Capgemini

Agentic Process Automation for Customer First Organizations



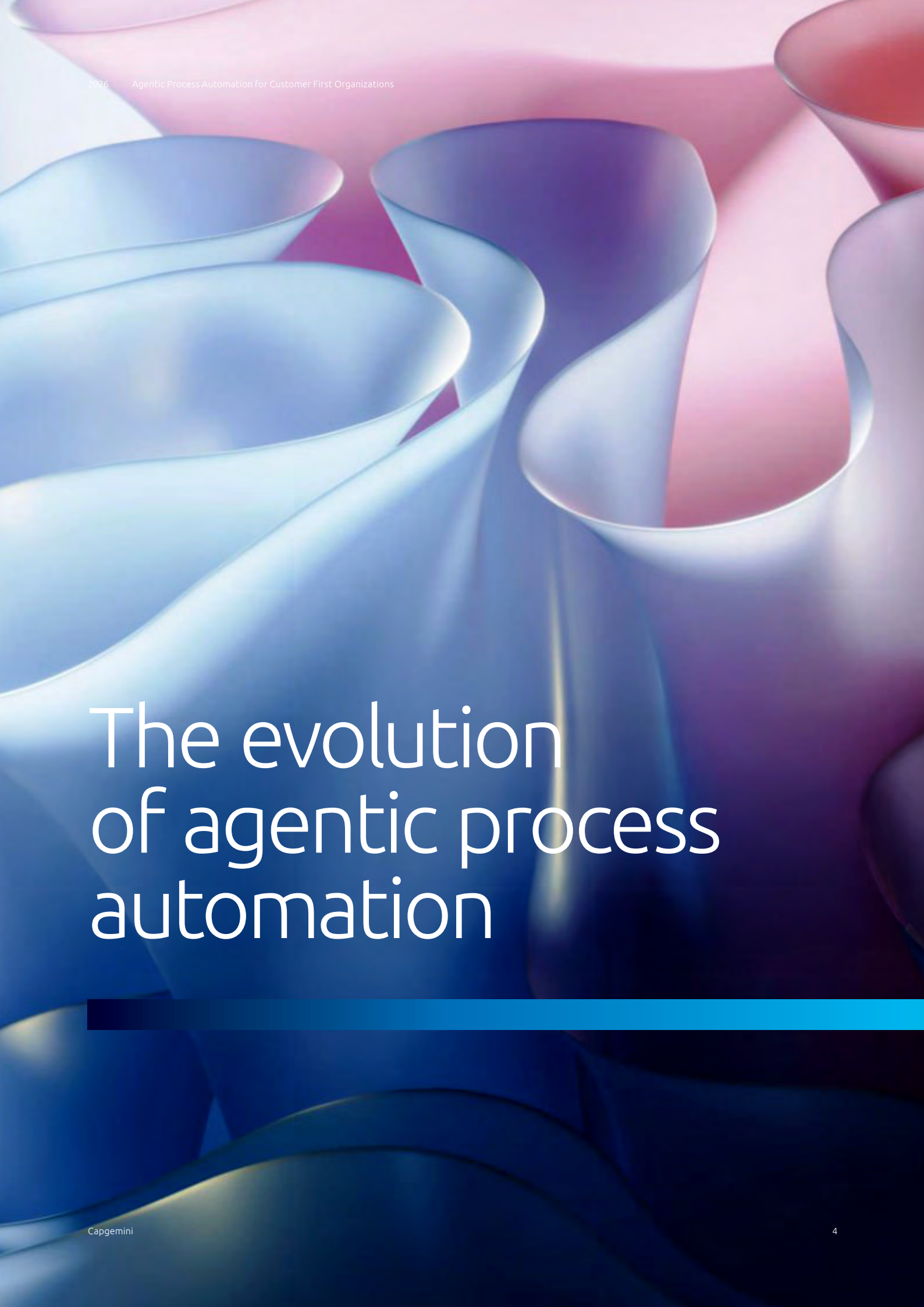


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The evolution of agentic process automation

Automation has evolved from workflow standardization and robotic process automation (RPA) into intelligent automation augmented by generative AI and agentic systems. The defining change is not related to technology as such; it is the ability to plan, coordinate, and act across systems under new possibilities and explicit constraints.

Agents were at the center of the global technology narrative in 2025. The past year has marked a turning point in automated software agents, with breakthroughs in large language models (LLM) and frameworks for orchestration and interoperability dramatically expanding their capabilities not only to answer questions, but to plan, collaborate, reason, execute tasks, and improve continuously. AI had already surpassed human performance across many tasks, including several previously challenging benchmarks, with only a few exceptions. Even in those areas, the performance gap between AI and humans is shrinking rapidly.

Technology providers are productizing agent platforms, orchestration protocols, and agent builders that integrate with enterprise applications such as customer relationship management (CRM), enterprise resource planning (ERP), and information technology service management (ITSM). At the same time, cost dynamics and model availability are improving, making experimentation easier to start – but not easier to scale responsibly.

At the same time, the deployment of agents requires governance, guardrails, and the ability to facilitate human-in-the-loop for agent and human collaboration. The core leadership question is therefore not “Can we build an agent?” but “Can we delegate decisions safely at scale?” Organizations that succeed treat agentic automation as an operating-model change – designed around orchestration, governance, and continuous optimization – rather than a one-time tooling upgrade.

Our vision for customer first in the agentic era

Customer-first organizations continuously thrive to improve value propositions and improve customer journeys. The differentiator in the agentic era has become the ability to sense, decide, and act quickly across channels and functions – without sacrificing trust.

