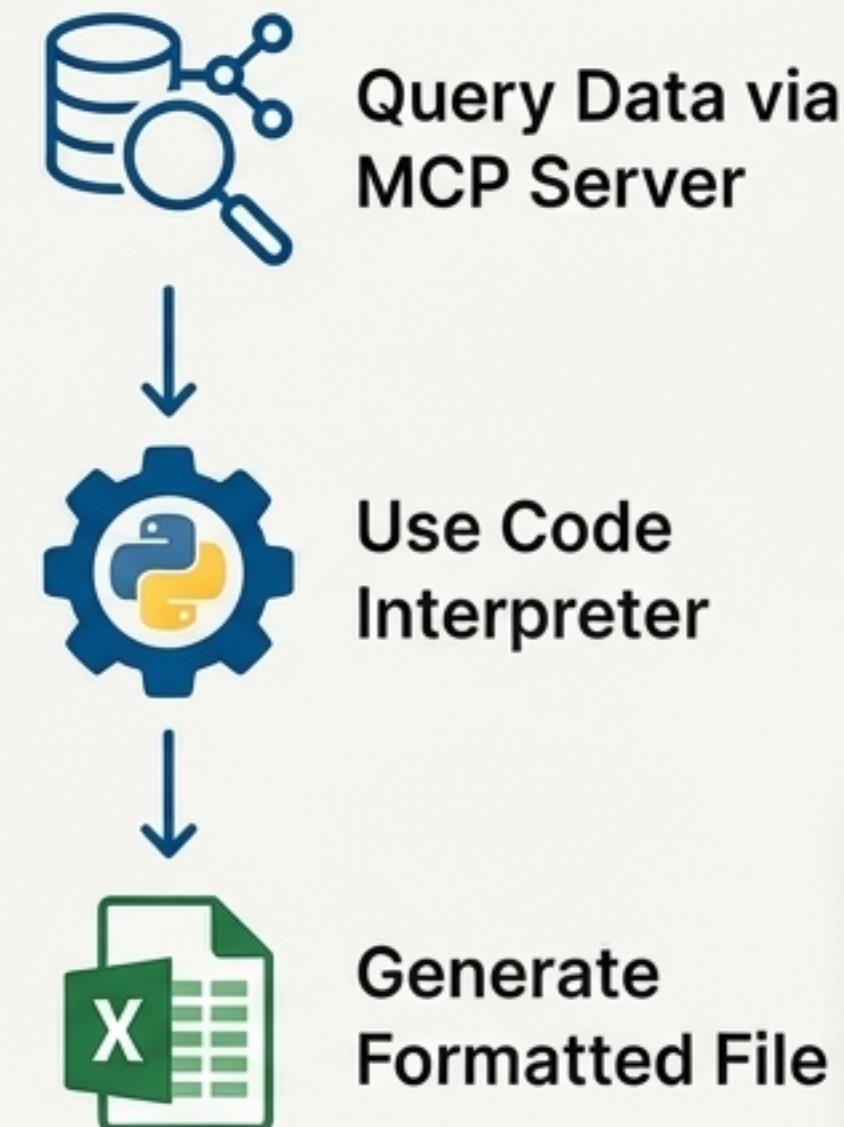
The Result: The agent is no longer reactive; it is a proactive, autonomous worker that executes a business process on a schedule.

Beyond Data Retrieval: On-the-Fly Code Generation

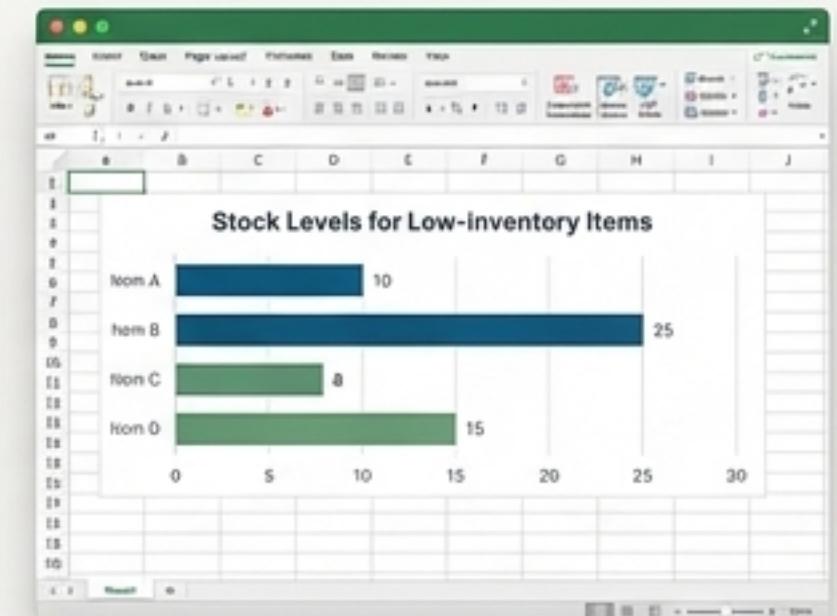
The Prompt

"First, query for product alerts. Then, using the code tool, create an Excel file of this data with a graph of stock levels."

