Microsoft

# Microsoft Ignite



Microsoft

# Building Agents in AI Foundry

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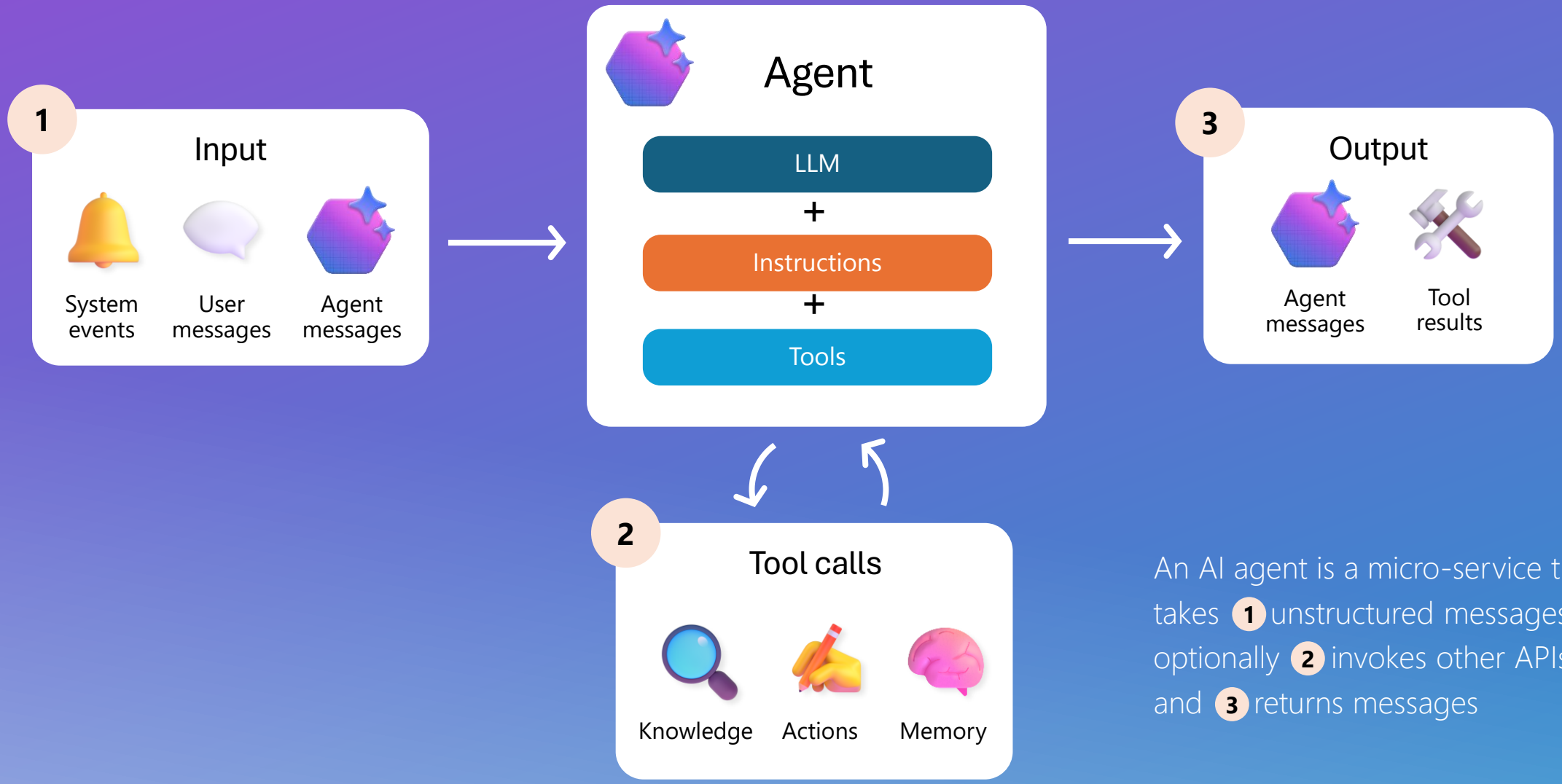
Sr. AI Solutions Architect



# What is an AI agent?




An AI agent is a micro-service that takes 1 unstructured messages, optionally 2 invokes other APIs and 3 returns messages

# Every application achieves more with AI and agents

| | From | | To |
|---|---|---|---|
| **Customer Service & Support** | Limited business hours<br>Costly routine inquiries<br>Inconsistent quality | → | 24/7 availability<br>Routine automation savings<br>Quality standardization |
| **Sales & Marketing** | Generic campaigns and content<br>Inefficient lead qualification<br>Reactive sales strategies | → | Personalized engagement<br>Predictive lead management<br>Dynamic, real-time selling |
| **Finance & Business Operations** | Manual data entry, errors, delays<br>Post-transaction risk management<br>Resource-intensive auditing | → | Fast and accurate reporting<br>Real-time fraud prevention<br>Audits in less time, less labor |
| **Supply Chain** | Inaccurate forecasting, old data<br>Cumbersome logistics<br>Hindered visibility and tracking | → | Accurate, predictive forecasting<br>Intelligent route planning<br>Continuous monitoring, optimizing |
| **Human Resources** | Manual, slow time-to-hire<br>Generic training/development<br>Reactive employee engagement | → | Streamlined recruitment<br>Individualized programming<br>Timely intervention, retention |

