

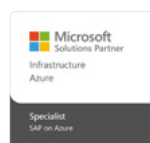


WHITEPAPER FOR FORTUNE 500 CIOs

Meeting Agentic AI Needs of Demanding Global Enterprises

Plan with Vnomic Agent Director | Build with Microsoft Foundry | Govern with Microsoft Agent 365 | Deliver with Vnomic Forward Deployed Engineers

**Controlled. Governed.
Explainable. Trusted.**



Gold Cloud Platform



Vnomic.ai

Turnkey Enterprise AI Architecture

Cloud modernization, Microsoft Fabric, Microsoft Foundry, Agent 365, MAI models and Vnomic Agent Director (ontology driven) working as one production-ready operating model.



Controlled. Governed. Explainable. Trusted.

A business-ready architecture that connects systems of record to trusted data and governed AI execution.

1

USERS & EXPERIENCES



Business Users



Line of Business



Employees



Microsoft 365



ISV Partners

2

MICROSOFT-ALIGNED AGENTS



Microsoft Foundry



AI Agents

3

VNOMIC AGENT DIRECTOR™ (ONTOLOGY DRIVEN) CONTROL LAYER



Ontology & Semantics



Data Access & Contracts



Policy & Rules Engine



Policy & Rules Engine



Explainability & Audit



Compliance & Governance

4

MICROSOFT FABRIC TRUSTED DATA



Microsoft Fabric



OneLake Data Lake



Synapse Data Engineering



Synapse Data Science



Power BI Analytics

5

CLOUD MODERNIZATION + ENTERPRISE SYSTEMS



SAP



Azure



Microsoft 365



Database



SQL / Databases



On-prem Systems

END-TO-END GOVERNANCE & CONTROL



Enterprise Security & Zero Trust



Identity & Access Management



Data Security & Governance



Audit, Risk & Compliance



Regulatory Observability



Modernized Cloud Foundation
Secure, scalable and resilient



Unify Enterprise Data
Break down data silos, build a governed data product



Deploy Microsoft-Aligned Agents
Built on Microsoft Foundry & Agent 365



Govern AI Execution
Enforce policies, controls, and explainable outcomes every action



Drive Business Outcomes
Improve productivity, lower cost and deliver measurable ROI

One connected enterprise transformation stack – modernize cloud platforms, unify data, activate AI and enforce governance.



Figure 1. Turkey Enterprise AI Transformation vision and enterprise AI architecture.

Executive Positioning

Fortune 500 AI programs need more than models and pilots.

They require a governed operating model that connects business intent, trusted data, secure enterprise systems, human approval, auditability, and measurable outcomes. Vnomic and Microsoft together provide that model.



Executive Summary

Global enterprises are entering the production phase of Agentic AI. The strategic question for CIOs is no longer whether AI can automate work, but whether autonomous agents can be governed, secured, integrated, audited, and scaled across complex global operations.

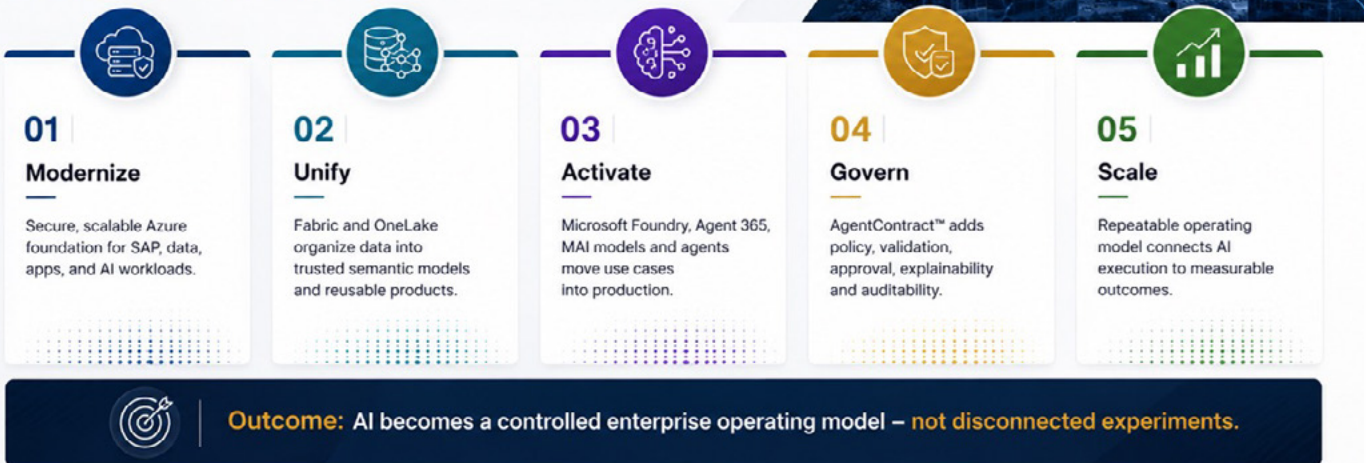
Vnomic and Microsoft provide a combined enterprise architecture for Agentic AI development and deployment. Microsoft provides the trusted cloud, AI development foundation, security services, and agent lifecycle governance. Vnomic provides the business execution layer that defines how agents are allowed to act inside mission-critical workflows.

