

Agentic Fabric

Microsoft Solutions Partner | Innovation Engineers | Kevin Harmer

About

Hi, I'm Kevin. **Agents that empower people, not replace them.**

CHIEF AI & DATA OFFICER, ARCHITECTNOW · 30+ YEARS IN AI, DATA AND CLOUD

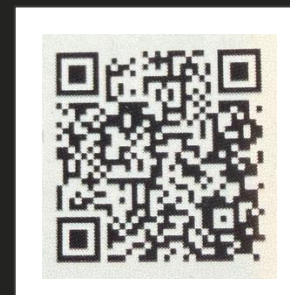
WHO IS TALKING · AND WHY IT MATTERS



About me

- Chief AI & Data Officer at ArchitectNow.
- 16 years at Adastra, most recently Chief Cloud Officer.
- AI, data and cloud delivery across manufacturing, energy, financial services, healthcare, higher ed and public sector.
- Recent work: invoice automation that saves 200,000 hours a year.

Find me



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SESSION

Agentic Fabric · 2026

Enabling the three horizons for AI: decision insights, decision augmentation, enterprise-scale automation. Every step keeps managed autonomy and a human in the loop.

About ArchitectNow

Custom AI and software, from concept to production.

ArchitectNow designs and delivers AI and cloud solutions on the Microsoft stack. Anchored in St. Louis, with clients coast to coast.

AI and Data

Copilots, agents and automation. Fabric, Power BI and data ready for AI. AI strategy and governance.

App and Infra

Custom software and modernization. Azure migration and landing zones. Security and Power Platform.

Modern Work and Managed Services

CSP for Azure and Microsoft 365. Licensing strategy, E3 through E7. Managed services and support.

18

years as an exclusive Microsoft
partner

60+

active Microsoft customers

4

Solutions Partner designations

1

AI Apps on Azure Specialization

Fabric IQ

Fabric IQ is the anchor: **business context for every agent.**

SEMANTIC MODELS · ONTOLOGY · GRAPH · GROUNDS DATA & OPERATIONS AGENTS · GOVERNED ONCE, REUSED

GENERALLY AVAILABLE · BUILD ON TODAY



Power BI semantic model

The curated analytics layer — measures, hierarchies and relationships — that gives agents governed, business-ready numbers instead of raw tables.



Graph

Stores connected business data as nodes and edges, so an agent can traverse relationships and answer questions a flat table cannot.



Data agent

A virtual analyst that draws on Fabric IQ context to answer natural-language questions across lakehouses, warehouses, models and Eventhouses.

PREVIEW & NEXT · PILOT NOW



Ontology

The shared business vocabulary — entity types, relationships, properties and rules — that turns tables into concepts an agent can reason over.



Operations agent

Watches real-time signals continuously, then recommends and takes approved action, grounded in the same business context the analysts use.



