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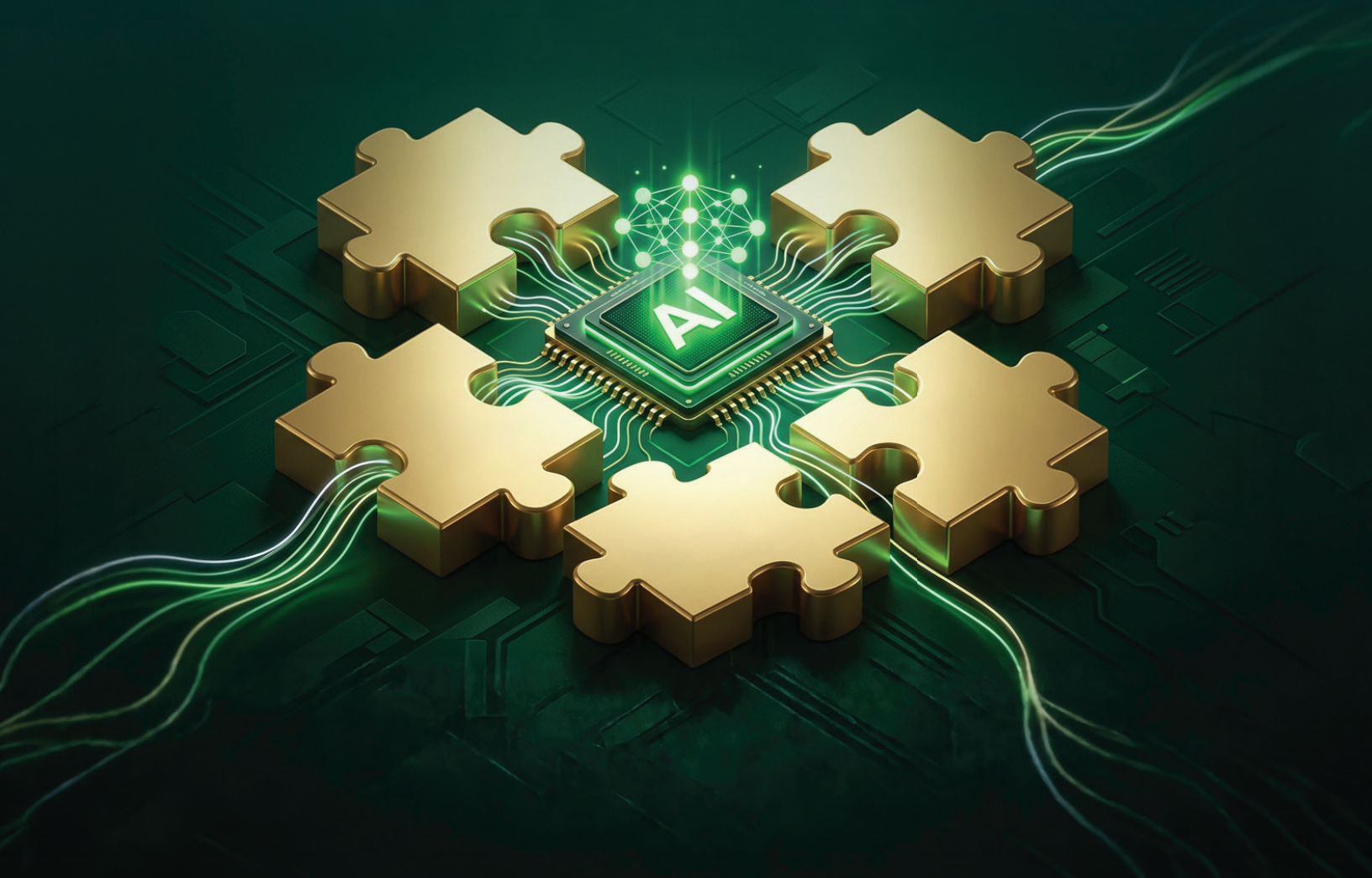
PARTNERING FOR SPEED AND SCALE IN A CONSTRAINED WORLD



Joint Ventures as the Operating System of AI Infrastructure: Partnering for Speed and Scale in a Constrained World