This combined model is purpose-built for demanding global enterprises where AI must operate across SAP, ERP, finance, supply chain, IT operations, compliance, and customer service processes without bypassing enterprise controls.

CIO PERSPECTIVE

Executive Mandate

AI-first transformation is not a model deployment. It is a governed enterprise capability.



- + **Microsoft Foundry:** builds, evaluates, deploys, and operates enterprise agents.
- + **Microsoft Agent 365:** provides central governance, observability, inventory, and lifecycle control for the enterprise agent estate.
- + **Vnomic AgentContract:** defines enterprise business intent, semantic rules, data boundaries, role constraints, approvals, and audit obligations before an agent executes.
- + **Vnomic Agent Director:** orchestrates governed execution by translating business contracts into runtime controls and decision gates.
- + **Vnomic Forward Deployed Engineers:** convert strategy into production systems by working directly with business and technology teams.



Figure 2. CIO executive mandate for controlled enterprise transformation.

The Fortune 500 Requirement: Controlled AI at Global Scale

Fortune 500 enterprises require Agentic AI solutions that satisfy business, security, compliance, and operational requirements simultaneously. AI agents must not become another fragmented automation layer; they must be part of a controlled enterprise operating model.



The required standard includes:

- + Secure access to enterprise data, applications, APIs, and tools.
- + Policy enforcement before and during agent execution.
- + Human approval gates for sensitive decisions and high-impact actions.
- + Complete traceability across prompts, context, reasoning artifacts, tool calls, approvals, and results.
- + Integration with Microsoft security, identity, data governance, monitoring, and compliance platforms.
- + Repeatable deployment patterns that can be scaled across regions, business units, and regulatory environments.

The Global Enterprise Challenge

AI pilots are easy. Production-grade enterprise execution is hard.



Figure 3. Common enterprise challenge: pilots move quickly, but production requires business controls.

Reference Architecture: Vnomic + Microsoft for Enterprise Agentic AI



The Vnomic and Microsoft architecture separates responsibilities clearly. Microsoft provides the enterprise AI platform, agent factory, governance plane, security services, and cloud foundation. Vnomic provides the business execution control layer that defines what agents are authorized to do and how those actions are governed.

The AI-First Enterprise Stack

Turnkey Enterprise AI Architecture

Cloud modernization. Microsoft Fabric, Microsoft Foundry, Agent 365, MAI models and Vnomic Agent Director working as one production-ready operating model.