# What's ahead: AI Season 3

01 Advanced Reasoning

02 "AI only as Good as your Data"

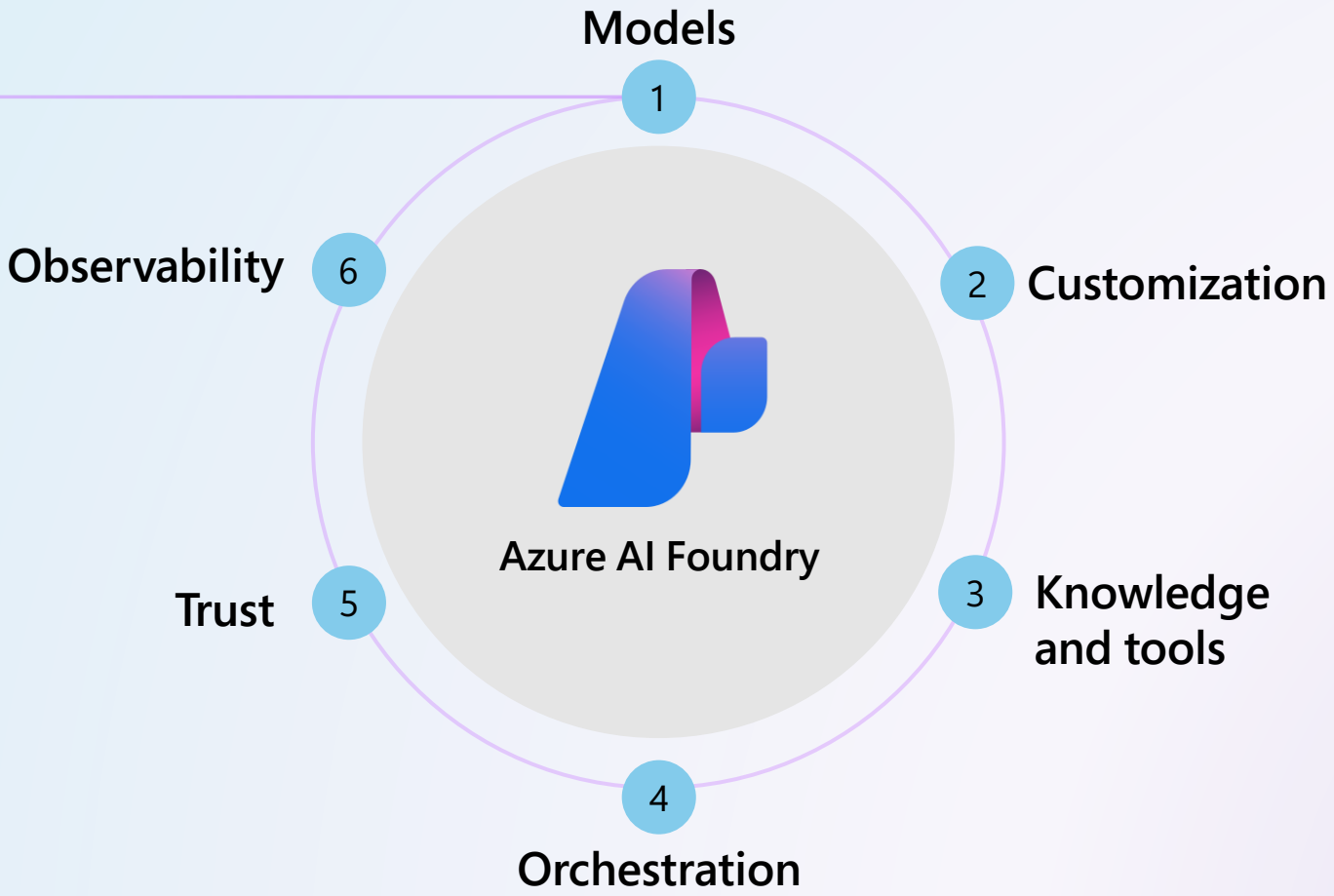
03 Multimodel and Multimodal

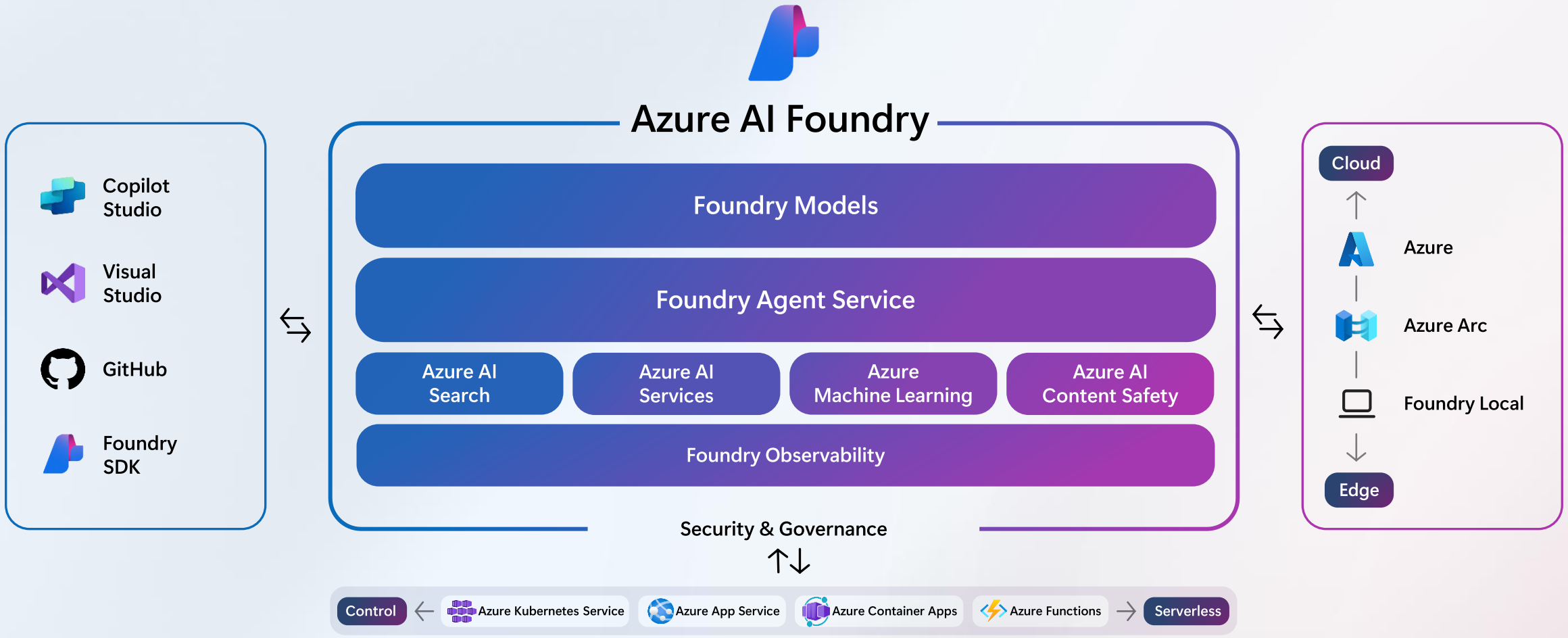
04 Memory and Entitlements

05 Agent + Multi-agents

06 From "use-case" to reshaping every business process

# Azure AI Foundry: The AI App and Agent Factory




Azure AI Foundry
Copilot Studio
Visual Studio
GitHub
Foundry SDK
Foundry Models
Foundry Agent Service
Azure AI Search
Azure AI Services
Azure Machine Learning
Azure AI Content Safety
Foundry Observability
Security & Governance
Control
Azure Kubernetes Service
Azure App Service
Azure Container Apps
Azure Functions
Serverless
Cloud
Azure
Azure Arc
Foundry Local
Edge