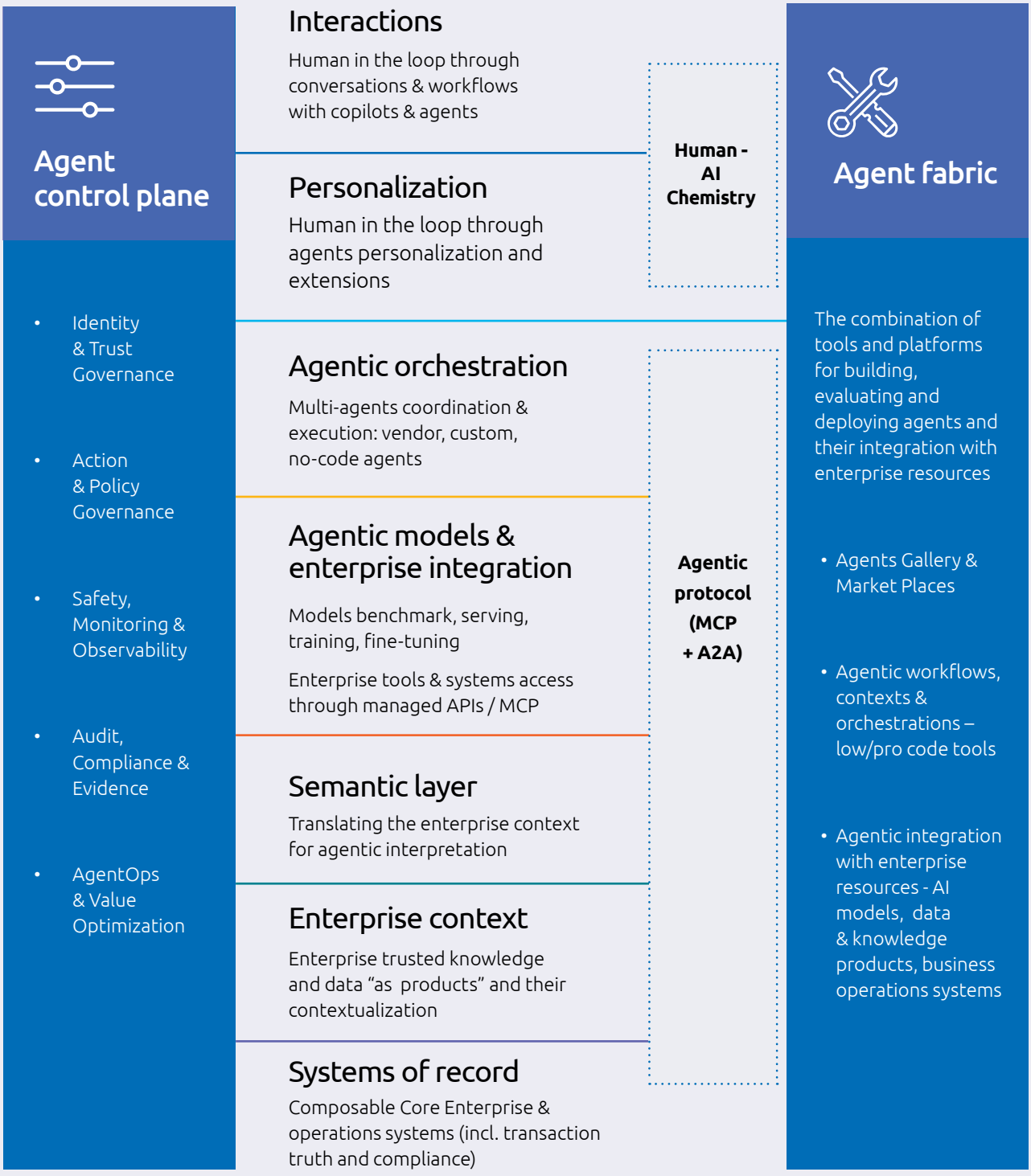
Traditional transformation approaches with workshops to document as-is processes and incrementally design to-be flows remain useful but are no longer sufficient on their own. New AI-powered tools help increase efficiency and change how enterprises build future blueprints to run their business. With any tools and collaboration formats, most importantly, leaders must reimagine customer outcomes end-to-end and then decide where autonomy is appropriate, where human judgment must remain, and how the organization will govern both.

After early experimentation, clients are increasingly focused on agentic “control planes”: governance structures and technical layers that oversee customer flows across front, middle, and back office, ensuring auditability, recoverability and accountable decision-making.

Figure 1 Capgemini Agentic Enterprise Stack

Our vision of the newenterprise architecture

The glue breaking organizational and IT silos, with semantic layer, agent fabric and agent control plane as vital organs.





Agentic process automation for customer-first organizations

Enterprise orchestration

Despite the agentic enthusiasm, defined business processes and workflows remain essential – particularly in regulated environments. What changes is the execution model: alongside humans and deterministic automation, agents contribute to outcomes by coordinating decisions and actions across systems within defined boundaries.

APA combines goal-oriented agents with established workflow automation, rules engines, and RPA. Agents can interpret intent, assemble context, recommend options, and execute actions where permitted – while human specialists retain authority for high-risk decisions and exceptions.

Leading practices for agentic customer-first operations include:

- **Proactive and predictive experiences:** detect issues early and trigger resolution paths before customers escalate.
- **Seamless omnichannel journeys:** unify customer context across channels and systems to reduce handoffs and repeat interactions.
- **Employee enablement:** summarize, triage, and automate routine work so human experts focus on judgment, exceptions, and customer moments that matter.