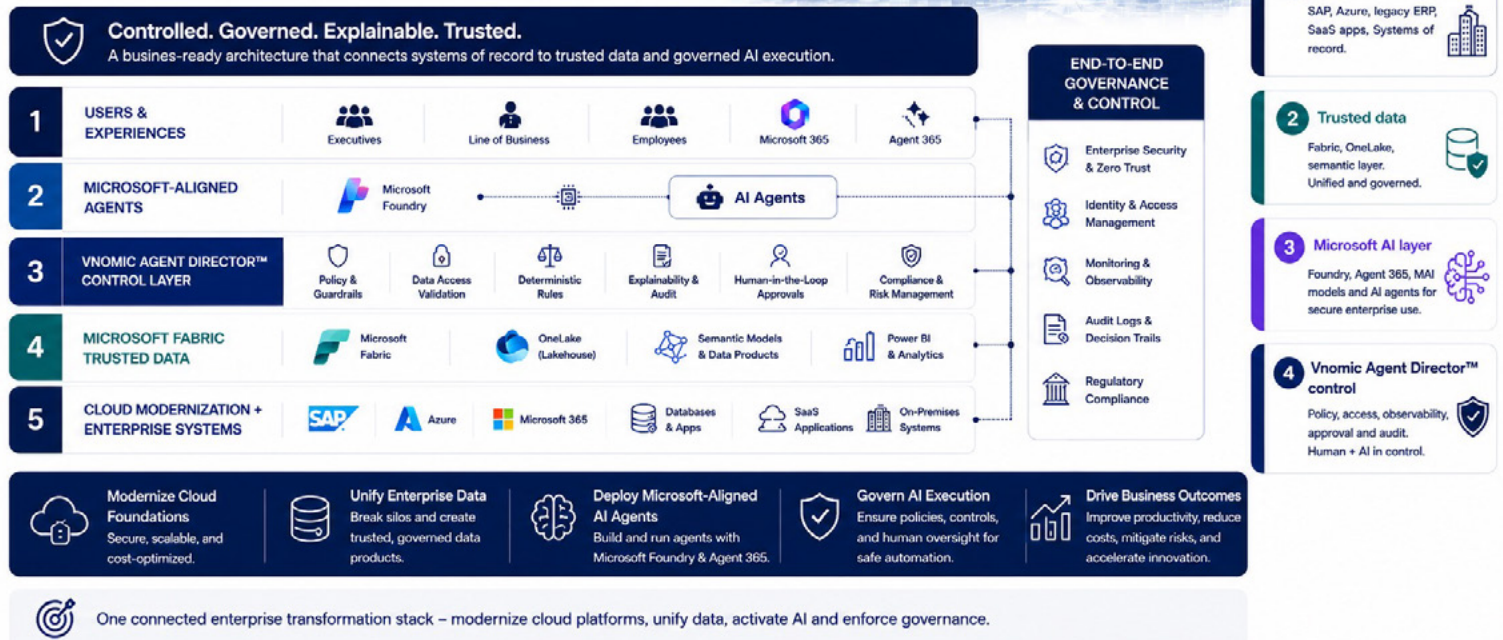


Figure 4. AI-first enterprise stack with Vnomic, Microsoft Foundry, Microsoft Agent 365, and enterprise security.

The architecture is designed for CIOs who need to industrialize **Agentic AI**. Each layer has a specific accountability:

Layer	Primary Role	Enterprise Value
Enterprise business processes	SAP, ERP, CRM, supply chain, finance, IT operations, knowledge management	Connects AI to real enterprise outcomes
Vnomic AgentContract	Business intent, semantic rules, role permissions, data boundaries, approval policies, audit requirements	Defines the governance contract before agents act
Vnomic Agent Director	Runtime orchestration, policy checks, approval gates, execution traceability	Ensures agents execute within approved boundaries
Microsoft Foundry	Agent development, testing, evaluation, deployment, runtime	Enables scalable build and deployment of agents
Microsoft Agent 365	Agent inventory, lifecycle governance, observability, security posture	Controls the enterprise agent estate
Microsoft Security and Azure foundation	Identity, access, data protection, monitoring, threat detection, compliance	Provides trusted enterprise-grade platform controls

Complementary Microsoft + Vnomic Architecture

Each platform owns a distinct layer of the enterprise AI operating model.



 **Figure 5.** Complementary Microsoft and Vnomic architecture.

Vnomic Business Ontology and Semantic Contracts

Agentic AI requires business context. Without it, an agent can call tools and generate outputs, but it cannot reliably understand enterprise policy, accountability, risk, or operational constraints. Vnomic addresses this through business ontology and semantic contracts.

A business ontology defines the key enterprise concepts agents must understand: processes, roles, systems, data objects, approval authorities, risk categories, compliance obligations, and expected outcomes. A semantic contract converts those concepts into execution rules that can be applied before and during agent runtime.

BUSINESS ONTOLOGY + VNOMIC AGENT DIRECTOR™

Ontology defines business meaning; Agent Director converts it into governed AI execution.