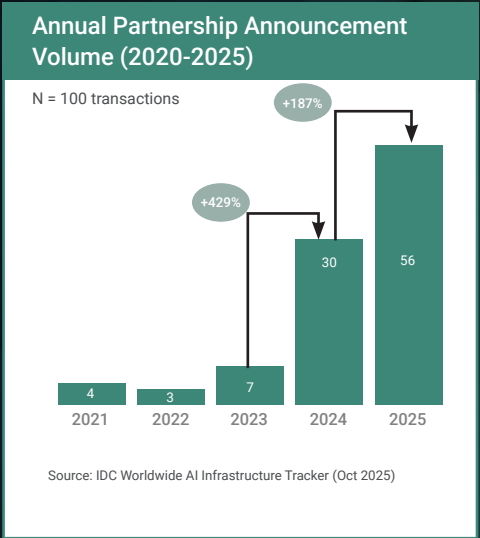
By Marta Bayarte and Shishir Bhargava

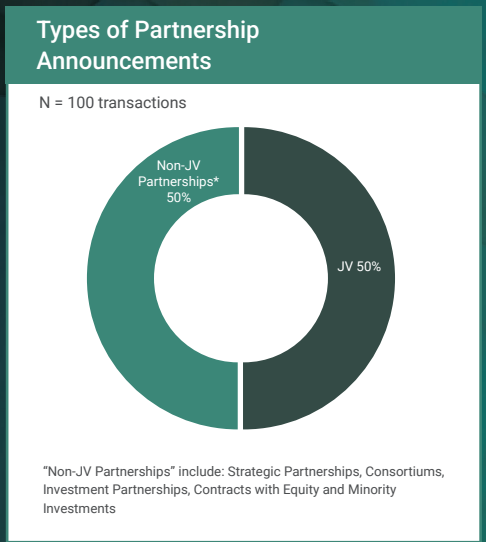
AI infrastructure is scaling faster than any previous wave of digital build-out. Global spend on AI-centric compute, storage, and power systems is accelerating sharply – with companies like Meta, Microsoft, Google, and Amazon alone committing to $650 billion in AI capex spend[1] – and McKinsey projecting $5.2 trillion in cumulative AI-specific data center capex by 2030 (as part of ~$6.7 trillion in total global data center needs, with ~70% driven by AI workloads amid mounting power and build-out challenges[2]). This surge has exposed a structural truth: the constraint is no longer simply capital. It is power availability, deployment speed, and the multi-billion-dollar scale of integrated energy-and-compute facilities required to train and operate modern AI models.

These pressures have made joint ventures (JVs) a dominant partnership model in the AI era. Ankura's analysis of more than 100 AI-infrastructure transactions from 2021–2025 shows JVs now account for over half of all strategic partnerships, following a 429% surge in 2024 (See Exhibit 1). This shift is significant. JVs are becoming the operating system of AI infrastructure because they solve problems that bilateral commercial contracts cannot — aligning incentives, pooling complementary capabilities, securing power, and sharing risk at unprecedented scale.

EXHIBIT 1

Partnership Volume – Non-Exhaustive





[1] Microsoft and Google face $650bn AI spending test as sell-off opens fresh entry point", Yahoo Finance (February 2026)
[2] The cost of compute: A $7 trillion race to scale data centers", McKinsey & Company (April 28, 2025)

The article explains why AI-era infrastructure increasingly depends on JVs to solve power, speed, and scale constraints, then outlines the key failure modes and five design principles that determine whether these JVs succeed.

JV Momentum Is Real — And Reshaping the Market

AI-era infrastructure is no longer a real-estate or data center play. It is an energy-intensive, grid-dependent industrial system. As a result, the largest players in global digital infrastructure are using JVs as a primary mechanism for scaling. Equinix formed an over $15 billion JV with GIC and CPP Investments to develop more than 1.5 GW of new U.S. hyperscale capacity. Digital Realty and Blackstone launched a $7 billion JV to build approximately 500 MW across Frankfurt, Paris, and Northern Virginia. Meta and Blue Owl created an 80/20 JV for the $27 billion Hyperion AI campus in Louisiana. Crusoe, Blue Owl, and Primary Digital entered a $3.4 billion JV to build a 200-MW AI-optimized data center campus in Texas[3].

This is a global realignment. AI-era data centers behave like industrial energy assets. No single participant, not even hyperscalers, can shoulder power procurement, grid timing, capital load, engineering complexity, and delivery risk alone.

Why JVs Win: Power, Speed, and Scale

JVs have always been a staple in capital intensive industries, but with AI capex spend outpacing the gross domestic product (GDP) of small nations, combined with the need for speed, and to manage power constraints, JVs are becoming a go-to model to access power, speed, and scale.

Power is the binding constraint. U.S. interconnection queues have become the single largest bottleneck to AI growth. Lawrence Berkeley National Lab data shows median queue timelines now exceed 4-5 years[4]. Meanwhile, PJM Interconnection LLC (PJM) capacity auctions — a proxy for grid stress — have surged to historic highs: $269.92/MW-day for 2025/26 and the regulatory cap of $329.17/MW-day for 2026/27[5].