Key enablers for agentic customer first

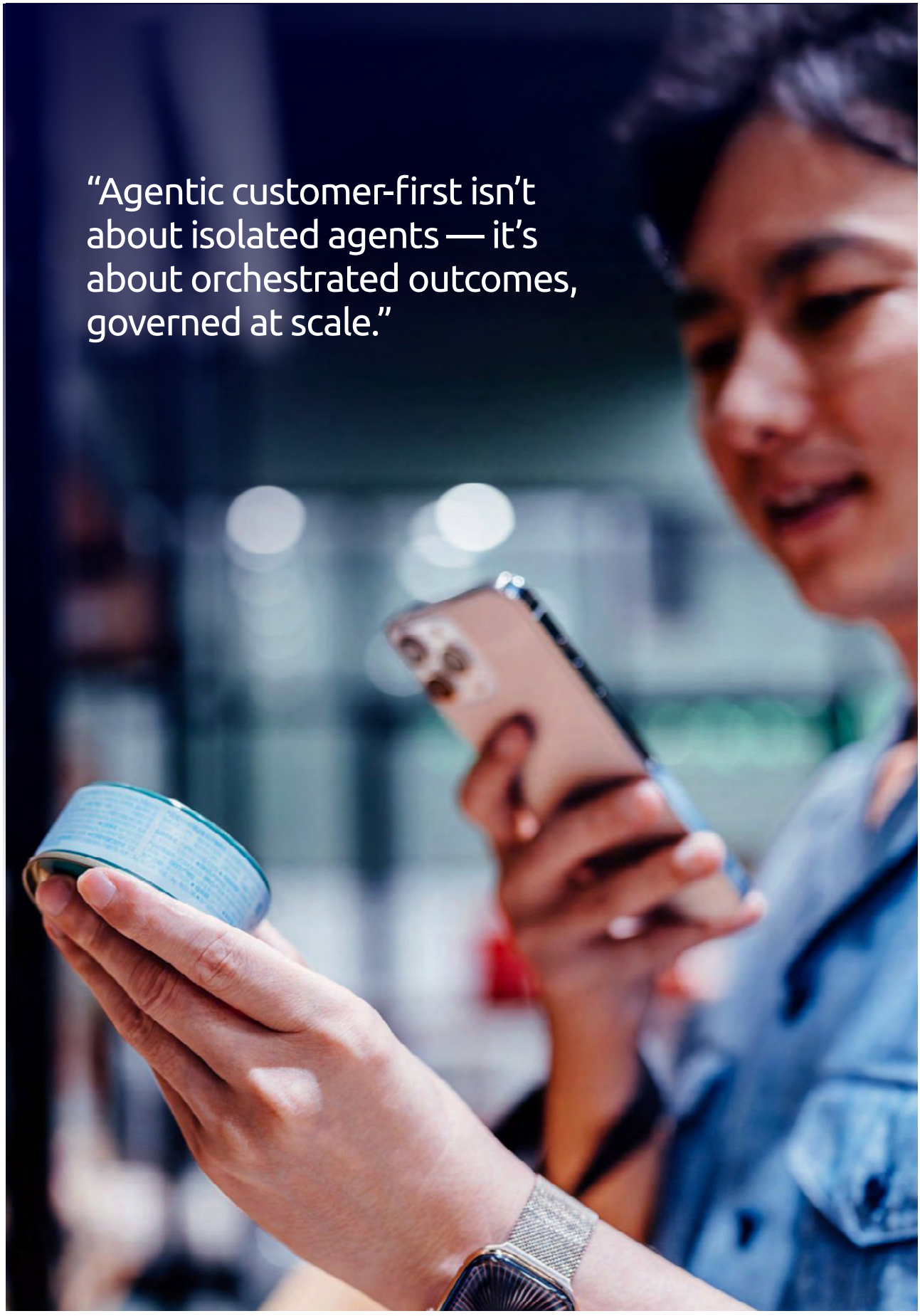
Customer-f First outcomes depend on disciplined execution across front and back office. APA strengthens the operational backbone by orchestrating tasks, data, and decisions across the enterprise, reducing bottlenecks and improving consistency of service outcomes.

Three enablers are foundational to deliver cCustomer-f First outcomes with agentic automation:

- **Personalized conversations:** tailored recommendations and next-best actions based on customer context and intent.
- **Real-time sentiment and intent signals:** adapt interactions based on customer emotion and service risk indicators.
- **24/7 intelligent support:** always-on self-service and assisted service with consistent knowledge and escalation paths.

For safety and compliance, agents require explicit guardrails: policies, thresholds, approvals, and audit trails. The design goal is safe autonomy – —automation that is explainable, recoverable, and governed through human oversight.




“Agentic customer-first isn’t about isolated agents — it’s about orchestrated outcomes, governed at scale.”

