

Growth Is Not Enough. Governing Is Harder Than Scaling.

KPIs, simulation and integrated management in European tech scale-ups backed by PE and VC: why the top line alone never tells the whole story.

There is a paradox at the heart of many European tech scale-ups backed by private equity or venture capital: they grow. Often rapidly. Sometimes spectacularly. Yet too often, nobody inside the company knows precisely why they are growing, what is actually sustaining that growth, or what would happen if one of the underlying variables shifted.

ARR climbs. The customer count rises. The board receives slides with upward-pointing charts. But beneath the surface, churn is accelerating quietly. CAC has increased 30% over the past year without anyone connecting that change to the shift in sales team composition six months earlier. Margins are eroding because the cost to serve is growing faster than revenue. And no one has yet built the model that shows how these three phenomena connect — and where they lead in eighteen months.

This paper is rooted in a conviction developed through working with dozens of high-growth companies across Europe: the challenge facing PE- and VC-backed scale-ups is never only growth. It is the quality of understanding that leaders have of that growth. And the ability to translate that understanding into coherent operational decisions — not in silos, but cross-functionally, end-to-end, with an integrated view that connects the top line to the operational drivers behind it, and those drivers to the financial outputs that matter to the fund.

In an ecosystem that saw \$44 billion invested in European tech in 2025 — with 601 active unicorns and venture growth rounds representing nearly two-thirds of all deal value — the stakes have never been higher. Nor has the distance between companies that govern themselves and those governed by events.

THE ARGUMENT IN BRIEF

THE CONTEXT

The European tech ecosystem counts over 600 active unicorns in 2025 and \$44 billion in capital deployed. PE- and VC-backed scale-ups operate under ambitious growth targets — typically 2–3x ARR in the early years — with holding periods of 3–7 years and exit expectations that require a documented, credible value narrative.

THE PROBLEM

KPI management in scale-ups is frequently fragmented: the top line is monitored closely, but the link between commercial, operational and financial metrics is weak or absent. Each function lives inside its own numbers. The result is a company that grows but does not know exactly why — and that discovers structural problems only when they surface in the financial results, too late to act.

THE ANSWER

Scale-ups that build an integrated KPI system — where the top line is connected to commercial drivers, commercial drivers are connected to operational processes, and everything is projected in probabilistic scenarios tied to fund objectives — shift from reactive to decisional management. Decision intelligence is the infrastructure that makes this transformation possible.

PART ONE: CONTEXT — EUROPEAN TECH UNDER FINANCIAL PRESSURE

To understand why integrated KPI management has become a strategic priority — not merely a reporting exercise — it is necessary to understand the environment in which European PE- and VC-backed scale-ups operate in 2026.

A maturing ecosystem, but an increasingly selective one

The European tech ecosystem went through three years of deep transformation after the 2021 peak. Capital has returned — \$44 billion invested in 2025, the highest level since 2022 — but with a radically different logic. Rounds are fewer but larger. Venture growth rounds account for nearly two-thirds of all deal value, the highest share since 2017. Capital concentrates on a limited number of companies with proven metrics and credible exit paths. The bar for an IPO has shifted: companies now need \$400–800 million in ARR with growth above 25%, against the \$150–250 million threshold of the previous cycle.

In this context, the difference between scale-ups that attract growth rounds at elevated valuations and those that stagnate — or are recapitalised on unfavourable terms — is not measured solely by growth speed. It is measured by the quality of self-understanding. And by the ability to demonstrate to investors, with data, that growth is sustainable, efficient, and repeatable.

The fund's logic: targets, holding periods, and the exit narrative

Anyone leading a PE- or VC-backed scale-up operates under a dual time pressure. There is the operational horizon — quarter by quarter, sprint by sprint — and there is the fund's horizon, typically three to seven years from investment, ending with an exit: IPO, strategic sale, or secondary buyout. Every operational decision, every resource allocation choice, every trade-off between growth and margin plays out at the intersection of these two horizons.

PE funds managing tech scale-ups follow a highly structured process. Nearly 90% of PE firms develop a 100-day plan at acquisition. This plan establishes governance, installs the KPI system, launches three to five high-confidence value creation levers, and defines the reporting framework toward the fund. The implicit message is clear: from day one, the company must be able to tell its story in numbers. And that story must be coherent, credible, and updated in real time.