The Agent's Process



Writes and executes Python code in a sandboxed environment.

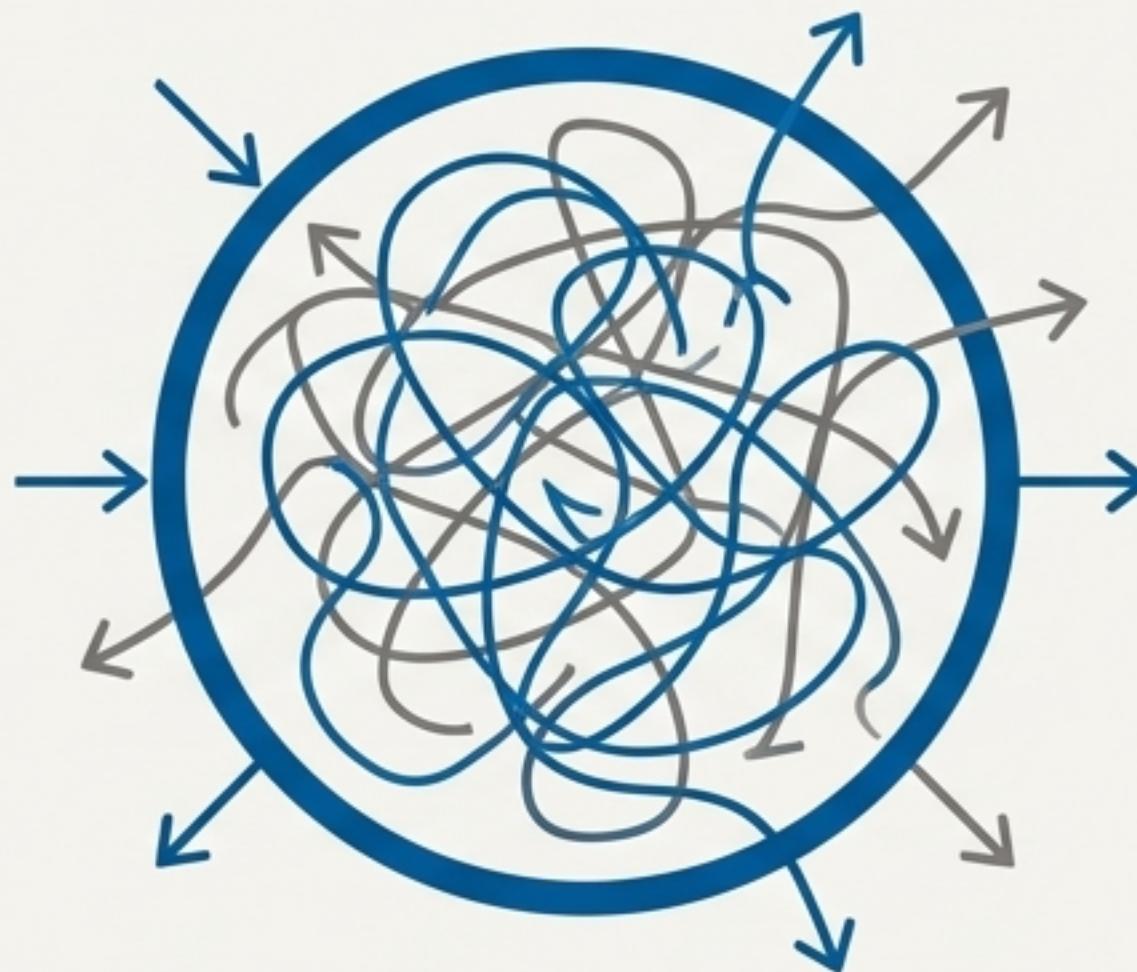


Key Takeaway: Agents aren't just for calling APIs; they can generate and execute code to perform complex data analysis and visualization tasks on the fly.