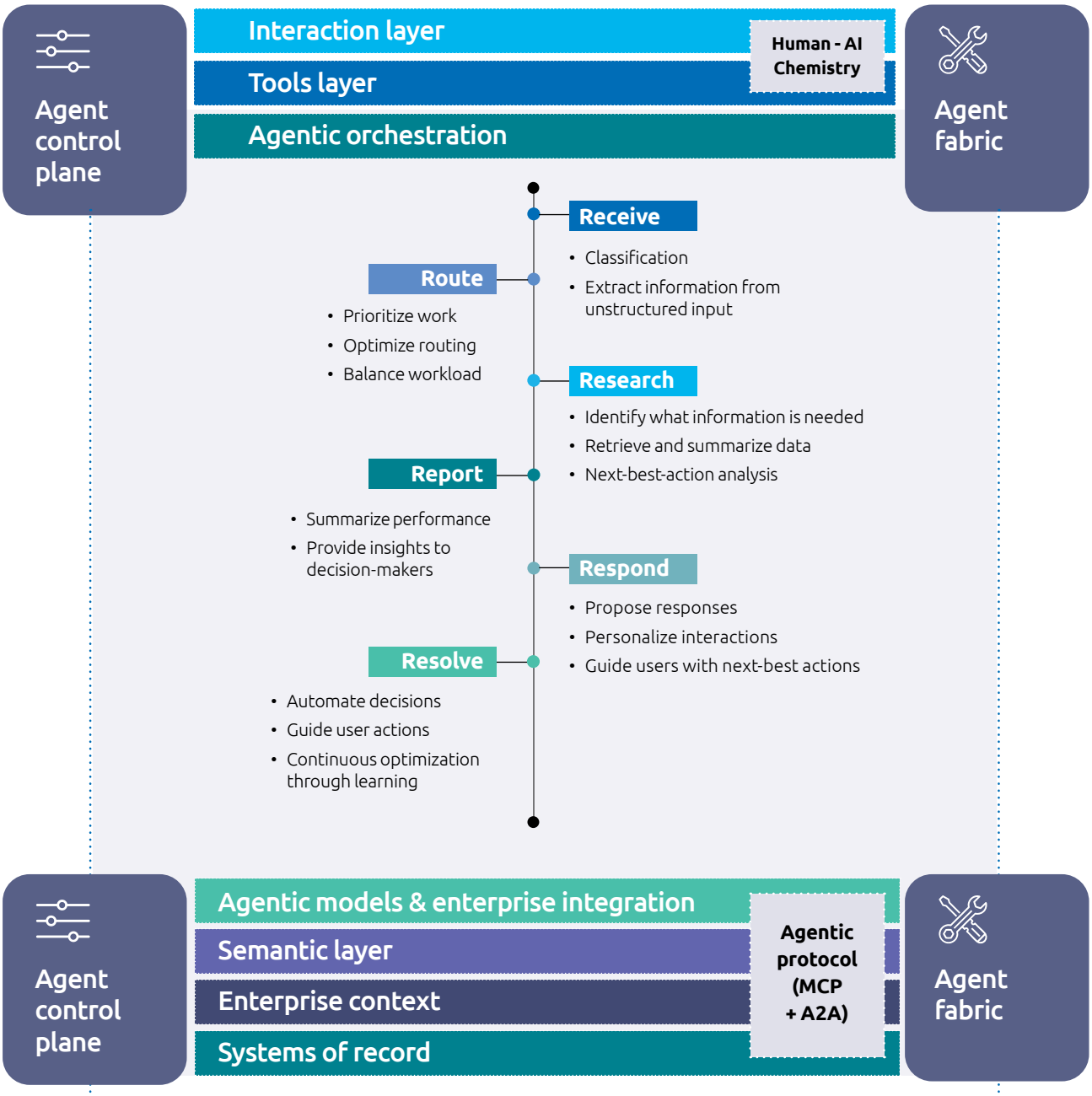
Capgemini value proposition for agentic process automation

Capgemini helps organizations operationalize agentic automation with an approach that combines domain expertise, integration capabilities, and industrialized delivery methods with AI governance and strong technology partnerships. We combine these capabilities to make agentic enterprise orchestration real with an absolute focus on value creation.

Figure 2 Capgemini Agentic Orchestration

Agentic Orchestration: connecting people, agents and systems

We are moving from human-navigated applications to agent-orchestrated workflows.



The Agentic Orchestration layer…

…enables simplification of the enterprise stack

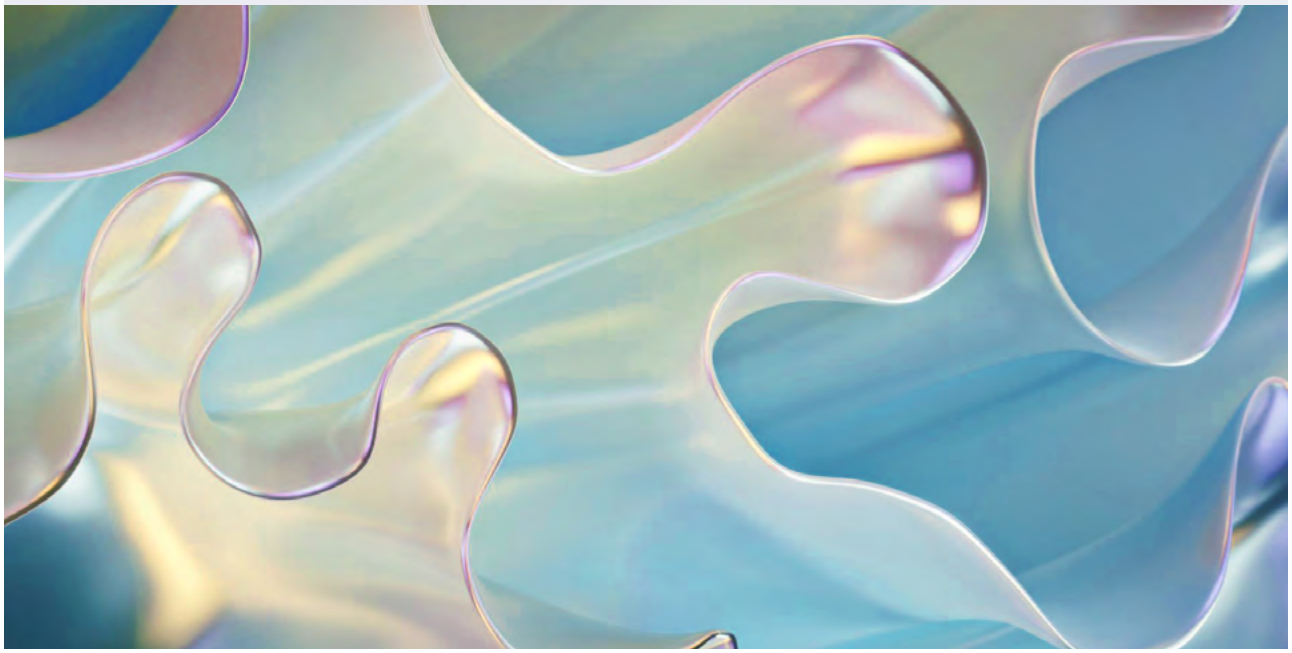
…keeps humans-in-the-loop when needed – and automate with governance