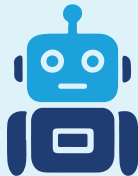
Why this matters for CIOs

Ontology and semantic contracts make Agentic AI understandable to the enterprise. They transform agent behavior from a black-box automation risk into a governed business execution pattern that can be reviewed, tested, approved, and audited.



Figure 6. Business ontology and Vnomic Agent Director for governed agent execution.

Vnomic Agent Director: Govern Business Execution



Vnomic Agent Director is the control layer between business intent and agent action.

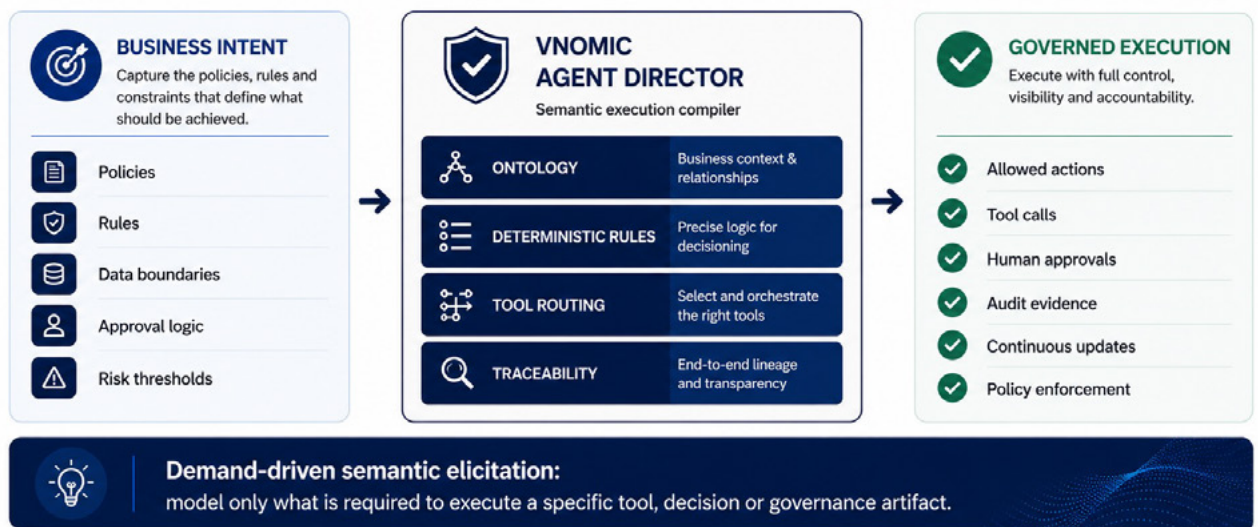
It defines and enforces runtime controls across the agent workflow, including policy checks, tool access, data boundaries, human approvals, audit evidence, exception handling, and rollback requirements.

For demanding global enterprises, this is the difference between deploying agents and deploying agents that are safe to operate inside core business processes.

- + **Business intent:** defines what the agent is expected to accomplish and why.
- + **Policy enforcement:** maps company policy, regulatory constraints, and risk rules into runtime checks.
- + **Data boundaries:** limits which data can be accessed, transformed, disclosed, or acted upon.
- + **Tool governance:** defines which systems, APIs, scripts, and enterprise tools can be used.
- + **Human approvals:** routes high-risk actions to designated approvers before execution.
- + **Runtime traceability:** captures evidence for audit, compliance, issue resolution, and continuous improvement.

Vnomic Agent Director: Govern Business Execution

Agent Director defines exactly how an enterprise agent may act in a business process.

