



How Private Equity Compounds AI Capability

Five mechanisms that turn a portfolio into a learning system

Why private equity is built to compound AI capability

A private equity firm with twenty portfolio companies runs twenty parallel experiments in AI deployment. Most enterprises get one attempt: a management team picks a vendor, configures a tool, and lives with the result. A fund gets twenty, across different sectors, data environments, and management teams, and sees the outcome of every one.

That vantage point is worth nothing on its own. What separates the firms seeing real returns is infrastructure that moves what one company learns into the next deployment, so capability accumulates at the fund level. The advantage is architectural.

This report sets out the five mechanisms firms use to do that, in the order they come into play across the deal lifecycle, each illustrated by a firm putting it into practice.

Three features of the asset class make the difference:

A FIXED HOLD PERIOD

Three to seven years to exit puts a clock on every AI investment.

HOW IT COMPOUNDS

Deployments are scoped to pay back inside the hold, so pilots reach production and each hold period compounds on evidence from working systems.

CONCENTRATED OWNERSHIP

One owner holds enough equity to mandate a decision and see it through.

HOW IT COMPOUNDS

The same standards, vendors, and data rules are imposed across every company, and common standards are what let gains in one company compound into the rest.

A MULTI-COMPANY VANTAGE POINT

Twenty companies produce twenty data sets, vendor negotiations, and talent models a year.

HOW IT COMPOUNDS

Benchmarks and playbooks form at fund level, so every new deal inherits what the last twenty produced and adds to it.

Five compounding mechanisms

Each compounds through a different asset, and each acts at a different point in the deal lifecycle. They are numbered here in the order they come into play. Firms using several in combination are the ones pulling ahead.

MECHANISM	BEFORE THE DEAL		DURING OWNERSHIP	
	Sourcing	Diligence	Hold period	Exit
01 The AI-Native Investment Thesis Compounds through portfolio selection				
02 AI-Native Diligence Frameworks Compounds through repeated criteria				
03 The Cross-Portfolio Benchmark Engine Compounds through aggregated data				
04 The AI Center of Excellence Compounds through codified judgment				
05 Curated Vendor and Talent Ecosystems Compounds through relationships				

Bar position shows when each mechanism is active. The benchmark engine is the only one that spans both sides of the deal.

01

PORTFOLIO SELECTION

The AI-Native Investment Thesis

What it is. A strategy built around acquiring companies specifically because they suit the firm's existing AI-driven playbook, with AI readiness shaping the target list from the outset.

How it works. Firms sit at different points on a spectrum running from bolt-on AI applied after acquisition, through AI as a diligence factor shaping target assessment, to AI as the reason certain targets are chosen at all.

How it compounds. This mechanism compounds through selection. Each acquisition is chosen to make the existing engine stronger, so the playbook gets a better fit with every deal and the portfolio grows more coherent as it grows larger.

EXAMPLE IN PRACTICE

GrowthCurve Capital only buys companies its playbook can work on

The firm screens for data-rich, control-oriented businesses in three sectors it knows well, then applies in-house AI, digital transformation, and human capital teams built into the investment organization itself. Its 2025 acquisition of PlanHub was made explicitly to accelerate an AI-enabled product strategy, so the thesis decided the target and the target suits the thesis.

LESSONS LEARNED

Keep the thesis broad enough to flex. A lens that widens with the market keeps good assets in play and the technology approach current.

02

PRE-DEAL JUDGMENT

AI-Native Diligence Frameworks

What it is. A diligence process that assesses AI readiness as a distinct, structured category, and gains accuracy with every deal it is applied to.

How it works. Firms are running a dedicated AI scope within technology diligence, testing whether a target has the data infrastructure, leadership capacity, and decision-science capability to sustain AI-driven value creation across the hold period. Leading firms also point AI at the diligence process itself.

How it compounds. This mechanism compounds through repetition. Every diligence process run through the framework produces both a decision and a data point, so the framework predicts AI readiness more accurately with each target it is applied to.

EXAMPLE IN PRACTICE

Brightstar Capital Partners put AI agents inside its own deal process

Internal agents review CIMs, map markets, and draft first-pass investment memos, cutting work that took hours down to minutes. The firm applies to its own diligence the capability it underwrites in targets, and each deal run through the same agents adds a point of comparison for the next.

LESSONS LEARNED

Hold the criteria constant deal to deal. Repetition is what turns a framework into an asset.