…involves the right system of action securing ownership to deliver outcomes in time

…secures consistency across channels in the interaction layer

…allows agents to keep context and execute complex long-running processes

…improves operational efficiency and customer and employee experience



Our value proposition is built on five pillars:



Domain-led transformation: industry and process expertise to identify high-impact decisions and design responsible autonomy boundaries.



Enterprise orchestration: integration of agents with workflows, rules, APIs and systems of record to enable end-to-end execution.



Trust and governance by design: control plane patterns, auditability, human override, and compliance-ready evidence trails.



Industrialized delivery: phased rollout from pilot to scale with measurable outcomes and repeatable assets.



Operating model enablement: change management, reskilling, and new roles (e.g., agent supervisors, model stewards) to sustain adoption.

Agentic orchestration layer maturity – from siloed automations to autonomous, outcome-driven enterprise fabrics.

Organizations do not move directly from basic automation to full autonomy. The journey requires a deliberate evolution of orchestration capabilities from rule based task automation toward agent driven, policy aware decisioning at enterprise scale. Each stage builds on the previous one, expanding scope, intelligence, and governance.

At the foundation, basic automation focuses on rule based workflows and scripted execution. While effective for individual processes, these approaches are manually coordinated, fragmented across systems, and difficult to scale. Governance typically stops at the workflow level, limiting transparency, reuse, and operational resilience.

The next step introduces single agent enablement, embedding one or a few AI agents into applications to support localized execution. These agents perform lookups, summarization, or document extraction and can accelerate individual tasks. However, intelligence remains isolated. Reuse across the enterprise is limited, and auditability and policy consistency remain challenging.

As organizations mature, they move toward foundational multi agent orchestration. Multiple agents collaborate within a shared platform, coordinated by a basic orchestration layer. A semantic layer emerges, providing common concepts and shared understanding across agents. This enables more predictable execution, improved compliance, and stronger governance – shifting automation from isolated tasks toward managed, outcome oriented flows.

At enterprise scale, the enterprise orchestration layer becomes the control plane for intelligent operations. This layer is vendor agnostic and coordinates agents across systems, platforms, and channels. Shared semantics, standardized protocols, and central registries establish consistency and reuse. Policies govern human AI collaboration, monitoring covers performance and drift, and outcomes remain predictable across channels and actors.

The most advanced stage is the fully autonomous enterprise fabric. Here, multi agent ecosystems operate across channels with end to end accountability for well defined business outcomes. Orchestration optimizes execution continuously, policies dynamically guide autonomy, and humans are engaged only where judgment or escalation is required. The result is enterprise wide autonomy, massive efficiency gains, and rapid scaling of new processes and experiences.

The core insight:

Autonomous agentic automation is not achieved by adding intelligence to workflows – but by establishing an enterprise grade orchestration fabric that governs how agents reason, collaborate, and act at scale.



Industry-specific challenges and agentic solutions



01

Banking

Context and challenges

Banks operate under intense regulatory scrutiny while facing sustained pressure to reduce cost-to-serve. Fragmented system landscapes and inconsistent data quality often prevent a unified customer view, while customer expectations for speed, personalization, and proactive service continue to increase.

Agentic response

Agentic architectures enable compliance-by-design and scalable decisioning. Intelligent agents can orchestrate know your customer (KYC) and anti-money laundering (AML) activities end-to-end – coordinating evidence collection, routing cases, handling exceptions, and maintaining fully auditable decision trails.

Digital twins of risk and operations allow banks to simulate scenarios in real time, supporting controlled decision-making and stress testing under regulatory constraints.

Finally, API-enabled ecosystems connect internal and external signals – such as payments, identity services, and network data – enhancing fraud detection, resilience, and customer responsiveness.

APA is not a one-size-fits-all capability. Its value emerges only when it is deeply tailored to the specific decision patterns, risk profiles, and operational realities of each industry. The following examples illustrate how agentic approaches address sector-specific challenges and unlock differentiated outcomes.

02

Insurance

Challenges

Insurers face growing pressure to accelerate time to market for new products and journeys, while operating with fragmented data that limits underwriting precision and claims efficiency. Rising loss ratios and climate driven volatility further increase underwriting complexity.

Agentic solutions

Agentic insurance lifecycles support onboarding, underwriting, and claims through automated context assembly, intelligent document processing, and guided decision support – reducing cycle times while preserving control.

Continuous location-based risk intelligence enables underwriting decisions to remain current as environmental conditions change. Digital twins of assets and supply chains further support proactive risk monitoring and resilience planning, allowing insurers to move from reactive to anticipatory risk management.

03

Telecommunications

Context and challenges

Telecom operators face high operational costs driven by network incidents, fault management, and outage related call spikes. Fragmented tooling and massive data volumes overwhelm both network and service teams, while customer communications during incidents remain inconsistent.