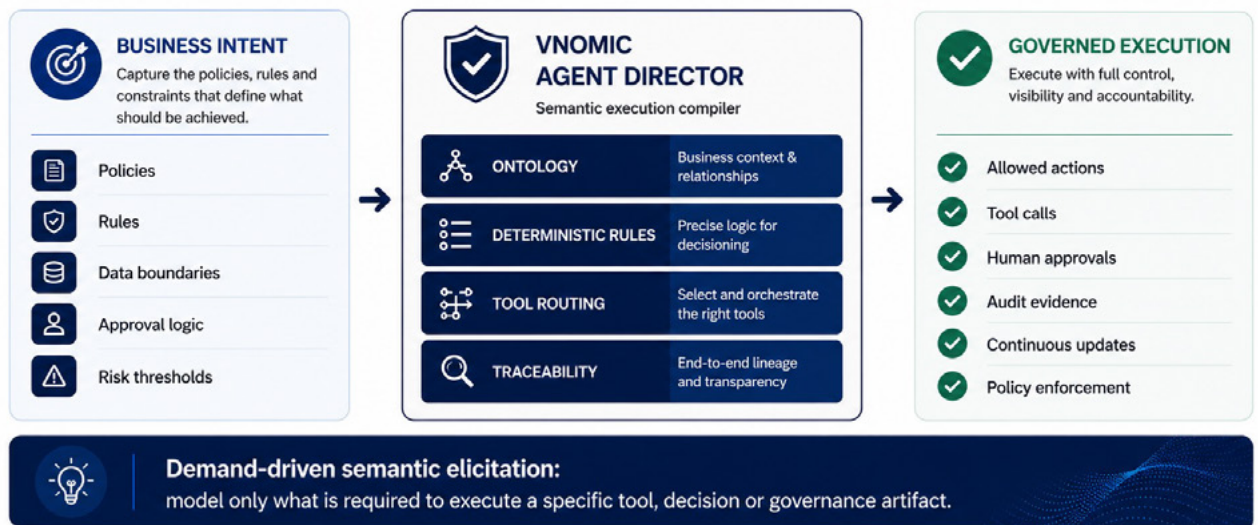


↑ **Figure 7.** Vnomic Agent Director governance model.



Vnomic Agent Director: Govern Business Execution

Agent Director defines exactly how an enterprise agent may act in a business process.



 **Figure 8.** Demand-driven semantic elicitation and governed execution.

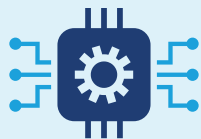
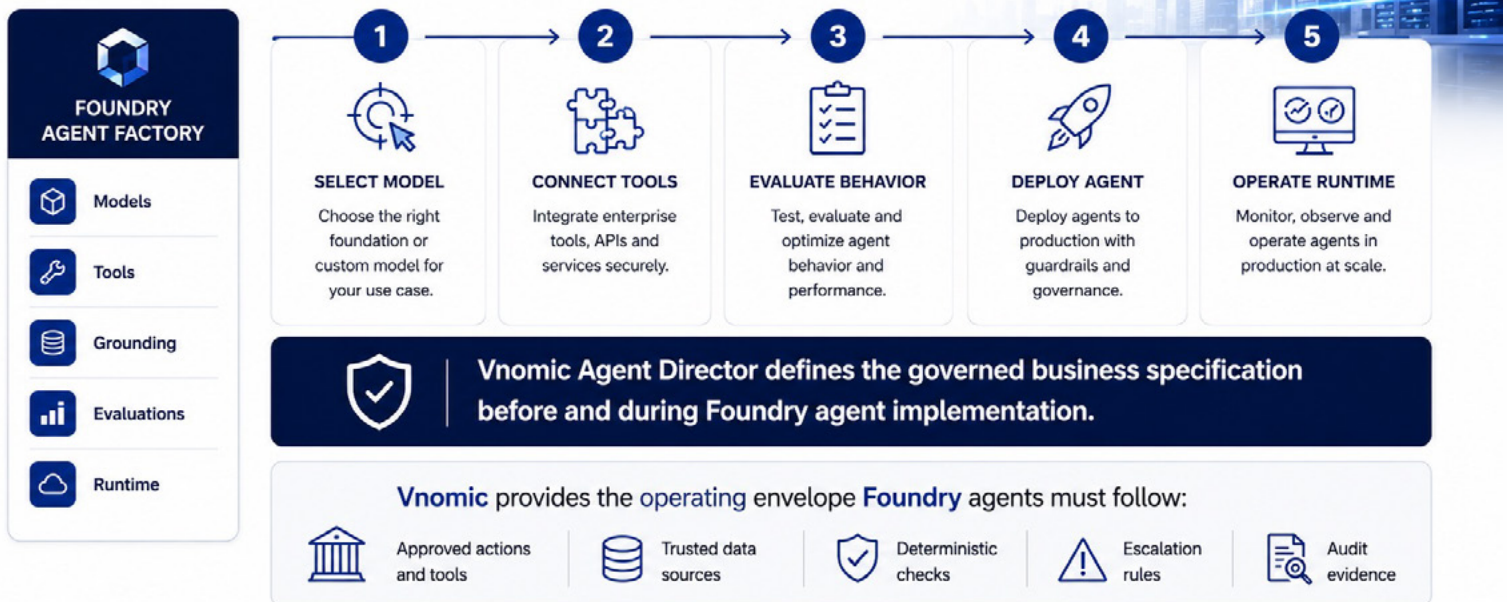
Microsoft Foundry and Agent 365: Build, Operate, and Govern the Agent Estate