As Capabilities Grow, Complexity Becomes the Bottleneck

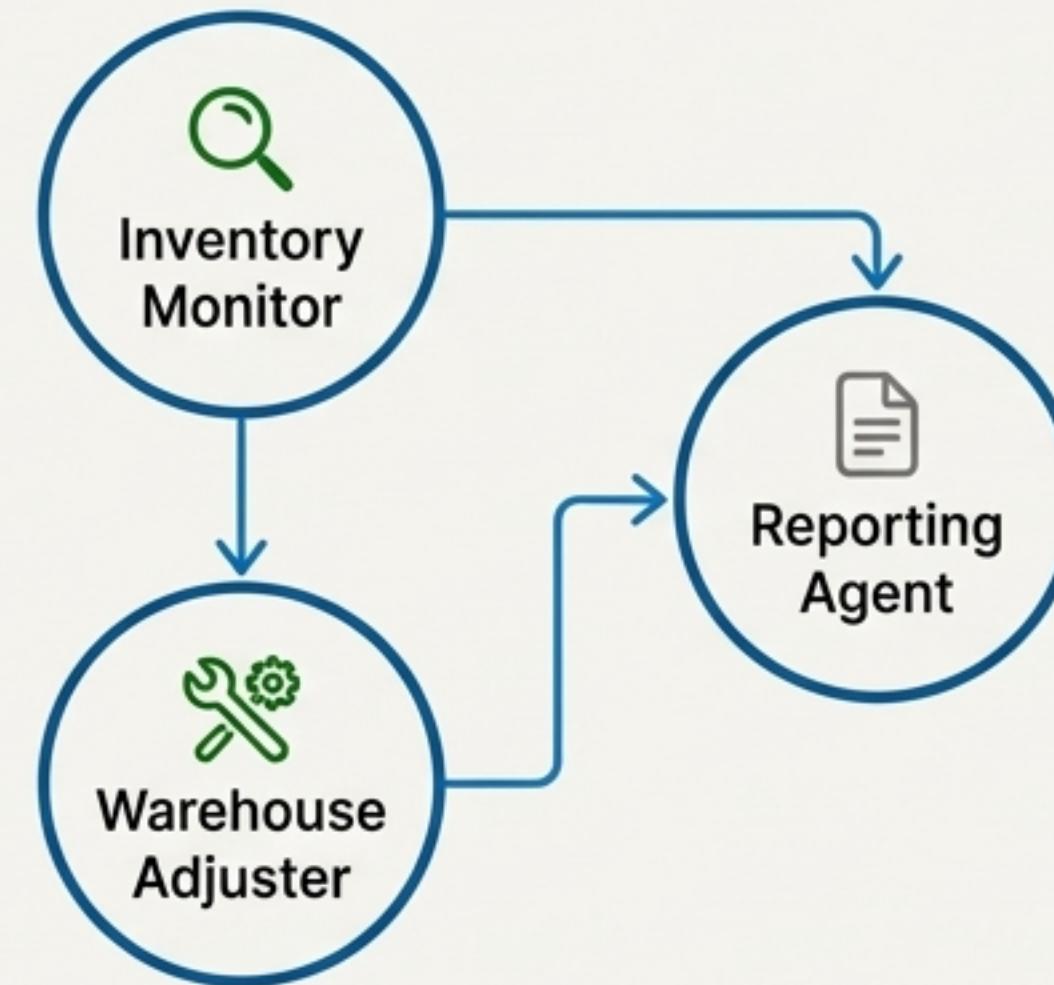
Applying the “Separation of Concerns” Principle to AI Agents

The Problem: Monolithic Agent



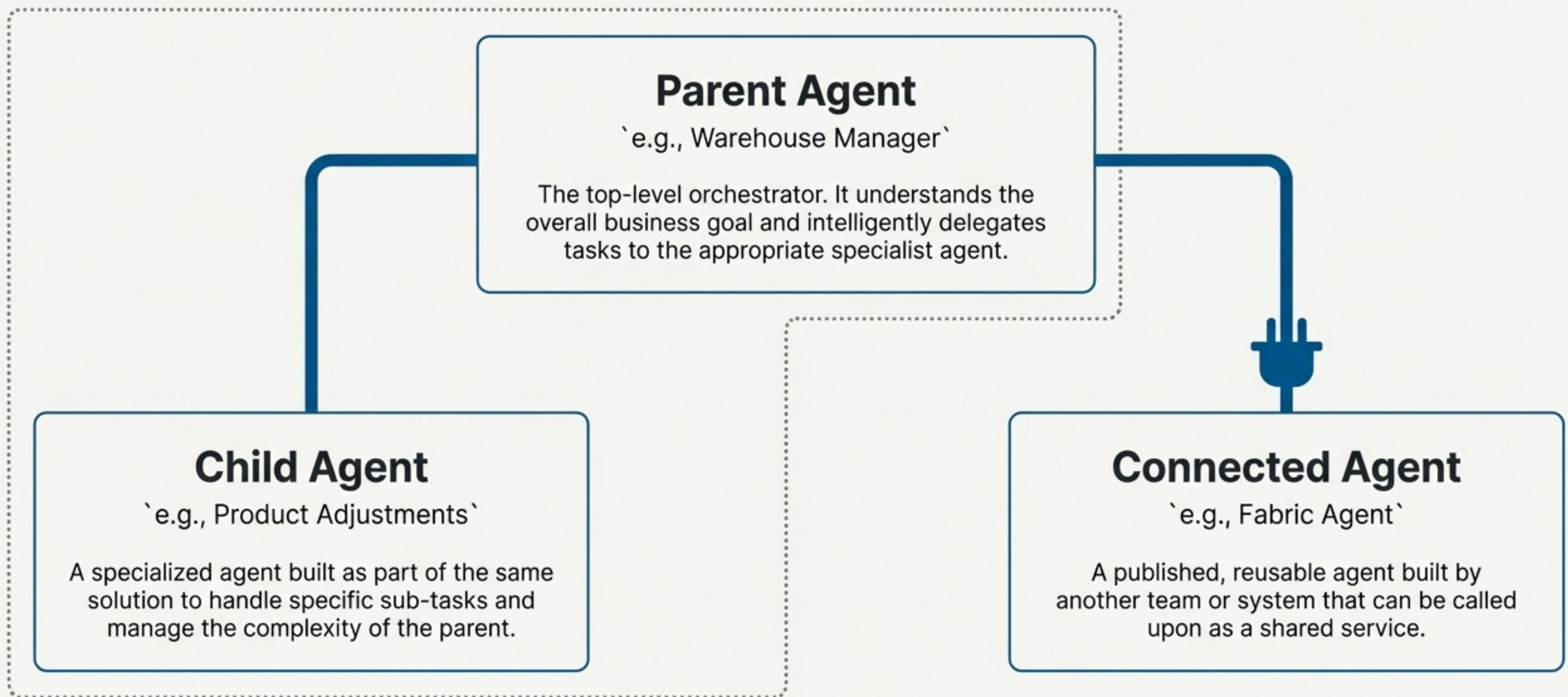
A single agent handling too many diverse tasks becomes difficult to instruct, maintain, and debug. Its instructions become long and contradictory.

