

From Alliances to Swarms

Rethinking Competition and Collaboration in the Age of AI:

Executive Summary

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A user opens a webpage. Within milliseconds, before the page fully loads, a competition has already been decided. Autonomous systems have gone to work across advertising networks, data providers, platforms, and demand-side intermediaries. Some have collaborated through shared protocols. Others have competed for the impression. Advertiser agents have predicted the value of the user, estimated rivals' bids, adjusted their own, and decided whether to enter or exit. In one instant, one configuration of agents wins. In the next, a different configuration wins, because it predicted better, responded faster, or priced more precisely.

Now a customer taps a card to make a payment. In less than a second, issuing banks, merchant processors, card networks, fraud-detection systems, and risk engines all participate. Multiple agents evaluate the transaction simultaneously — some pushing toward approval, others toward rejection, optimizing across different objectives. None of these agents belong to a single firm. The outcome is not decided by one decision-maker. It is the result of a temporary configuration of capabilities, agents, rules, and data flows operating across organizational boundaries.

This is the rise of the swarm — and it is changing the nature of competition. This paper argues that strategy can no longer be built on alliances and ecosystems alone. A new unit of competitive interaction has emerged: the swarm. Understanding it, building for it, and governing it is the central strategic challenge of the AI era.

Why Alliances and Ecosystems Are No Longer Enough

For decades, competitive strategy was built around durable choices. Leaders decided what to own, what to acquire, whom to partner with, and how to position within ecosystems. Alliance theory explained how firms access capabilities they do not own. Ecosystem theory explained how value is created through the alignment of multiple actors around shared platforms and standards. Both perspectives remain essential.

But AI changes the tempo and unit of coordination. Alliances explain how firms access capabilities over time. Ecosystems explain how interdependent actors coordinate around a shared value proposition. Swarms explain what happens when those capabilities are assembled, contested, and dissolved in real time by human and AI agents. The unit of competition is no longer only the firm, the alliance, or the ecosystem. It is the momentary configuration of agents and capabilities that determines whether value is created — and who captures it.

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Three Layers of Competition

To compete in this environment, leaders need to think across three interconnected layers.

Capability bundle is what a firm can deploy: its assets, AI models, data, infrastructure, partner networks, and specialized capabilities. Mergers, acquisitions, and alliances build this layer. Amazon has invested in logistics and cloud infrastructure. Microsoft has secured access to frontier AI through strategic partnerships. These choices determine what a firm can bring to any competitive interaction — but ownership alone does not determine outcomes.

Ecosystem context is the environment in which capabilities interact. Platforms, standards, protocols, and complementors determine who can participate and how coordination is possible. But ecosystems in the AI era are no longer stable constellations of fixed roles. A single digital interaction may draw simultaneously on advertising, payments, identity, logistics, and cloud ecosystems. Roles shift. Participants enter and exit. The ecosystem defines what is possible — but not what actually happens.

Swarm dynamics is where value is actually created and captured in real time. Each ad impression, payment authorization, delivery route, or fraud decision triggers a different configuration of agents and capabilities. Swarms assemble, act, compete, collaborate, and dissolve. Capability bundle defines potential. Ecosystems define possibility. Swarms determine outcomes.

Six Sources of Swarm Advantage

Within swarm competition, advantage is created in six distinct ways. The first five are complementary; the sixth multiplies all of them.

Selection advantage is being included in the right swarm at the right moment. If a firm's agents, data, or services are not selected into the relevant interaction, it cannot compete for the outcome. Eligibility comes first.

Prediction advantage is understanding the value, risk, or probability of an interaction better than others. In advertising, this means knowing which impression is worth bidding for. In payments, it means distinguishing legitimate transactions from fraud without disrupting customer experience. In logistics, it means anticipating disruptions before they cascade.

Coordination advantage is enabling multiple actors to act together faster and more reliably. Firms that design better interfaces and protocols make their capabilities easier to combine — and harder to displace.

Latency advantage is acting quickly enough to matter. In many swarm environments, advantage depends on milliseconds. A better prediction that arrives too late is worth nothing.

Trust advantage is being considered safe, reliable, and fair enough to participate. As AI agents proliferate, firms will compete not only on speed and intelligence but on whether other actors trust their agents, their data, and their decisions.

Brokerage advantage is the sixth source — and the one that multiplies all others. The most powerful swarm competitors are not those embedded in a single ecosystem. They are those that bridge multiple ecosystems simultaneously. A firm that participates in advertising, logistics, payments, and cloud infrastructure at once can assemble swarm configurations that no single-ecosystem competitor can replicate. Its selection options are larger, its prediction richer, its

coordination stronger, its latency lower, and its trust footprint wider. Amazon, Google, and Microsoft build across so many ecosystems not merely for diversification — the deeper logic is brokerage: the ability to connect what would otherwise be disconnected, and to win interactions that no narrower competitor can even enter.

Governing Swarms

Swarms require governance precisely because they operate across organizational boundaries. No single firm controls every participant, model, data flow, or objective. Governance therefore shifts from internal control to protocol design. Leaders must define who can participate, what data can be used, which agents are authorized to act, how disputes are resolved, and when humans must intervene.

This resembles the challenge of governing multilateral alliances — where three or more firms cooperate and compete simultaneously. The lesson from that literature is that effective governance requires pre-agreed procedural rules rather than outcome agreements: not what the result will be, but how decisions will be made when interests diverge. Swarms intensify this challenge in three ways: participants include AI agents as well as human managers; interactions happen in milliseconds rather than months; and configurations assemble and dissolve dynamically, making fixed arrangements inadequate.

The firms that shape swarm governance — designing the protocols, eligibility rules, and accountability standards that govern participation — will shape the distribution of value in swarm competition, just as platform designers shaped value distribution in the previous era.

What Leaders Must Now Build

Competing in swarm environments requires five strategic investments. First, build capability optionality: access to the assets, data, AI models, and human expertise that future swarm configurations may require — even before the exact configurations are known. Second, invest in interoperability: the APIs, standards, data architecture, and trust frameworks that allow capabilities to connect quickly across boundaries. Third, improve agent quality: the ability of the firm's AI agents to predict, bid, route, coordinate, approve, and escalate better than those of competitors. Fourth, shape participation rules: the ability to influence who can join ecosystems, what counts as valid contribution, and how value is distributed. Fifth, secure governance rights: the ability to audit, constrain, explain, or override swarm behavior as regulatory and partner expectations evolve.

Strategy is no longer only about who to compete with and who to collaborate with. It is about designing a system in which capability bundle, ecosystem context, and agentic dynamics continuously align in real time to create and capture value. From alliances to swarms — strategy is no longer only about managing relationships. It is about mastering the interplay between durable capabilities, fluid ecosystems, and real-time agentic competition.

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