Agentic response

Agentic models enable experience driven operations, converging network management and customer engagement into a closed loop operating model. Autonomous Network Operations Centers (NOCs) apply predictive detection, root cause analysis, and guided remediation – under human oversight – to reduce incidents and recovery times.

In parallel, intelligent customer service agents increase containment for routine inquiries and provide targeted assist for complex cases, ensuring consistent escalation paths and improved customer experience during disruptions.

04

Public sector

Context and challenges

Public services are often characterized by complex forms, long processing times, and fragmented responsibilities across agencies. Legacy systems and siloed data hinder end to end service delivery, while expectations for transparency, fairness, and regulatory compliance are exceptionally high.

Agentic response

Agentic solutions reimagine citizen services by guiding form completion, automating eligibility checks, and routing cases with full auditability. Cross agency orchestration breaks down silos by coordinating data and tasks while preserving data privacy and sovereignty.

Specialized analysis agents support evidence based policymaking by accelerating insights while strictly enforcing access controls, traceability, and provenance – ensuring trust, accountability, and compliance.



Proven success in agentic customer operations

Our automation and AI capabilities support measurable outcomes across customer operations. The examples below illustrate typical impact patterns and results.

Industry	Challenge and solution	Key outcomes
Banking	A leading financial services organization implemented AI-driven anomaly detection and root-cause analysis within incident workflows.	Over 70% reduction in mean time to resolution (MTTR) and a 50% improvement in incident lifecycle performance.
Banking	A leading banking group started to implement an AI- driven perpetual KYC solution in line with legal boundaries.	Significantly reduced decisioning times for product and service requests from clients.
Insurance	A European insurer redesigned customer journeys and implemented a digital and data platform using Agile/DevOps with workflow automation and conversational interfaces.	Reduced time-to-market for new customer journeys from 24 to 6 months.
Insurance	A Canadian insurer stabilized and enhanced a CRM application supporting sSales, sService, and mMarketing through application maintenance and upgrades.	25% reduction in infrastructure and operations cost, improved application stability, and response times.
Public Sector	A national employment agency started to boost job matching with AI.	Reduced time-to-job wait times and overall social-economic benefit with less funding needs.

Industry	Challenge and solution	Key outcomes
Public Sector	A public sector organization implemented FinOps governance and cost optimization with an effective tagging strategy for a diverse cloud portfolio.	Accurate cost showback for $5M p.a. and delivered savings of $2M from quick wins.
Telecommunications	Customer-first program using analytics to identify and resolve recurring customer pain points proactively.	10–13% annual reduction in calls to customer care through proactive issue prevention.
Telecommunications	Gen AI infused into contact center stack to improve self-service and agent support for high-volume use cases.	70% containment for FAQs; improved bill payment experience; virtual agents handling 80 million calls.
Hospitality	Hospitality Contact center operating model transformation supported by generative Gen AI for agent assist and knowledge retrieval.	40% increase in efficiency, 90% first call resolution, 91% customer satisfaction quality rating.


“70%
of customers return after
positive experiences.”



Key takeaways for your agentic journey

1. **Manage a strategic imperative, not just technology:** Agentic AI requires an integrated strategy aligned to core business outcomes. Move beyond ad-hoc experimentation to operating-model change.
2. **Prioritize foundational readiness:** Scale depends on data quality, governance, integration, and talent. Without these foundations, deployments stall.
3. **Embrace realistic cost management** (agentic AI economics): Total cost of ownership (TCO) includes talent, data preparation, integration, governance, and variable consumption costs. Establish AI-specific FinOps practices.
4. **Embed governance and risk management early:** Address security, privacy, bias, explainability, and ethical use from the outset. Define clear ownership and evidence trails.
5. **Treat integration as the catalyst:** Value comes from connecting agents to systems of record and workflows. Without integration, agents remain isolated.
6. **Focus on human-AI collaboration:** The stable end state is a hybrid workforce. Design roles where AI workers assist, execute, and escalate – rather than replacing humans by default.
7. **Ensure proactive workforce evolution and change management:** Reskilling, clear communication, and adoption support are critical to avoid disruption and increase trust.
8. **Design autonomy deliberately, not everything should be automated:** Define explicit autonomy boundaries and retain human judgment for high-risk, irreversible, or regulated decisions.
9. **Measure decision quality, not automation volume:** Track decision reversals, intervention frequency, time to resolution, and error severity. Avoid vanity metrics like “% automated”.
10. **Think in control loops, not end states:** Agentic automation requires continuous monitoring, drift detection, policy refinement, and periodic autonomy reassessment.



Call to action for organizations

"Business domain is key. Let common sense rule – and ***make it real.***"



No organization becomes fully agentic overnight. Success requires a phased transformation grounded in business domain expertise, deliberate autonomy boundaries, and governance that enables safe scaling.

To successfully navigate this transformation, while infusing processes with agentic capabilities, we help organizations to:

- **Develop a comprehensive agentic AI strategy:** define business goals and select high-impact use cases for phased rollouts.
- **Invest in foundational capabilities:** strengthen data quality, governance, and integration to enable scalable deployment.
- **Implement AI-specific FinOps:** track and optimize the cost drivers of agentic AI across cloud and model consumption.
- **Build ethical and trusted AI frameworks:** establish policies, audit processes, and accountability to sustain trust.
- **Foster a culture of continuous learning**: monitor performance, manage drift, and continuously refine guardrails and prompts.