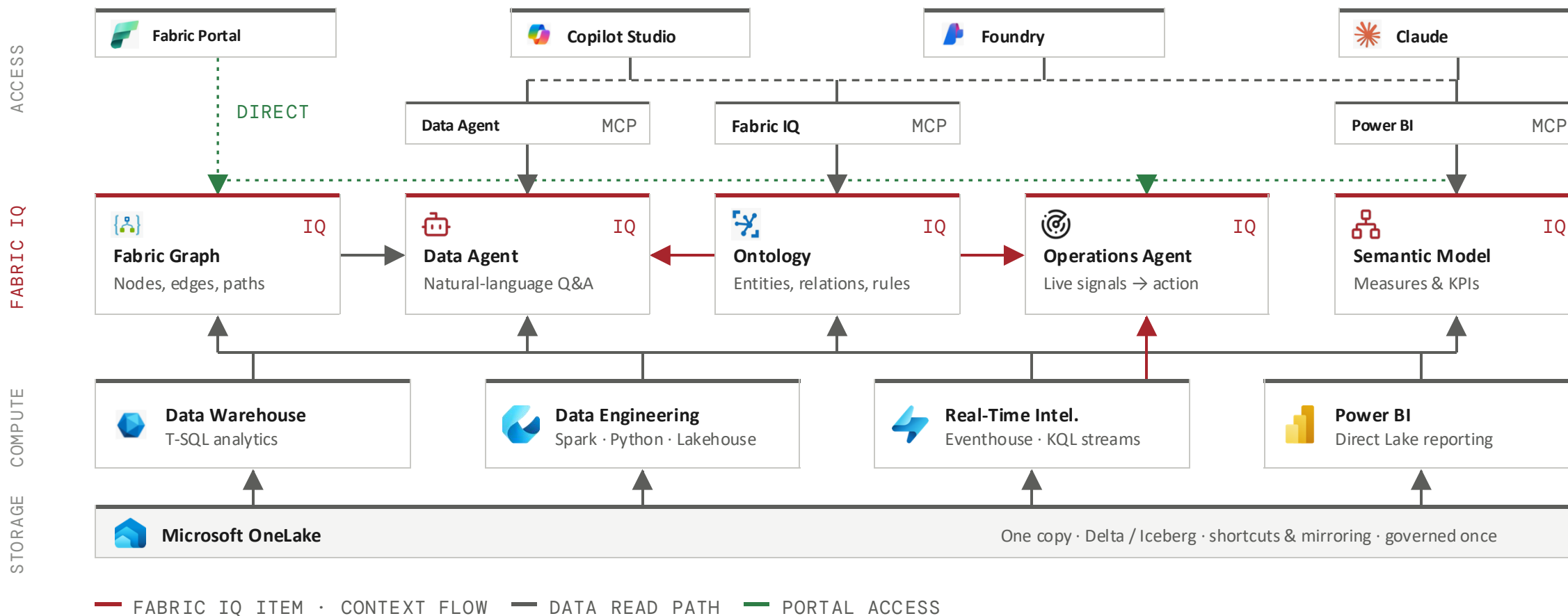
Planning

Collaborative planning, forecasting and reporting on the same governed foundation, so plans and agents share one definition of the truth.

Fabric IQ is one of four Microsoft IQ components — alongside Work IQ (how your people work), Foundry IQ (your policies and authoritative documents) and Web IQ (context from the web). Together they form the enterprise intelligence layer of the Microsoft stack.

Microsoft Fabric and Fabric IQ

One governed lake, four engines, a shared context layer — reached by any agent through MCP.



Graph in Fabric

Tables answer **what**. Graph answers **how things connect**.

NODES & EDGES OVER ONELAKE · GQL PATTERN MATCHING · MULTI-HOP TRAVERSAL · NL2GQL FOR DATA AGENTS



Graph vs. the rest of Fabric

Graph models OneLake data as nodes and edges, so you query the relationships themselves instead of rebuilding them with joins.

- **Relationships are first-class.** Tables hold connections as keys and joins; graph stores them as edges you traverse.
- **Multi-hop questions become one query.** “Which suppliers touch every product this customer buys?” is one GQL pattern match, not nested SQL.
- **Pattern matching with GQL.** The ISO-standard language finds paths, cycles and shared neighbours tables cannot express.
- **No ETL, no copy.** Defined over existing OneLake tables; scales out on Fabric capacity, idles when unused.



Why graph grounds better agents

Agents reason in relationships. Graph gives them the connected context the ontology describes, in a form they can walk.

- **Business meaning made navigable.** Ontology entities become nodes and edges; the agent follows “customer → order → product” instead of guessing joins.
- **Fewer tool calls, better answers.** One traversal replaces several queries; grounded agents win head-to-head with ~30% fewer tool calls.
- **NL2GQL through the data agent.** Ask in natural language; the agent writes GQL, walks the graph and shows its path.
- **Built for RAG and knowledge assistants.** Relationship context lifts multi-hop answers a dashboard was never going to give.

Fabric data agent

Ask in plain English. Get a governed answer, not a query.

NL2SQL · NL2DAX · NL2KQL · UP TO FIVE SOURCES · READ-ONLY · RUNS AS THE USER · GA



What a Fabric data agent is

A virtual analyst built in Fabric: users ask in natural language; the agent writes, validates and runs the query on your data.

- **Up to five sources.** Lakehouse, warehouse, semantic model, KQL database, ontology or graph.
- **Generates the right query.** NL2SQL, NL2DAX or NL2KQL, validated before it executes.
- **Read-only, as the user.** Runs on the asker's identity; Purview policies and RLS apply.
- **Reusable everywhere.** A knowledge source in Copilot Studio, a tool in Microsoft Foundry.