# Azure AI Foundry: The AI App and Agent Factory

## Let's dive in



**Design**
with the best models



Customize
with multi-agent toolchain



Manage
AI apps with confidence

# Find the best models for your AI applications

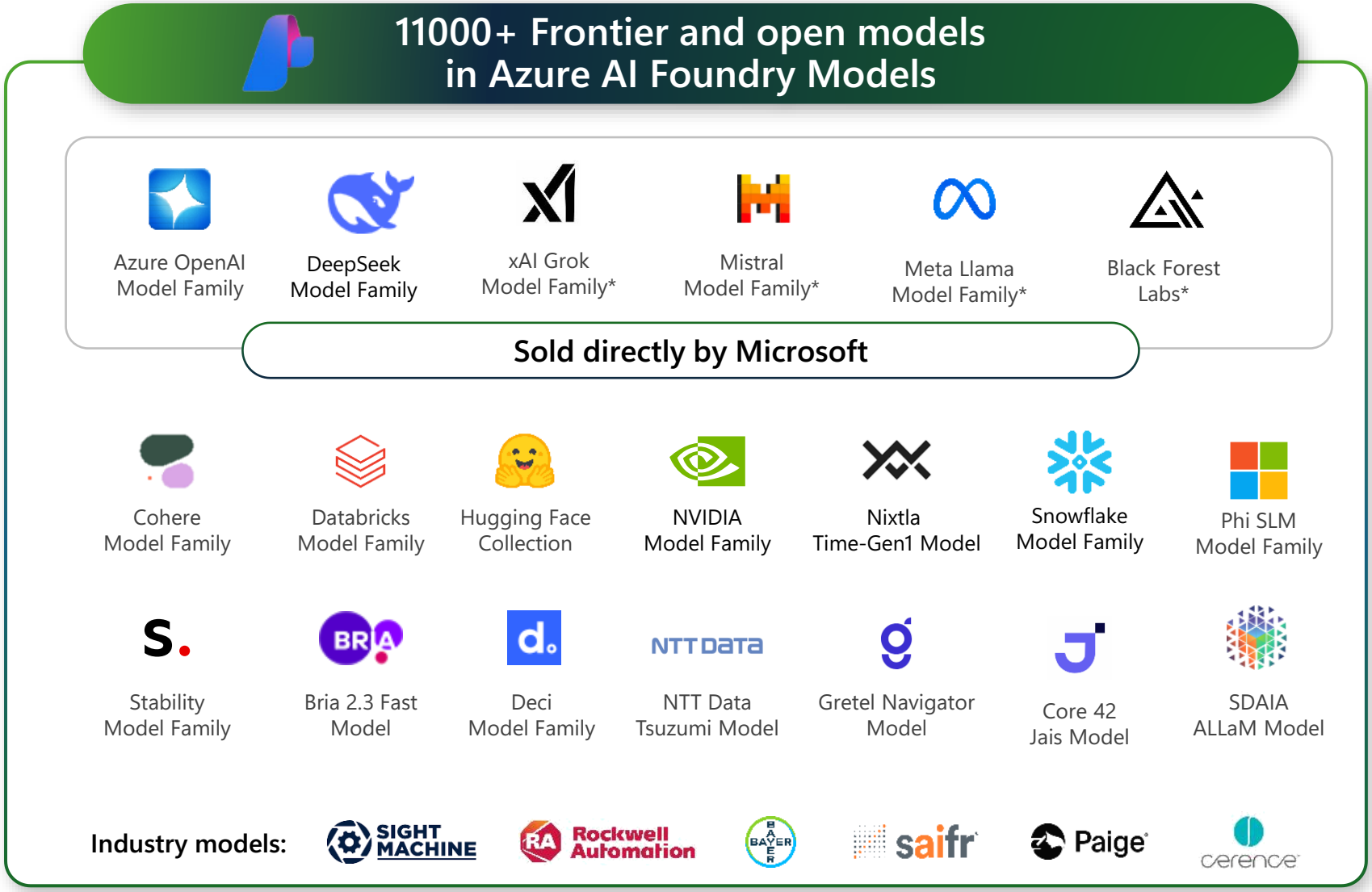
## Benefits

All Azure AI Foundry Models:

- Unified access
- Scalable deployment
- Enterprise-Ready

Sold directly by Microsoft models:

- SLA & compliance
- Reserved capacity
- Cost-efficient PTU quotas




*coming soon

# Azure AI Foundry: The AI App and Agent Factory

## Let's dive in



**Design**

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Customize

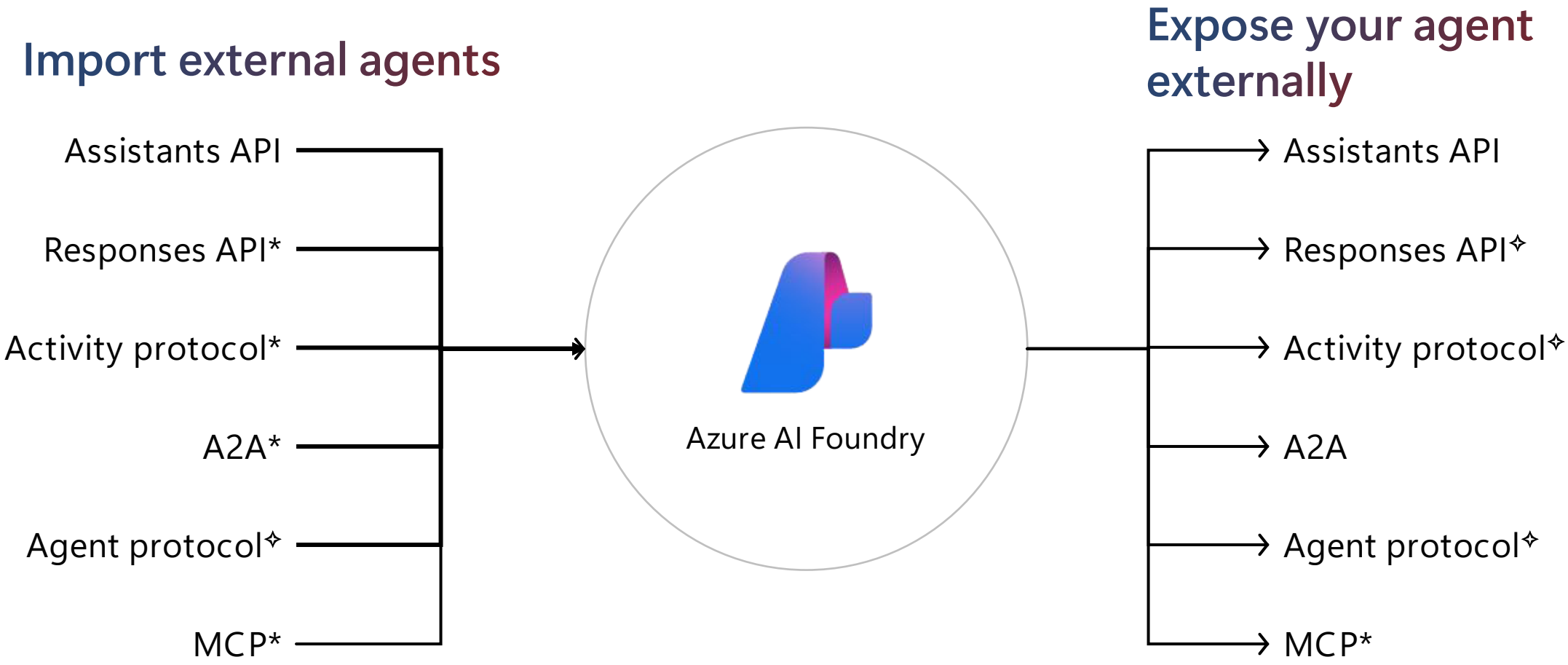
with multi-agent toolchain



Manage

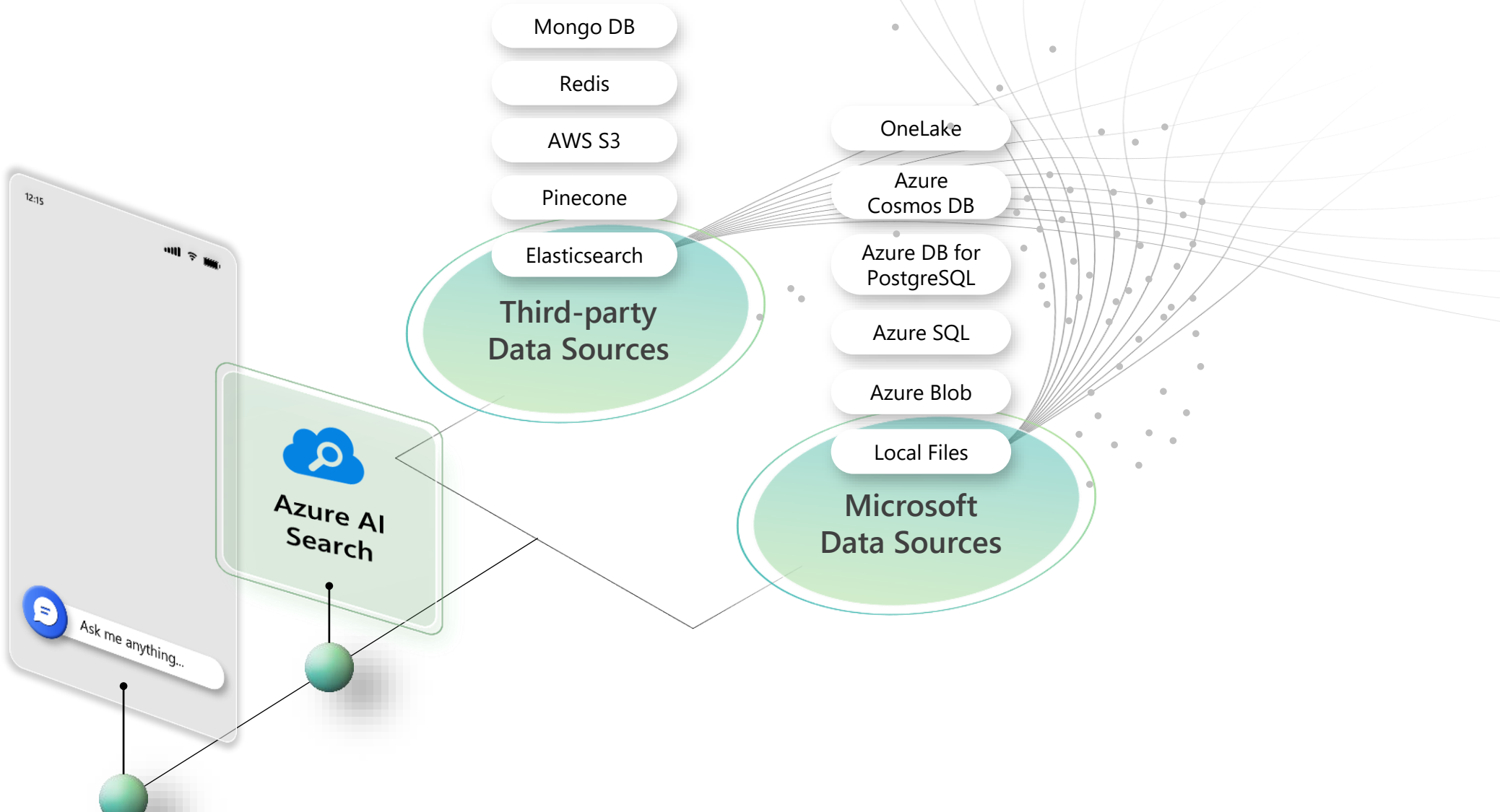
AI apps with confidence

# Azure AI Foundry supports open protocols for multi-agents and connected agents




* Available with Semantic Kernel ✧ Coming soon

# Wherever your data resides, bring it to life through Azure AI Search



# Azure AI Foundry: The AI App and Agent Factory

## Let's dive in



**Design**

with the best models



Customize

with multi-agent toolchain



Manage

AI apps with confidence

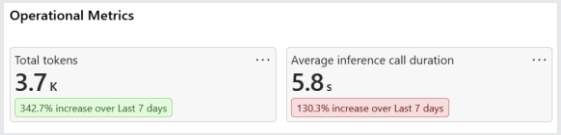
# Observe, secure and govern your AI apps and agents with Azure AI Foundry and Microsoft Security ecosystem

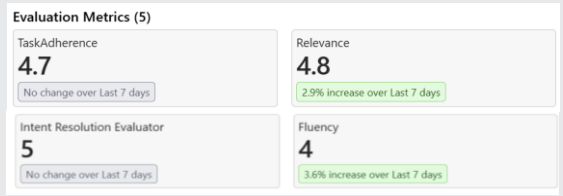


# Azure AI Foundry Observability

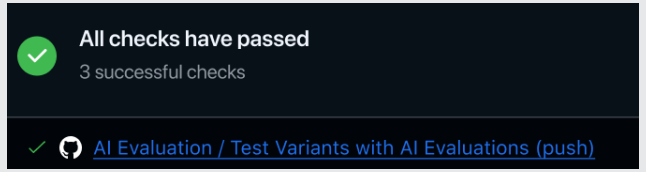
## Continuously improve and monitor your AI Agents

### Balance Impact, Quality, Safety, and Cost



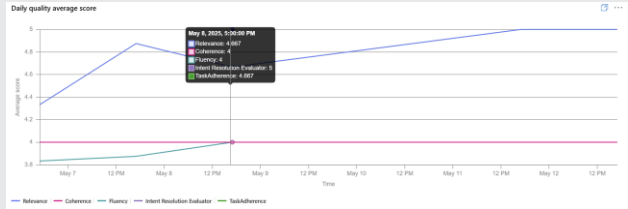