The agentic era is moving from experimentation to operational deployment. Organizations that delay risk higher manual workload, rising cost-to-serve, inconsistent customer experience, and talent pressure.

Appendix A: Delivery framework for agentic automation (Phases 0–8)

Agentic automation requires a different delivery model than classic automation. The governing idea is to begin by designing goals before orchestrating decisions and finally letting the agents act with guardrails.

Throughout the delivery phases the guiding questions for all deliverables is:

Can we responsibly delegate more decision power – without losing control, trust, or accountability?

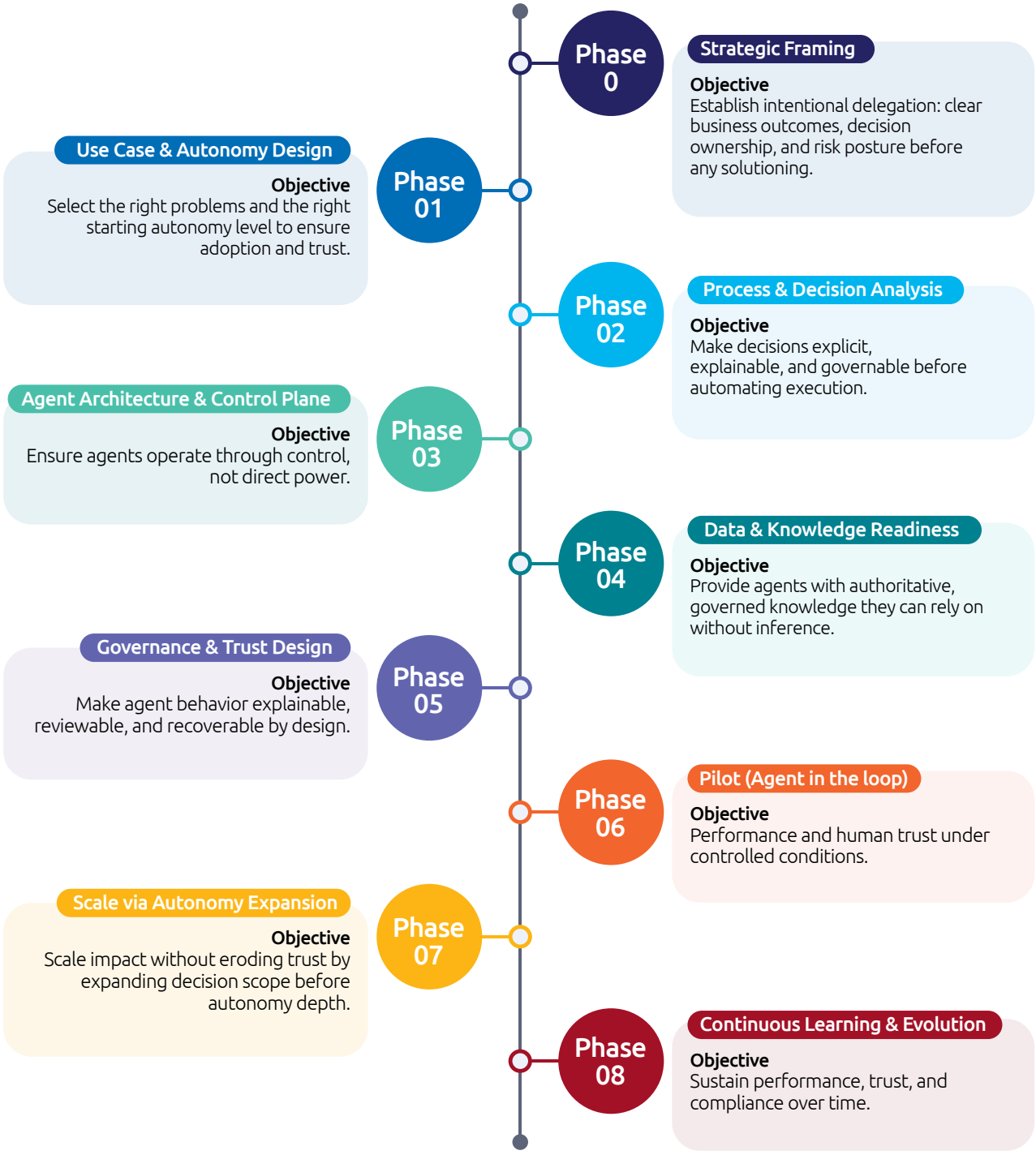
01. Autonomy levels

Level	Description
0	Assist only (recommendations)
1	Execute with approval
2	Execute with monitoring
3	Conditional autonomy
4	Full autonomy (rare)

Most successful deployments start at Levels 1–2 and remain below Level 3 in the first year.

02. Objectives and results by phase

Agentic Automation – Delivery Framework



Phase		Objectives	Results
Phase 00	Strategic framing	Establish intentional delegation with clear outcomes, ownership and risk posture.	Outcomes defined; autonomy boundary documented; sponsor assigned; non-goals documented.
Phase 01	Use case & autonomy design	Select the right use cases and starting autonomy level to ensure adoption and trust.	Use case shortlist with success criteria; autonomy level set; override/approval model agreed.
Phase 02	Process & decision decomposition	Make decisions explicit, explainable, and governable before automating execution.	Decision inventory; exceptions; human triggers; success signals; traceable rationale.
Phase 03	Architecture & control plane	Ensure agents operate through control, not direct power.	Orchestrator; guardrails; override; audit & traceability; no direct system access.
Phase 04	Data & knowledge readiness	Provide authoritative, governed knowledge and evidence tracking.	Systems of record; memory model; approved sources; evidence linked to outcomes; ownership.
Phase 05	Governance, trust & risk	Make agent behavior explainable, reviewable, and recoverable.	Explainability model; logging; escalation; bias/drift monitoring; confidence signaling.
Phase 06	Pilot (agent in the loop)	Validate real-world performance and trust with controlled scope.	Real users/data; instrumentation; reversal & intervention metrics; go/adjust/stop decision.
Phase 07	Scale via autonomy expansion	Scale impact without eroding trust by expanding scope before autonomy depth.	Widened boundaries; additional agents; autonomy increased on evidence; new roles; KPI shift.
Phase 08	Continuous learning & evolution	Sustain performance, trust, and compliance over time.	Drift reviews; policy refinement; controlled prompt updates; autonomy reassessment; audits.