Tips to make it deliver

Context beats prompting: the agent is only as good as the schema and instructions you hand it.

- **Select less schema.** Only the tables and columns the expected questions need; extra objects add ambiguity.
- **Describe what names don't say.** Grain, codes, units, flags, and which date means what.
- **Write direct data-source instructions.** Authoritative tables, join paths, default filters, fiscal logic — say “do”, not “avoid”.
- **Define business terms.** “Active customer”, “MAU”, status values, currency units, what null means.
- **Teach patterns with example queries.** One reusable pattern each — joins, pre-aggregation, relative dates.
- **Test, inspect the query, refine.** Add the missing context at the right layer; repeat as questions evolve.

Fabric ontology

Give the agent a vocabulary, not a schema.

ENTITIES · PROPERTIES · RELATIONSHIPS · RULES · BOUND TO ONE LAKE · NL2ONTOLOGY · PREVIEW



What the Fabric ontology is

A shared, machine-readable vocabulary of your business — defined once, bound to OneLake data, and consumed by every agent.

- **Entity types.** Customer, Product, Shipment: one standard name, description, identifiers and constraints across teams.
- **Properties and relationships.** Typed facts and directional links — “Customer places Order” — with cardinality and rules.
- **Bound to your data.** Lakehouse tables, Eventhouse streams and semantic models become governed business objects.
- **Materialised as a graph.** Bindings and relationships form a queryable instance graph, powered by graph in Fabric.



Why it's a better interface for agents

Other Fabric sources hand the agent a schema to interpret. The ontology hands it the concepts it was asked about.

- **Concepts above tables.** “Customer” means one thing everywhere — no conflicting definitions across lakehouse, warehouse and model.
- **Relationships are explicit.** Agents traverse “customer → order → shipment” instead of guessing join paths.
- **Rules travel with the data.** Constraints, validity windows and inferences apply at the concept level, not per prompt.
- **NL2Ontology routes the query.** Business question in; GQL or KQL out, sent to the engine that answers it best.
- **Measured lift.** Ontology-grounded agents: 2.2× more excellent responses, 4.5× win rate, ~30% fewer tool calls.

Beyond graph: graph gives agents relationships to traverse; the ontology adds the meaning on top — standard entity definitions, typed properties, constraints and rules — and generates its graph from those definitions, so the same concepts also drive semantic models, operations agents and actions.

Operations agents

Agents that watch the signal and act on it.

EVENTHOUSE OR ONTOLOGY · GOALS → PLAYBOOK → RULES · EVERY 5 MIN · RECOMMEND, APPROVE, ACT · GA



What an operations agent is

A Real-Time Intelligence item that watches your data continuously, spots the conditions you care about, and recommends — or takes — the next action.

- **Watches Eventhouse or an ontology.** Grounded in live KQL data, or the same business concepts the data agent uses.
- **Goals in, playbook out.** Describe the objective in natural language; the agent generates rules, each backed by an inspectable KQL query run every five minutes.
- **State vs. transition.** “Is above” fires while a condition persists; “crosses above” fires once on the change — choose the one that fits the response.
- **Its own identity.** A Microsoft Entra Agent ID makes each agent visible tenant-wide and audits its actions separately from people.



Actions it can trigger

Every rule ends in an action. Start with a recommendation in Teams, then graduate to actions that change things.

- **Teams message (default).** Direct message or channel post with the finding and a recommendation; recipients approve or dismiss in the flow of work.
- **Fabric item action.** Run a notebook, pipeline, dataflow or user-defined function — reprocess data, write back, call a service.
- **Power Automate flow.** Reach anything with a connector: raise a ticket, email a supplier, update ERP or CRM.
- **Human-in-the-loop by default.** Approval before execution, the creator's delegated permissions, and every query visible.

MCP options for Fabric IQ

Three doors, one context. Pick by what comes back.

STREAMABLE HTTP · ENTRA ID AUTH · COPILOT STUDIO, FOUNDRY, VS CODE OR ANY MCP CLIENT · PREVIEW



Data agent MCP

Publish a data agent and it becomes an MCP server with a single tool: the agent itself.