The Solution: Team of Agents



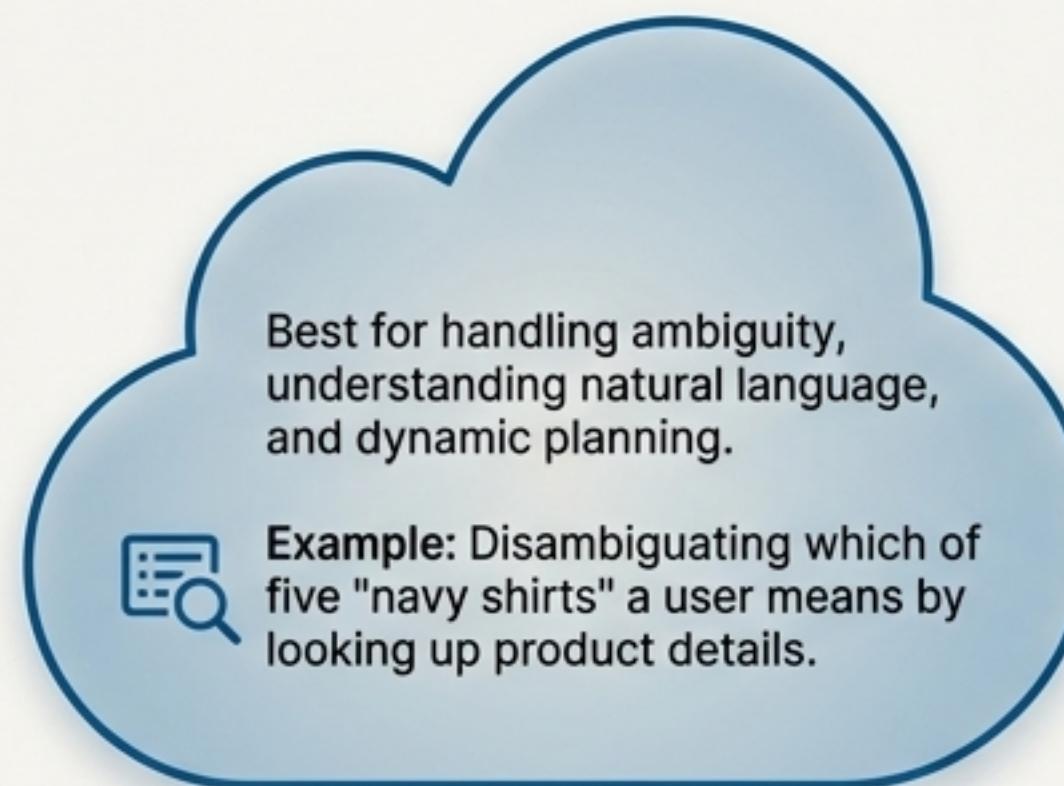
Break down a complex process into a “team of agents,” where each agent is a specialist with a clear, focused purpose. This is the same principle as componentization or microservices.