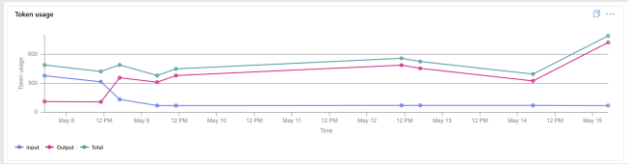

### Develop with Confidence




| Evaluation score | my-agent-v1 | my-agent-v2 |
|---|---|---|
| Groundedness | Baseline 5.00 | Degraded 1.40 (-3.60) |
| Relevance | Baseline 4.90 | Inconclusive 4.60 (-0.30) |

### Operate and Monitor in Production



# Drive innovation with a built-in, comprehensive safety system



# Azure AI Foundry

## AI Agent Ecosystem

### Authoring Tools

- Visual Studio
- GitHub

### Knowledge

- Microsoft Fabric
- Azure Cosmos DB
- SharePoint
- Microsoft Graph
- Azure AI Search
- Microsoft Bing

### Enterprise Trust

- VNet deployments
- OBO Auth
- BYO-resources
- Managed Identities

### Agent catalog

*Ready-made agents to kickstart your agent workforce*

### Agent frameworks

*Client SDKs for enterprise and production agentic systems*

- Agent tools
- Orchestration
- Channels

### Foundry Agent Service

*Deploy and manage agents with fully-managed runtime*

- Multi-agent workflows
- Built-in threads
- Long-term memory
- Evaluation
- Tracing & Monitoring
- Governance + Safety

### Foundry Models

- OpenAI
- Llama
- Grok
- Flux
- Mistral
- Phi
- Cohere
- Paige
- Stability
- Hugging Face
- Industry Models