- **Best for:** any client that wants a governed answer, not raw data — the agent picks the source and writes the query.
- **Capabilities:** natural-language question in, answer out across up to five sources; MCP tasks for long-running requests; user or service-principal token.
- **Limits:** opaque by design — no query or schema comes back; agent must be published; answers can leave Fabric's compliance boundary via the client.



Fabric IQ Ontology MCP

Exposes the ontology to agents: explore entity types, then ask questions over the ontology graph.

- **Best for:** Copilot Studio agents that must reason over business concepts and relationships, governed through Agent 365.
- **Capabilities:** `list_ontology_entity_types` for schema discovery; `search_ontology` for NL2Ontology queries returning JSON plus an optional answer.
- **Limits:** preview, not for production; needs the ontology item enabled, F2+ capacity and an M365 Copilot licence; tool names may change.



Power BI MCP (remote)

DAX-level access to a semantic model: get schema, execute DAX, generate DAX from natural language, read report metadata.

- **Best for:** custom agents that need exact, measure-level numbers and the model schema to reason over.
- **Capabilities:** AI-optimised schema metadata; Copilot-generated DAX; RLS enforced for user identity; a separate local MCP for model authoring.
- **Limits:** public preview; one model per call; Build permission and a Copilot licence needed; RLS not enforced for service principals; big schemas bloat context.

Rule of thumb: Data agent MCP when you want a governed answer; Ontology MCP when the agent must reason over business concepts and relationships; Power BI MCP when it needs exact measures and the freedom to write DAX. All three run as the caller's Entra identity.

Key recommendations

Build on what's GA. Shape everything for the ontology.

SEMANTIC MODEL FIRST · GRAPH NOW · NARROW AGENTS · APPROVE, THEN ACT · MCP, NOT COPIES



Start from the semantic model

Your Power BI models are already the governed answer layer. Point the first data agents at them before anything else.



Adopt graph today, prepare for ontology

Graph is GA: model the key relationships now, so the ontology has real edges to bind to and agents can traverse them today.



Keep data agents narrow — many, not one

Until the ontology carries shared meaning, build one agent per domain with a tight schema, and orchestrate them from Copilot Studio or Foundry.



Graduate to action with approval on

Start operations agents in recommend mode in Teams; add Fabric item and Power Automate actions once the playbook has earned trust.



Integrate through MCP, not copies

Expose data agents and the ontology as MCP servers to Copilot Studio, Foundry and M365 Copilot — governed once, reused everywhere.



Govern the agent estate as code

Entra Agent ID, Purview policies and delegated identity by default; keep instructions and example queries in Git and ship them through ALM.

30 / 60 / 90: 30 days — semantic model grounding and the first narrow data agent in production. 60 — graph over the critical relationships, an operations agent in recommend mode. 90 — data agents exposed via MCP to Copilot Studio or Foundry, and an ontology pilot on the highest-value domain.

— Free Fabric IQ Strategy Session

Your Fabric estate in. **An agent roadmap out.**

YOUR DATA AND BUSINESS LEADERS · WHERE AGENTS CHANGE DECISIONS · WHAT FABRIC IQ NEEDS FIRST

½ day

WORKING SESSION

4

WORKING BLOCKS, VISION TO ACT

8

ATTENDEE CAP

4

ARTIFACTS BUILT IN THE ROOM

HOW IT WORKS · FOUR BLOCKS

01 · VISION

Where agents change decisions

Your Fabric estate and agent readiness today; the last-mile gaps where reports stop and people start.

02 · PRIORITIZE

The use cases that matter

Three to five data-agent and operations-agent scenarios, ranked by business value and data readiness.

03 · DESIGN

The Fabric IQ context layer

Semantic model, graph and ontology scope for the top use cases; MCP paths into Copilot Studio and Foundry.

04 · ACT

The 30 / 60 / 90 roadmap

Sequenced first moves with owners named — and the hackathon or Frontier-funded pilot that follows.

WHAT YOU GET · FOUR ARTIFACTS

01 Agent Readiness Snapshot

Where your Fabric estate sits on the data-to-agent path.