AI customers, however, want capacity in 6-12 months. JVs solve this mismatch. They enable developers, operators, and energy providers to combine capabilities that no one party possesses individually — particularly in securing firm or behind-the-meter power. Microsoft's 10.5-GW clean-energy framework with Brookfield is a clear example: Power of that scale cannot be delivered via contract alone.

[3] Equinix press release (October 1, 2024); Digital Realty & Blackstone joint announcement (December 7, 2023); Meta press release (October 21, 2025); Crusoe press release (October 15, 2024)
[4] Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection (data through 2024), Lawrence Berkeley National Laboratory (LBNL) (December 2025)
[5] PJM 2025/2026 & 2026/2027 Base Residual Auction Results, PJM Interconnection Official Report (2024 & 2025)

Speed is the competitive edge. Traditional development cycles exceed 36 months. AI demand curves now compress timelines dramatically. Some JVs in the market have demonstrated the ability to reach operational readiness within 12-24 months — substantially faster than conventional, multiyear data center development timelines — when partners combine local execution capability with pre-secured power and coordinated capital. Speed is not a luxury — it is a prerequisite for competitive relevance.

Scale requires shared ownership. Integrated energy-plus-compute campuses often require $2-8 billion in capital. Even well-capitalized hyperscalers prefer not to own these assets outright due to balance-sheet efficiency, capital allocation priorities, and risk diversification. JVs allow each partner to contribute what they are uniquely positioned to deliver — capital, energy, land, expertise — while sharing risk.

To meet the above needs, above our analysis of recent partnerships identifies four JV archetypes (Exhibit 2) that have emerged as targeted solutions to the structural challenges driving AI-infrastructure buildout — power access, delivery speed, and large-scale capital deployment.

EXHIBIT 2

AI Infrastructure – Joint Venture Archetypes

	Description	Examples	Prevalence
AI Data Center Partnerships	Partnerships focused on building or scaling high-performance compute platforms for AI workloads - including data centers, GPU clusters, data storage.	• HUMAIN + AMD • SEB + Ericsson + Saab • MGX + Bpifrance + NVIDIA	N = 51 Joint Ventures 52%
AI Energy Integration Partnerships	Partnerships that combine energy generation (traditional or renewable) with AI or data center infrastructure for power availability, sustainability, and affordability	• Chevron + Engine No. 1 • NRG + GE Vernova • Eni + MGX + G42 + Masdar + Taqa Transmission + ADQ	20%
Capital Backed AI Infrastructure Partnerships	Financial institutions, sovereign funds, or asset managers enable AI infrastructure development through funding, ownership, or operational partnerships.	• KKR + ECP • Digital Realty and Blackstone	18%
AI Enabling Hardware Partnership	Partnerships that enable AI hardware or supply chain - including chip design, production, packaging, cooling, and integration with OEMs/ Cloud platforms	• NVIDIA-Foxconn-Wistron-Amkor-SPIL • Cisco and NVIDIA • Intel and TSMC	10%

Note: Some deals may span multiple archetypes but are classified by their dominant objective
Source: Ankura Analysis

Why JVs Fail — And the Structural Risks Leaders Must Solve

Even with strong underlying logic, many JVs underperform. A prior analysis from McKinsey shows that 50% of JVs fail to meet their owners' performance expectations[6]. While JVs fail for multiple reasons, four reasons are more prominent for AI-infrastructure JVs.

Asset–strategy misfit. AI workloads require high-density racks (commonly 30 kW+) with liquid cooling and specialized electrical systems. Industry-wide Power Usage Effectiveness (PUE) averages remain at approximately 1.56 — well above new-build best-in-class levels of approximately 1.2–1.3[7]. Retrofitting older facilities frequently costs as much as greenfield development while locking in structurally higher operating costs. Without early technical diligence, JVs inherit assets that cannot meet the strategy.

Governance deadlock. AI-infra-JVs often adopt asymmetric ownership — typically majority-minority setup between a capital provider and operator — as seen in Blackstone–Digital Realty and Blue Owl–Meta, where the capital partner holds the majority stake while the operator runs delivery. When unanimous consent (or long "reserved-matters" lists) is required for strategy, budgets, capacity releases, or financings, this structure can stall decisions at the very moments speed is decisive a well-documented hazard in JV governance. Deadlocks most often surface around (1) customer mix, (2) capacity allocation, and (3) capital pacing, where partner incentives diverge.