Architecting an Agent Hierarchy



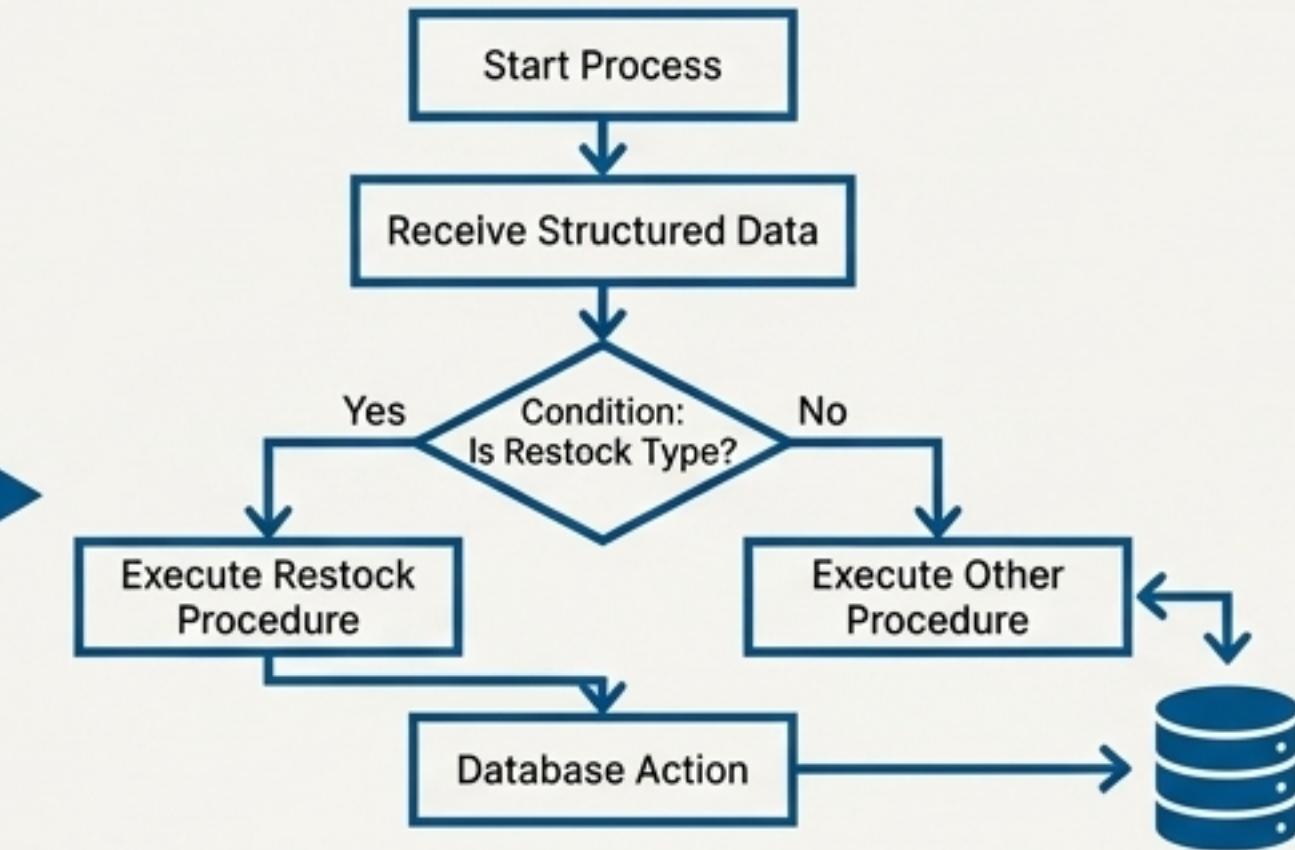
Blending AI Flexibility with Procedural Rigor

Non-Deterministic (The AI Agent)



```
{  
  "ProductID": "GUID-1234",  
  "Quantity": 10,  
  "Type": "Restock"  
}
```

Deterministic (The Agent Flow)