Microsoft Foundry provides the enterprise environment for agent development, model selection, evaluation, runtime deployment, and operational integration. Vnomic strengthens Foundry by defining the business controls that should be embedded into the agent design before deployment.

↓ **Figure 9.** Microsoft Foundry as the enterprise agent factory.

Microsoft Foundry: Build and Run Enterprise Agents

Foundry is the agent factory: models, tools, evaluation, runtime and deployment.



Microsoft Agent 365 gives CIOs the governance plane required to manage agents as enterprise assets. It supports inventory, security visibility, lifecycle oversight, observability, policy alignment, and operational governance across the organization.





The combined benefit is significant:

Foundry enables agent creation and operation, Agent 365 governs the agent estate, and Vnomic ensures that each agent action is connected to business intent, enterprise controls, and audit evidence.

Microsoft Agent 365: Govern the Agent Estate

Agent 365 is the enterprise control plane for inventory, security, observability and governance.



Vnomic Agent Director enriches Agent 365 with business-level governance metadata: contract ID, version, domain, risk tier, approved systems, policy IDs, rule IDs and approval lineage.



Figure 10. Microsoft Agent 365 governance model for the agent estate.

End-to-End Enterprise AI Workflow

A scalable Agentic AI program needs a lifecycle model that is repeatable from use case selection through runtime governance. The combined Vnomic and Microsoft workflow establishes a practical sequence: define the business process, specify the semantic contract, build and test the agent, govern deployment, monitor execution, and maintain audit evidence.



- 1. Define business outcome:** identify the enterprise process, value target, and accountable owner.
- 2. Create Vnomic AgentContract:** document policy, data, system, approval, and audit requirements.
- 3. Build in Microsoft Foundry:** develop, test, evaluate, and deploy the agent using Microsoft AI tooling.
- 4. Govern with Agent 365:** register the agent, monitor lifecycle state, enforce governance, and maintain visibility.
- 5. Execute through Agent Director:** apply business controls, route approvals, and record evidence during runtime.
- 6. Improve continuously:** use telemetry, audit trails, and outcome metrics to refine the contract and agent behavior.

End-to-End Enterprise AI Workflow

Agent Director complements Foundry and Agent 365 across the full lifecycle.



Figure 11. End-to-end workflow from business need to governed enterprise execution.