[6] Avoiding blind spots in your next joint venture, McKinsey on Finance Number 48, (Autumn 2013)
[7] Global Data Center Survey 2025, Uptime Institute, (July 2025)

Timeline optimism. Many financial models assume 24–30 months to delivery, yet power-related delays can push schedules beyond 42 months — often cutting Internal Rate of Return (IRR) roughly in half. In a JV, that slippage does more than hurt returns: It misaligns capital pacing between partners, triggers governance friction over change orders and capital calls, and undermines the very rationale for the JV (faster, de-risked delivery). The root causes are structural — interconnection queues, federal and local permitting, and coordination across agencies — factors that routinely extend timelines well beyond pro formas unless power and approvals are secured up front.

Exit and liquidity traps. JVs that keep evolving perform better — and companies that rapidly recycle capital tend to have higher returns as compared to their peers. This rule is true for AI-infrastructure JVs as well. If partners cannot exit, refinance, or recapitalize the JV at predictable intervals, even successful assets can become strategically limiting. Recent attacks on data centers in the Middle East underscore why this matters: geopolitical risk isn't abstract — it can physically disrupt operations and strand capital overnight. These events reinforce the importance of portfolio diversity across geographies and the need for real-world contingency planning. Recent attacks on data centers in the Middle East underscore why this matters: geopolitical risk isn't abstract — it can physically disrupt operations and strand capital overnight. These events reinforce the importance of portfolio diversity across geographies and the need for real-world contingency planning. Regulatory exposure, grid-related timing, and geopolitical considerations like these can freeze liquidity for years.

The Five Principles of JVs That Deliver

Leaders now operate in an environment where AI-era infrastructure moves at the speed of power, not capital. The only durable strategy is one grounded in early, rigorous JV design — built around the constraints that define this market.

1. Lead With a Power-First JV Design

Structure the JV around power as a contributed capability: Define which partner brings firm or behind-the-meter supply, how interconnection queue position (or Power Purchase Agreements (PPAs) / Behind-the-Meter (BTM)) is allocated, reserved, or ring-fenced for the JV, and the step-in rights if the power-supplying partner misses milestones. Hard-wire capacity allocation rules (e.g., tranche releases by MW, pricing mechanics, and curtailment protocols) into the JV agreement so commercial commitments cannot outpace power reality. Link capital calls and notice-to-proceed to independently verified power milestones (e.g., Interconnection Agreement (IA) executed, major equipment ordered, substation Engineering, Procurement, and Construction (EPC) mobilized), ensuring the JV only scales when power is real — not assumed.

2. Lock in Governance Before Capital Flows

Decision rights — covering operational control, capital pacing, customer mix, and expansion triggers — must be defined upfront and anchored to each partner's capabilities. This avoids the most common JV failure mode: Misalignment that surfaces only after commitments are made and timelines have already slipped. Clear governance is the structural foundation that allows AI-infrastructure JVs to operate with speed.

3. Have Clarity in JV Strategy and Execution, and Pre-Plan for Misalignments

Partners in JVs often fail to pre-plan for misalignment. This issue is magnified when brownfield assets or retrofits are involved in AI infrastructure JVs. For retrofit sites, treat the "can this site actually do what we need?" question as a go/no-go before forming the JV or if the site is contributed to a JV by either partner. If a partner brings a site to the JV, agree on simple, upfront tests — can it handle the planned power density, cooling, and electrical setup without blowing the budget or schedule? If not, the JV either switches to greenfield or picks another site from the pipeline. Write these basics into the JV agreements so problems do not quietly become everyone's cost and delay.

4. Build JV Economics That Assume Real-World Delays and Share Them Fairly

Assume that schedules can slip — especially for power and permits — and make the money plan reflect that. Align partner incentives so that being on time is rewarded and delays are shared, instead of letting one side carry the pain. Tie major cash releases to simple, verifiable milestones (e.g., key power agreements signed, substation work started, site energized). If timelines move, the JV should automatically revisit the plan — update the schedule, adjust capital needs, and, if necessary, pause, phase, or resize — so a delay does not turn into a partnership dispute.

5. Design the JV to Evolve

AI-infrastructure markets shift rapidly — power markets tighten, cooling technologies advance, and hyperscaler demand profiles change quarter to quarter. JVs that succeed include mechanisms to reset ownership, governance, capital commitments, and expansion pathways over time. Adaptability is what separates multi-asset JV platforms from one-off projects.

Together, these principles transform a JV from a legal vehicle into a strategic engine — capable of navigating the unique power, scale, and speed constraints that define AI-infrastructure deployment.

Expert Authors

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