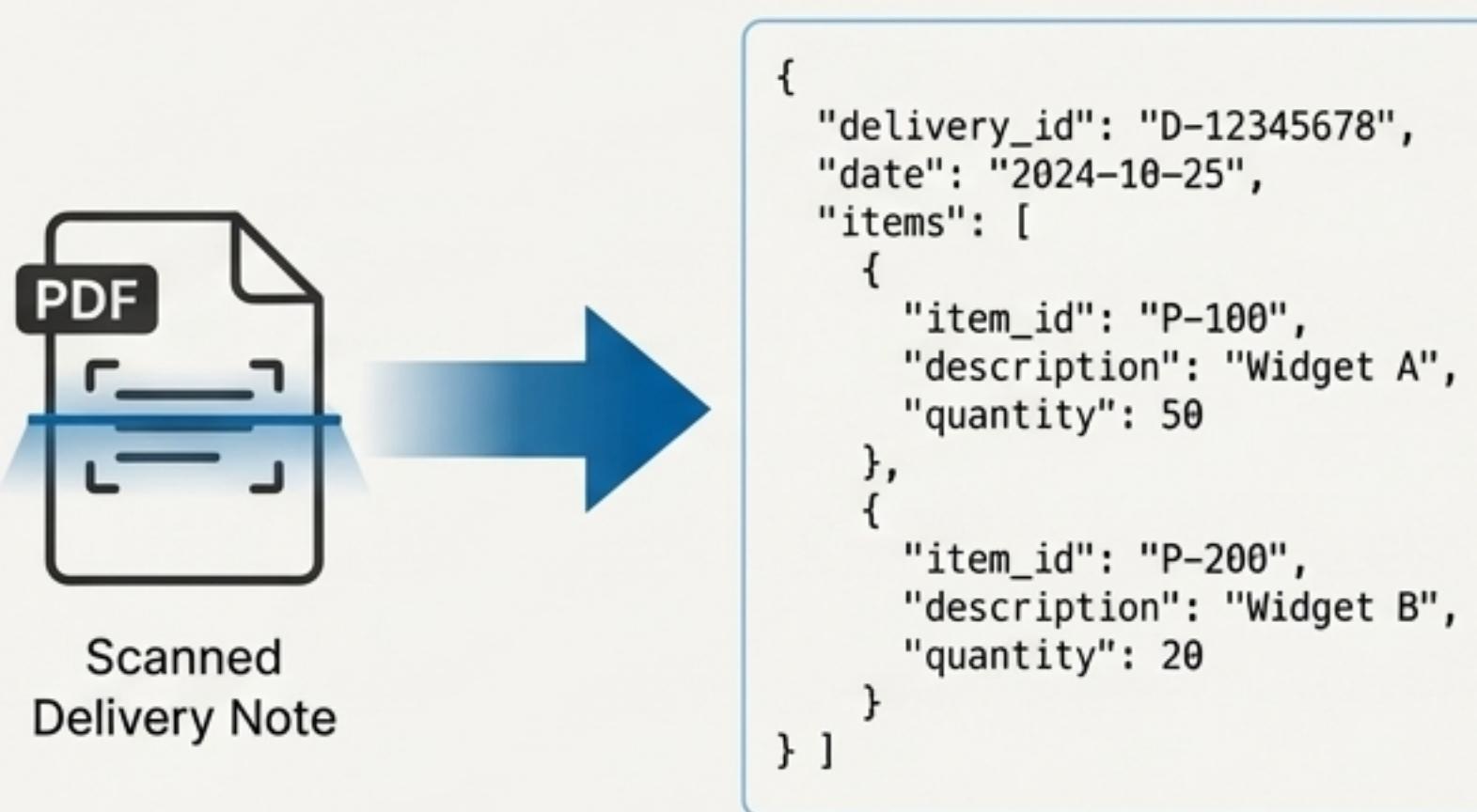
Best for processes that must execute identically every time. Can include business logic like conditions, switches, loops, and "Human in the Loop" approval steps.

Example: Creating a new inventory adjustment record in a database with specific inputs (ID, quantity, type).

Interacting with Any System—No API Required

1. Multimodal Prompts

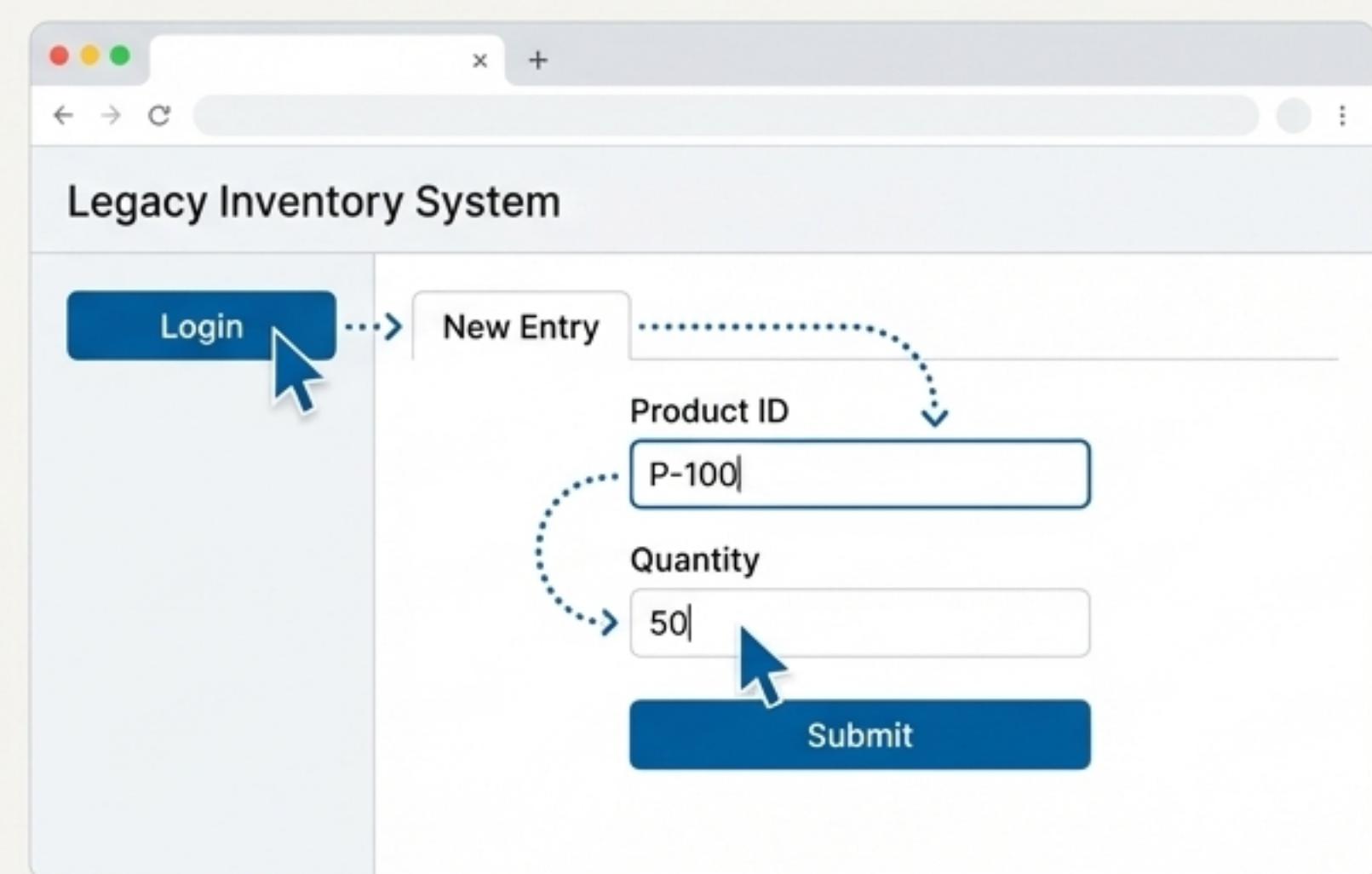
Agents can ‘see’ and extract structured data (JSON) from documents like PDFs and images.