03

DATA COMPOUNDING

The Cross-Portfolio Benchmark Engine

What it is. A proprietary dataset built by aggregating operational data across every portfolio company, used to generate benchmarks no single company could produce alone.

How it works. Apollo Global Management built an AI system that reviews purchasing contracts and invoices across more than 40 portfolio companies to determine the best price paid for any given product or service. In one instance it analyzed 15,000 software purchase agreements in minutes and helped a single portfolio company cut procurement costs by more than 65%.

How it compounds. This mechanism compounds through aggregation, independent of any single company's effort. Every company added to the portfolio makes the benchmark more accurate for all the others, and every negotiation carries forty companies' purchasing history behind it.

EXAMPLE IN PRACTICE

Apollo knows the right price before it starts negotiating

Its benchmark holds the price every one of 40-plus portfolio companies pays for a given product or service. Any company renewing a contract can see the best-negotiated deal in the portfolio, and a diligence team can quantify the savings in a target before signing.

LESSONS LEARNED

Standardize data infrastructure first. Consistent formats and access rights are what make forty data sets behave as one.

04 KNOWLEDGE TRANSFER The AI Center of Excellence

What it is. A dedicated internal function that captures what worked in one portfolio company's AI deployment and transfers it to the next, so every operating partner starts with a current view of which use cases pay back.

How it works. The function separates the AI deployment from the company that ran it, then repackages it so the next company starts partway through. What travels typically includes model and vendor assessments with the terms already negotiated, the sequence in which use cases were rolled out, the pilots that looked promising and failed in production, and the roles that turned out to matter for getting a model adopted.

How it compounds. This mechanism compounds through codified judgment: why a use case was chosen and where the deployment nearly came apart. Every deployment adds to the record, and people rather than systems carry it into the next company.

EXAMPLE IN PRACTICE

Vista Equity Partners routes AI through the team that owns its playbook

More than 100 operators apply and evolve proven methods across its software portfolio, on a stated principle: what we learn in one company, we apply to another. A 2026 Google Cloud partnership gives more than 90 portfolio companies the same AI stack and engineers, so each deployment starts with lessons already learned.

LESSONS LEARNED

Give the function a real mandate. Capability compounds when operating partners route deployment decisions through it as a matter of course.

05

PEOPLE AND RELATIONSHIPS

Curated Vendor and Talent Ecosystems

What it is. A firm-maintained pool of vetted AI vendors and experienced operating talent that every portfolio company can draw on from day one.

How it works. A company evaluating a vendor for the first time negotiates blind. One drawing on a firm-wide curated list negotiates with the benefit of what every other portfolio company learned about pricing, reliability, and implementation friction. On the talent side, firms pair operating partners with consultants or full-stack engineers, a model that scales across a portfolio and survives turnover.

How it compounds. This mechanism compounds through relationships. Each deployment deepens the vendor relationships and adds to the operators' experience, so the same bench arrives at the next company better informed. It is the hardest of the five to formalize and the one most worth staffing properly.

EXAMPLE IN PRACTICE

Hg runs its operating bench and executive network as shared portfolio assets

A value creation team of more than 100 AI experts works across a portfolio where more than 60 companies are deploying generative AI, with over 1,600 projects live. Hg runs more than 120 leadership immersions, hackathons and summits a year, and connects some 2,750 senior executives on its Hive platform.

LESSONS LEARNED

Give the ecosystem an owner. In a market moving this fast, the vendor list is only as good as the person keeping it current.

Capability is a fund-level asset.

The same pattern runs through all five mechanisms. Firms getting returns from AI treat what the portfolio knows as something the firm owns and keeps building, and put the infrastructure in place to carry it from one deal to the next.

1 The advantage is organizational architecture.

Every firm can buy the same models. What differs is whether the firm has a route for moving what one company learns into the next deployment.

2 Capability has to be owned at fund level.

Benchmarks, playbooks, vendor lists, and operating talent only compound when someone at the firm is accountable for keeping them current and in use.

3 Consistency is what makes the asset accumulate.

Diligence criteria held constant across deals, and data standardized across companies, are what turn twenty separate efforts into one accumulating asset.

4 The mechanisms reinforce each other.

A thesis that selects for capability feeds better diligence, which feeds a stronger benchmark, which makes the playbook and the ecosystem more valuable to the next deal.

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