### Foundry Labs

- Muse
- Magentic-One
- Aurora
- OmniParser

### Open Ecosystem

#### Protocols

- A2A
- MCP
- OpenAPI

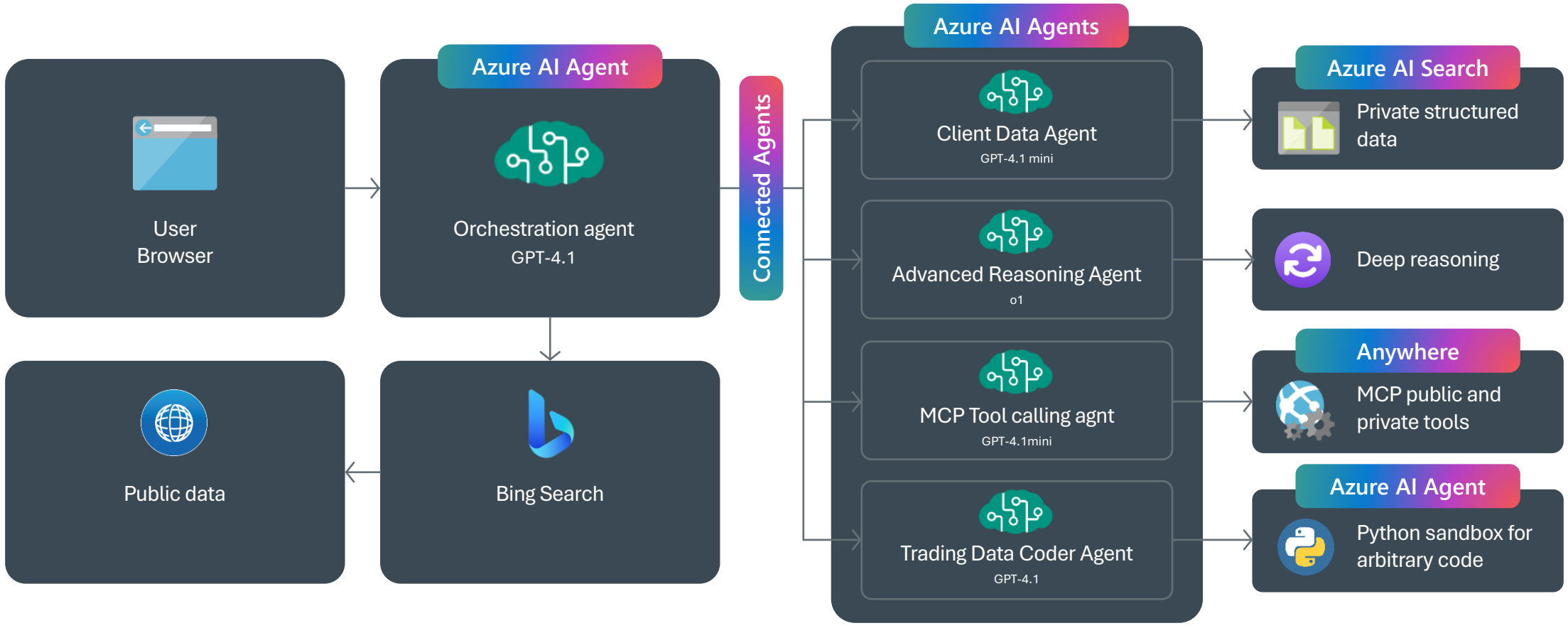
#### Connectors

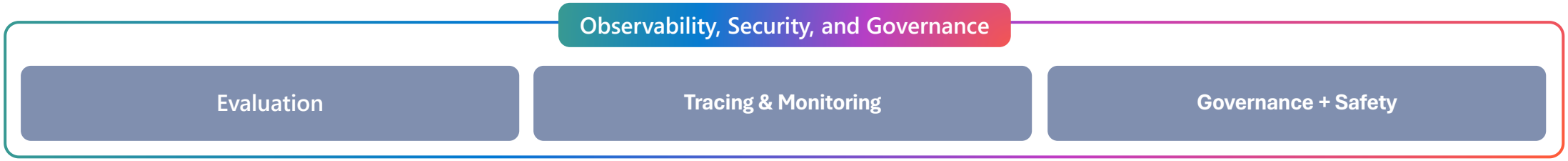
- Google VertexAI
- Amazon Bedrock
- CrewAI
- LangChain
- ElasticSearh
- Pinecone
- Logic Apps
- Azure Functions