Example: An agent processes a scanned PDF delivery note, identifies the line items, and outputs them as structured JSON for the next step.

2. Computer Use for Agents (CUA)

Give the agent a virtual desktop. It can open browsers, log in, and control the mouse and keyboard based on natural language instructions—intelligent UI interaction, not brittle screen-scraping.



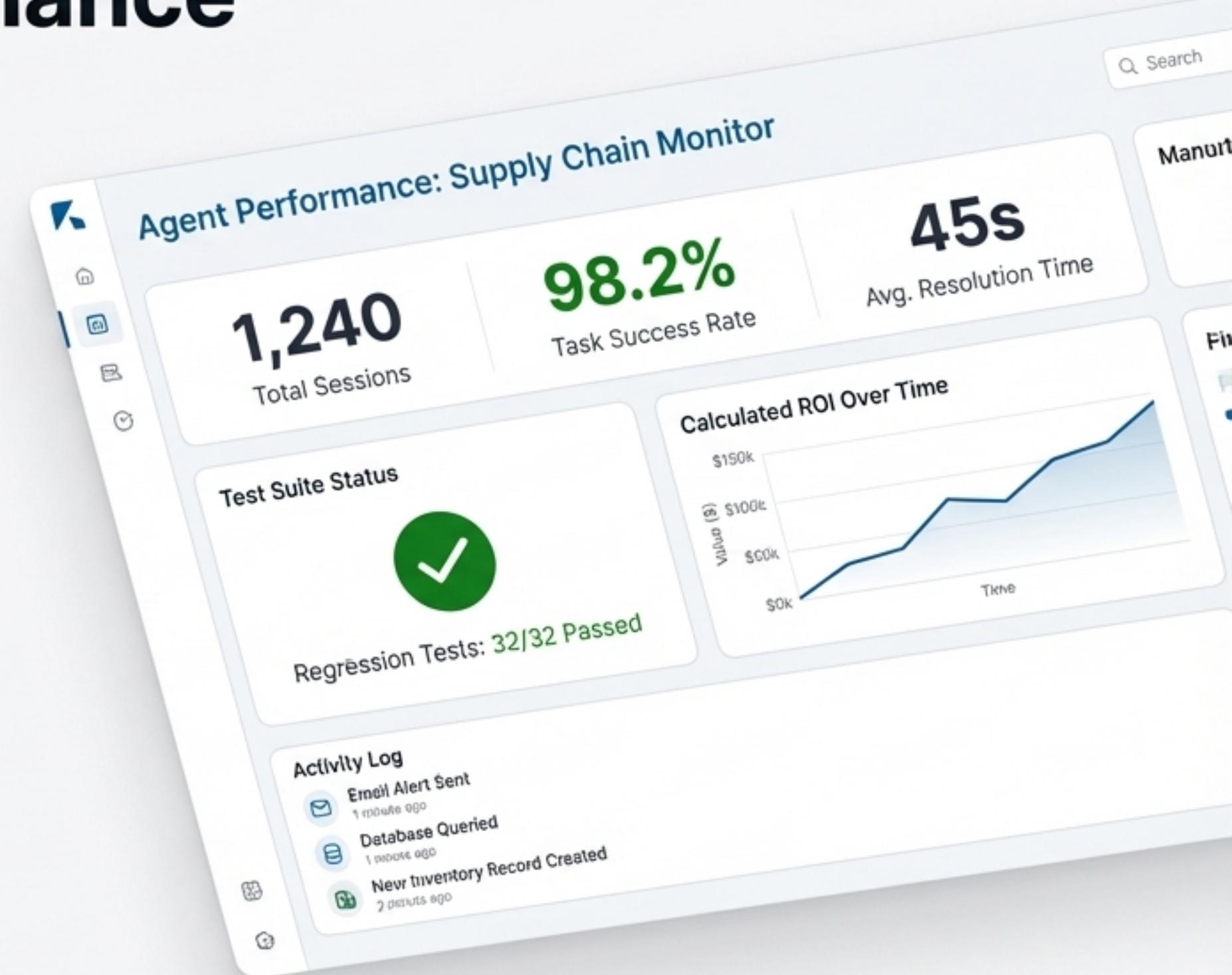
From Creation to Operation: Enterprise-Grade Governance

Testing

You can create test suites with example prompts to validate agent behavior after any changes, preventing regressions and ensuring reliability.