High-Value Enterprise Use Cases

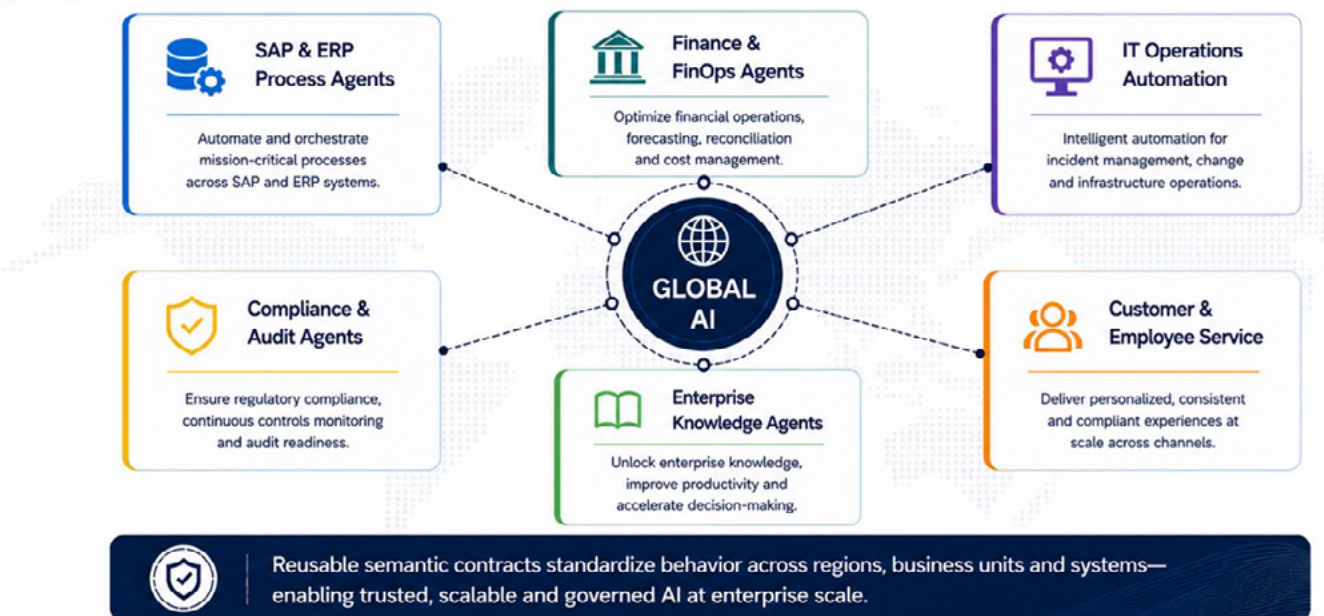
The strongest use cases for Vnomic and Microsoft are processes where business context, data protection, system integration, and auditability are critical. These are the same use cases where unmanaged agents create unacceptable risk.



Figure 12. High-value use cases for global enterprises.

High-Value Use Cases for Global Enterprises

Vnomic Agent Director is most valuable where AI actions must be accurate, governed and auditable.



Use Case Domain	Agentic AI Opportunity	Why Vnomic + Microsoft Fits
SAP and ERP process agents	Automated process support, transaction validation, workflow assistance, exception handling	Governed integration with mission-critical systems
Finance and risk agents	Variance analysis, close support, controls testing, reporting automation	Strong approval, data lineage, and audit needs
IT operations agents	Incident triage, change support, system diagnostics, remediation workflows	Needs safe tool use and operational guardrails
Compliance and audit agents	Evidence gathering, control checks, policy mapping, audit package generation	Requires explainability and complete traceability
Customer and employee service agents	Knowledge access, case support, workflow automation	Must protect sensitive data and maintain service quality

Runtime Traceability and Audit Evidence

Enterprise AI governance must produce evidence.

CIOs, CISOs, risk officers, and auditors need to know what the agent was asked to do, what context it used, what tools it invoked, which policies applied, who approved sensitive actions, and what result was delivered.

Vnomic Agent Director and Microsoft governance services provide a traceable execution model that supports compliance, incident investigation, risk review, and continuous improvement.



Runtime Traceability and Audit Evidence

Every critical action should produce evidence that explains why it was allowed.



EVIDENCE ATTACHED TO THE DECISION

- | | |
|--|--|
|  Vnomic Agent Director ID + version |  Tool call + parameters |
|  Policy ID + rule ID |  Human approval / escalation |
|  Approved data source |  Decision lineage + timestamp |



Agent 365 can observe the agent state while **Vnomic Agent Director** provides business-context lineage for each governed action.



Figure 13. Runtime traceability and audit evidence for governed agent actions.

- + User request and business intent captured at the start of the workflow.
- + Context retrieval and data access logged against approved boundaries.
- + Tool calls and system actions recorded with metadata and execution status.
- + Human approvals captured for sensitive decisions and high-risk actions.
- + Output, recommendations, and final actions linked back to the governing contract.
- + Audit record preserved for compliance, controls testing, and executive reporting.

90-Day Enterprise Adoption Plan

The recommended approach for Fortune 500 CIOs is to begin with a controlled, high-value use case and expand using a repeatable governance pattern. The first 90 days should prove that Agentic AI can be deployed safely, integrated with enterprise platforms, and measured against business outcomes.



90-Day Enterprise Adoption Plan

Start with one governed pilot and build the operating model for scale.