03. Developing agentic ecosystems at scale

The future of workflow automation is defined by a shift from passive digital assistants to proactive, autonomous systems capable of continuously interpreting customer and process-specific data, reasoning independently, and initiating actions in an “always on” mode. These agentic systems will be able to make informed decisions by orchestrating complex, multi step business processes across the enterprise.

This transformation requires organizations to rethink how applications are designed and built. Today, most enterprises prioritize composable, outcome driven architectures powered by cloud native, scalable infrastructure. The focus has largely been on exposing application capabilities through modern APIs distributed across the organization’s IT landscape.

With the emergence of modern agentic frameworks, this paradigm is evolving. The new objective is to convert business data and functionality into scalable, agent agnostic “tools” – potentially paired with modular agents – that can be accessed across all enterprise applications through agentic frameworks leveraging model context protocol (MCP) servers and agent-to-agent (A2A) protocol. To stay competitive, organizations will need to adopt an AI first mindset when building new applications or modernizing existing ones, ensuring they can leverage AI driven methods to deliver business value more efficiently and effectively.

Once this foundational layer of reusable tools and agents is established, enterprises can rapidly build, integrate, and maintain new individual agents or multi agent systems on top of their existing application stack. Over time, autonomous agents and extensible tool libraries will become default components of any newly developed application. Legacy applications will likewise need to be augmented with this layer to participate fully in an AI enabled application ecosystem.



04. Typical timeline (realistic)

Phase	Duration
Framing + Design	4–6 weeks
Pilot	8–12 weeks
Controlled Scale	3–6 months
Enterprise rollout	6–18 months

Promises materially faster typically trade off safety, trust or sustainability.

05. Common failure modes

Failure	Root cause
Agent gone rogue	No autonomy boundary
Low adoption	Humans do not trust decisions
Regulatory halt	Missing audit trail
High rework	Poor knowledge hygiene
Endless pilots	Unclear ownership

Appendix B: Sector-specific challenges and agentic solutions (examples)

APA is not one-size-fits-all. It must be tailored to the specific industries and use cases to account for the different decision patterns, risk profiles, and operational contexts of each industry.

01 Banking

Challenges

- Stringent compliance and transparency requirements alongside pressure to reduce cost-to-serve.
- Siloed systems and inconsistent data quality that limit a holistic customer view.
- Rising expectations for speed, personalization, and proactive service.

Agentic solutions

- **Agentic compliance orchestration for KYC/AML:** agents coordinate evidence gathering, case routing, and exception handling with auditable decision trails.
- **Digital twins for risk and operations:** real-time simulations to stress-test scenarios and support controlled decision-making.
- **API-enabled ecosystems:** integrate internal and external signals (e.g., payments, identity, network APIs) to improve fraud detection and service resilience.

02
Insurance

Challenges

- Need for faster time-to-market for new journeys and services.
- Fragmented data sources that weaken risk selection and claims efficiency.
- Rising loss costs and climate-related volatility that increase underwriting complexity.

Agentic solutions

- **Agentic insurance lifecycle:** agents support onboarding, underwriting, and claims with context assembly, document processing, and guided decisions.
- **Location risk intelligence:** continuous updates of risk signals to improve underwriting decisions.
- **Asset digital twins:** simulate and monitor physical risk exposure and supply chain resilience.

03
Telecommunications

Challenges

- High operational cost from network incidents and fault management.
- Call center surges during outages and inconsistent customer communications.
- Fragmented tooling and data volume that overwhelms human operators.

Agentic solutions

- **Experience-driven operations:** converge network operations and customer engagement into a single, closed-loop operating model for proactive resolution.
- **Autonomous** Network Operations Center (NOC): predictive detection, diagnosis, and guided remediation with human oversight.
- **Intelligent customer service:** higher containment for routine queries and better agent assist for complex cases with consistent escalation paths.

04
Public sector

Challenges

- Citizen services often involve complex forms, long wait times, and fragmented agency responsibilities.
- Siloed data and legacy archives hinder end-to-end journey execution.
- High expectations for transparency, fairness, and regulatory compliance.

Agentic solutions

- **Reimagined citizen services:** guided form completion, eligibility checks, and case routing with auditability.
- **Seamless journeys across agencies:** orchestration of data and tasks across silos to reduce handoffs and time-to-service while ensuring data privacy.
- **Specialized analysis agents:** accelerate evidence-based policy decisions while enforcing access controls and provenance.

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Make it real.

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Capgemini is an AI-powered global business and technology transformation partner, delivering tangible business value. We imagine the future of organizations and make it real with AI, technology and people. With our strong heritage of nearly 60 years, we are a responsible and diverse group of over 420,000 team members in more than 50 countries. We deliver end-to-end services and solutions with our deep industry expertise and strong partner ecosystem, leveraging our capabilities across strategy, technology, design, engineering and business operations. The Group reported 2025 global revenues of €22.5 billion.

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