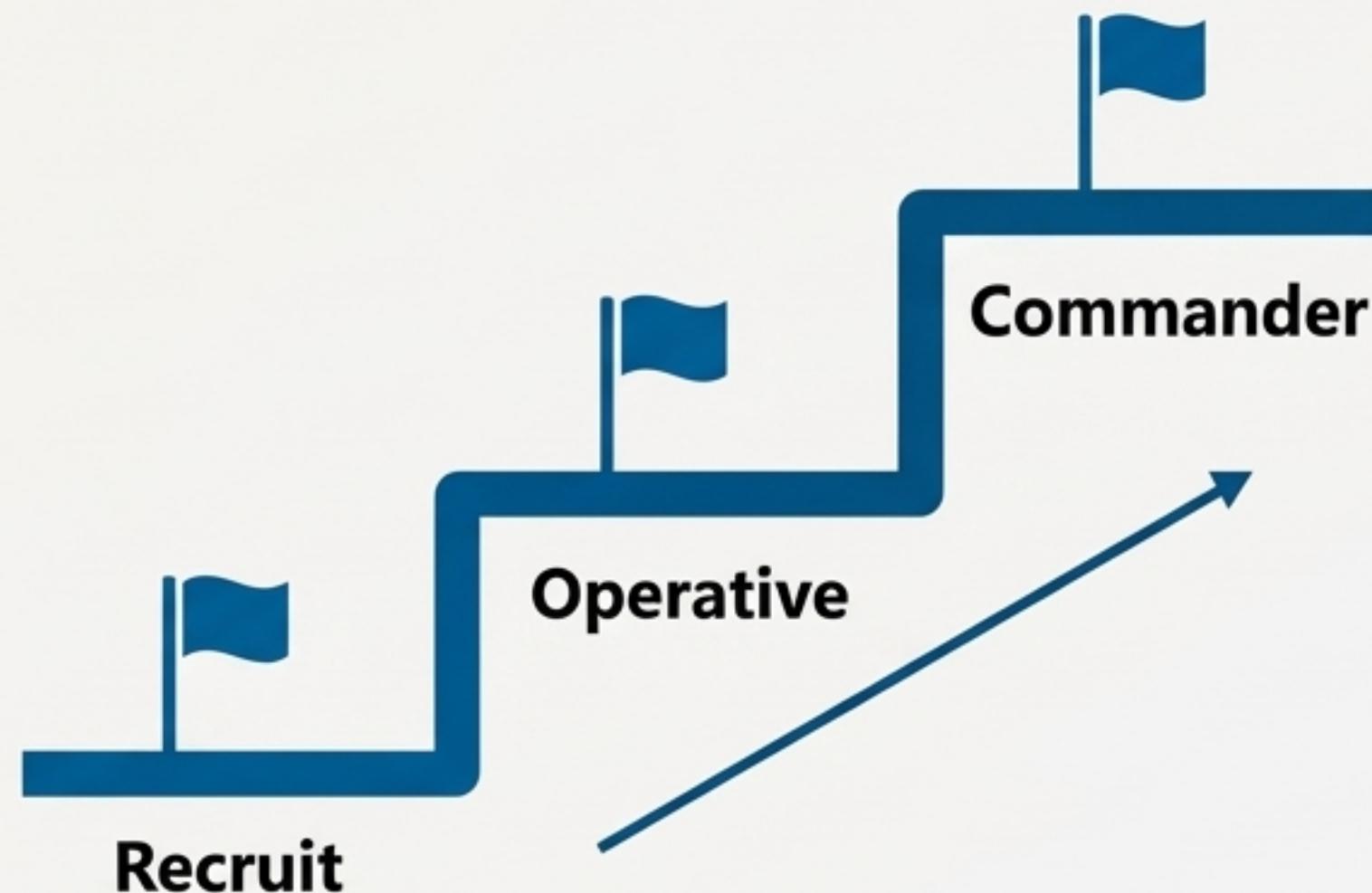
Analytics

Built-in dashboards allow you to monitor agent performance, track key KPIs like resolution rates, and ultimately calculate the return on investment (ROI) of your automation efforts.



Have the Courage to Experiment

"The key to getting the most out of this technology is trying things."



Keep Learning

Join the community for resources, examples, and discussions.

aka.ms/CopilotStudio/Community

Get Hands-On

Start your journey with the 'Agent Academy,' a structured learning path with progressive levels.



← Scan to Begin