- Weeks 1-2** : Strategy and use case selection. Identify candidate processes, define value targets, map stakeholders, and select the initial pilot.
- Weeks 3-5** : Vnomic Agent Director design. Create the semantic contract, approval model, data boundaries, policy rules, and audit requirements.
- Weeks 6-10** : Microsoft Foundry pilot. Build and test the agent, connect approved tools, evaluate safety, and validate results.
- Weeks 11-12** : Agent 365 scale planning. Register the agent, establish governance, publish operating procedures, and prepare for controlled rollout.

 **Figure 14.**
90-day enterprise adoption plan.

Enterprise Operating Model and CIO Success Metrics

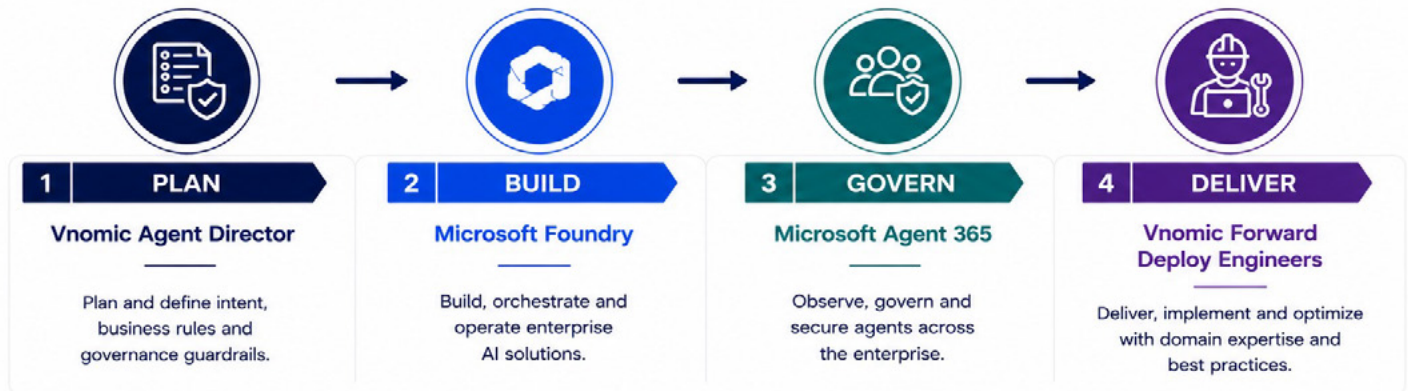


A successful **Agentic AI** program should be managed as a **productized enterprise capability, not as a collection of disconnected pilots**. CIOs should establish clear ownership for business contracts, agent development, runtime operations, security review, risk approval, audit evidence, and continuous optimization.

Vnomic.ai

AI Success for Global Enterprises

Plan with Vnomic Agent Director | Build with Foundry | Govern with Agent365 | Deliver with Vnomic Forward Deploy Engineers



- + **Production readiness:** percentage of agents with approved contracts, test results, access controls, and rollout plans.
- + **Governance coverage:** percentage of agents registered, monitored, classified by risk, and tied to business owners.
- + **Business value:** time saved, cycle-time reduction, defect reduction, cost avoidance, and revenue enablement.
- + **Risk reduction:** blocked unsafe actions, policy exceptions resolved, unauthorized tool usage prevented, and audit findings reduced.
- + **Adoption scale:** number of business units, regions, and enterprise workflows using the governed framework.



Figure 15. AI success model for global enterprises: plan, build, govern, and deliver.

Conclusion: Why Vnomic and Microsoft Meet the Needs of Demanding Global Enterprises

Fortune 500 enterprises need Agentic AI that can be trusted in production. This requires a platform that can build agents, a governance plane that can manage them, and a business execution layer that can ensure every agent acts within enterprise intent and policy.

Microsoft provides the trusted enterprise AI, cloud, security, and governance foundation. Vnomic adds the semantic business execution layer that makes agents usable for mission-critical workflows.



Together, they give CIOs a practical path to move from AI experimentation to controlled, auditable, and scalable enterprise AI deployment.



CIO Takeaway

Vnomic and Microsoft enable a complete Agentic AI operating model: Plan with Vnomic AgentContract, build with Microsoft Foundry, govern with Microsoft Agent 365, and deliver with Vnomic Forward Deployed Engineers.