02 Prioritized Agent Use Cases

The ranked scenarios and the value case for each.

03 Fabric IQ Context Design

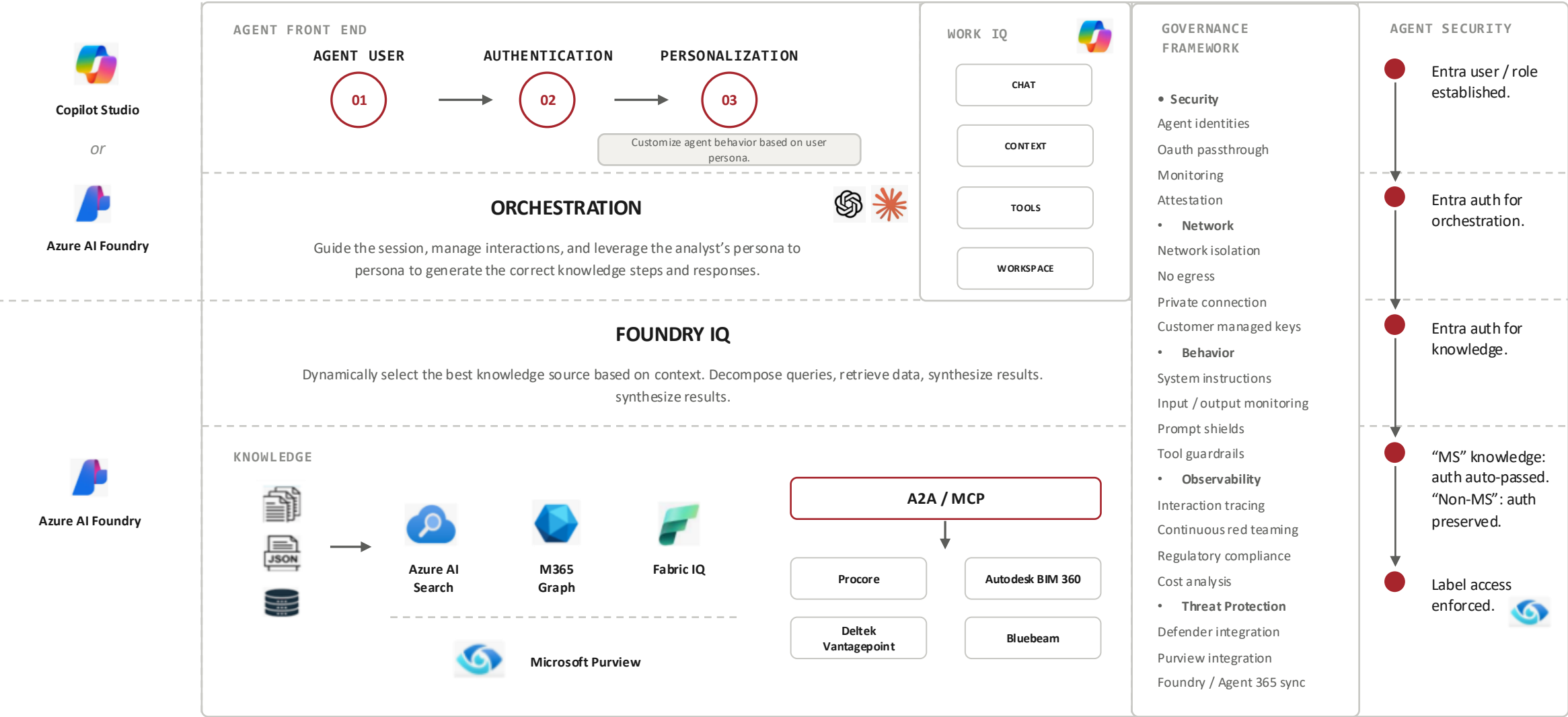
Semantic model, graph, ontology and MCP integration for the top cases.

04 30 / 60 / 90 Roadmap

First moves, owners and the funded next step.

Book the strategy session: a 30-minute sponsor call sets the agenda · info@architectnow.net · (314) 366-0875 · architectnow.net

MS Agent Platform





Thank You

Microsoft Solutions Partner | Innovation Engineers | Kevin Harmer