# Demo

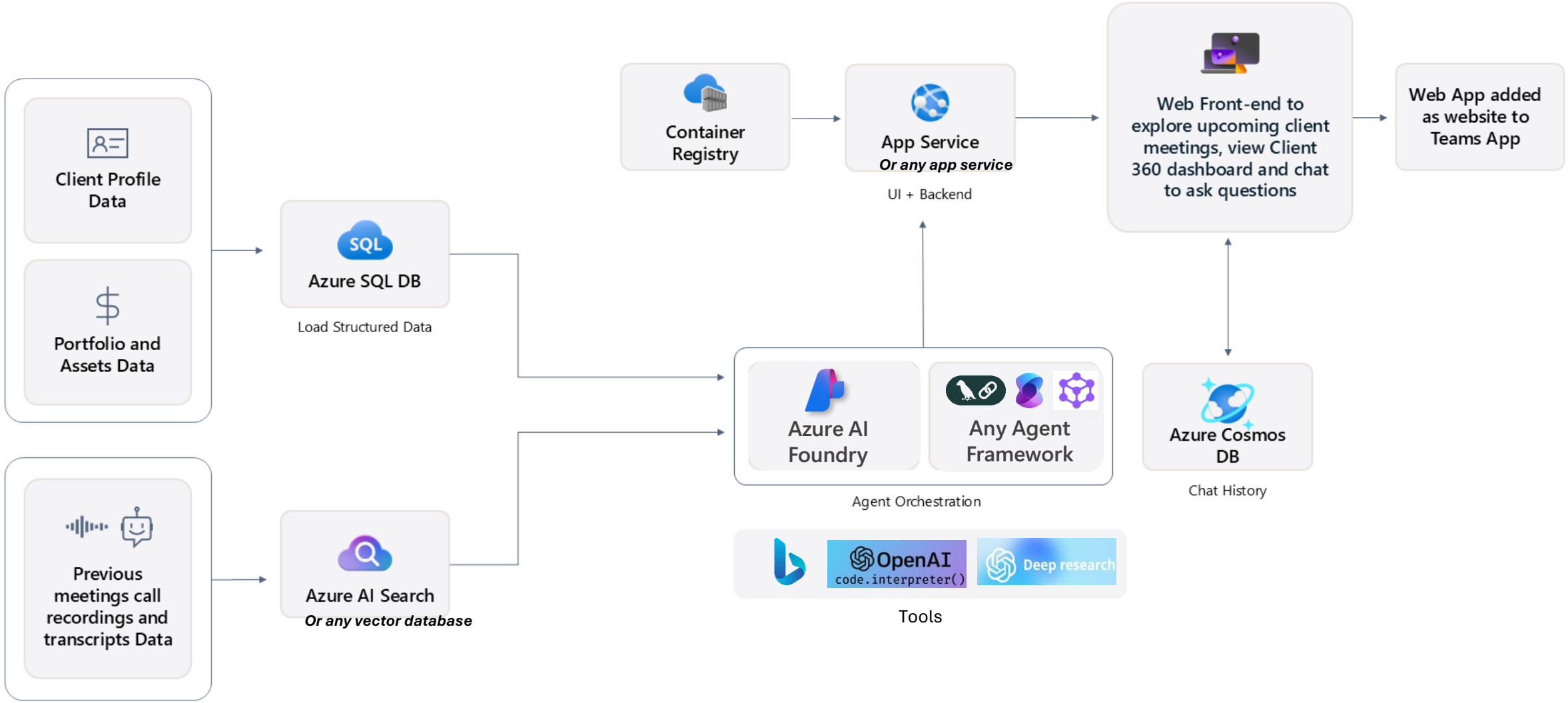


# Portfolio Risk Assessment – Architecture



# Architecture: Meeting Preparation Agent



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**Your Company!**

# Please share your event and session feedback!



http://aka.ms/MSIgniteNYCSurvey



http://aka.ms/MSIgniteNYCSessionsSurvey

# Day 1 – Nov 17

| | |
|---|---|
| 8:00am – 8:45am | 🍳 **Check In & Breakfast** 🍳 |
| 8:45am – 9:00am | **Kickoff & Welcome** |
| 9:00am – 9:30am | **Generative Pages in Power Apps** |
| 9:30am – 10:00am | **Lights, Camera, Akka! The Actor Model & Agentic AI Orchestra** |
| 10:00am – 10:30am | **How to create Moonshot solutions with AI** |
| 10:30am – 10:45am | 🍵 **Break** 🍵 |
| 10:45am – 11:15am | **Elevating Construction: Real-Time Optimization with Azure Digital Twins and AI** |
| 11:15am – 11:45am | **Transforming Facility, Network and Organization Management with Visio and Power BI** |
| 11:45am – 12:45pm | 🍴 **Lunch** 🍴 |
| 12:45pm – 1:15pm | **Adventures in AI** |
| 1:15pm – 1:45pm | **Building Agents in AI Foundry!** |
| 1:45pm – 2:15pm | **What's new with Azure Load Balancer, NAT Gateway, and Public IP Addresses** |
| 2:15pm – 2:30pm | 🍵 **Break** 🍵 |
| 2:30pm – 3:00pm | **.NET Apps Everywhere!** |
| 3:00pm – 3:30pm | **Accelerating Web Application Development with AI-Powered Tools: From Design to Deployment** |
| 3:30pm – 4:00pm | **Agentic AI: Strategies for Success and Paths to Failure** |
| 4:00pm – 4:30pm | **How (and why) Microsoft's upstream teams engage with multi-stakeholder open source projects** |
| 4:30pm – 5:00pm | 🛜 **Networking / Mingle** 🛜 |

# Day 2 – Nov 18

| | |
|---|---|
| 8:00am – 9:00am | 🍳 **Check In & Breakfast** 🍳 |
| 9:00am – 9:30am | **Leveling Up Agents: Copilot Studio for Enterprise Solutions** |
| 9:30am – 10:00am | **RAG Hero: Fast-Track Vector Search in .NET** |
| 10:00am – 10:30am | **Building Resilient Systems** |
| 10:30am – 11:00am | **Agentic Orchestration: Building Scalable, Open Source Automation with A2A, MCP and RAG Patterns** |
| 11:00am – 12:00pm | 🍴 **Lunch** 🍴 |
| 12:00pm – 2:00pm | 📺 **Keynote Watch** 📺 |
| 2:00pm – 3:00pm | 🎙️ **MVP Panel** 🎙️ |
| 3:00pm – 5:00pm | 🛜 **Networking / Mingle** 🛜 |