The best scale-ups do not grow faster than others. They understand better why they grow — and use that understanding to make faster, more precise decisions. This is the difference between a management approach that leads to a successful exit and one that misses it.

Three trends raising the stakes

In 2025, three trends have made integrated KPI management more critical than at any point in the previous cycle. The first is multiple compression: the median EV/Revenue of European tech companies stands at 4.73x in H1 2025, well below post-Covid peaks. In a compressed-multiple market, the valuation gap between a company with NRR above 120% and one with NRR at 85% can represent three to five turns of multiple — tens of millions of euros of enterprise value on any given round or exit.

The second trend is the shift from growth to efficient growth. Over 70% of European VC funds stated in 2025 that they prioritise long-term resilience over rapid scale. CAC for new customers rose 14% in 2024. Companies with NRR above 100% grow at 48% annually versus a 26% median: retention has become the most powerful — and least expensive — growth multiplier available.

The third trend is AI as an operational standard. VCs are deploying capital into AI-native companies at a record pace — 39% of all European capital in 2025 went into AI — but they are also asking existing scale-ups to demonstrate how AI is impacting operational efficiency, not just the product. ARR per employee, internal process automation, commercial cycle velocity: these have become valuation metrics, not just management metrics.

PART TWO: THE TOP LINE DOES NOT TELL THE WHOLE STORY

There is an understandable — but dangerous — tendency in fast-growing scale-ups: to monitor the top line obsessively and treat everything else as implementation detail. ARR growing 60% year-on-year? The board is satisfied. The founders are energised. The sales team collects bonuses. But beneath that growth, certain dynamics are building tomorrow's problems.

The silo KPI problem

The most common pathology in scale-ups is not a lack of data. It is an excess of unconnected data. The commercial team monitors pipeline, win rate, and sales cycle. The product team watches DAU, feature adoption, and NPS. Finance tracks ARR, burn rate, and runway. Customer success measures churn and time-to-value. Each function lives inside its own numbers, optimises its own indicators, and brings a partial reading of reality to the board.

The result is a company making locally correct but globally incoherent decisions. Sales pushes new customers at any cost — including discounting, lowering qualification criteria, promising features not yet available — to hit the quarterly ARR target. Customer success inherits these poorly acquired customers and battles structurally elevated churn that no retention investment will solve as long as the upstream source of the problem — acquisition quality — goes unaddressed. But no one has built the model connecting today's win rate to churn twelve months from now, because the two functions do not communicate systematically.

The KPIs that actually matter — and how they connect

For PE- and VC-backed tech scale-ups, three levels of KPIs must function as an integrated system, not as separate lists.

Level	Key KPI	What it measures	2025 B2B SaaS Benchmark
TOP LINE	ARR / MRR	Annual / Monthly Recurring Revenue	Median growth: 26% YoY
TOP LINE	NRR (Net Revenue Retention)	Net expansion from existing customers	Best-in-class: >120%; median: ~101%
TOP LINE	GRR (Gross Revenue Retention)	Pure retention, excl. expansion	Target: >90%; median: 92%
TOP LINE	Expansion ARR	Share of new ARR from existing customers	>50% for companies above \$50M ARR
COMMERCIAL	CAC (Customer Acquisition Cost)	Cost to acquire one new customer	+14% in 2024 vs prior year
COMMERCIAL	CAC Payback Period	Months to recover acquisition cost	Median: 15–24 months for ACV >\$100K
COMMERCIAL	LTV:CAC Ratio	Lifetime value vs acquisition cost	Target: >3:1; 2024 median: 3.6:1
COMMERCIAL	Win Rate & Pipeline Coverage	Commercial process efficiency	Coverage: 3–4x quarterly quota
OPERATIONAL / FINANCIAL	Burn Multiple	Cash burned per \$1 of net new ARR	Target: <1.5x in growth stage
OPERATIONAL / FINANCIAL	ARR per Employee	Organisational efficiency	Median 2025: \$129K; top quartile: \$280K+
OPERATIONAL / FINANCIAL	Rule of 40	Growth % + EBITDA margin %	Target: >40 for mature companies
OPERATIONAL / FINANCIAL	Gross Margin	Recurring gross margin	Best-in-class SaaS: >75%

These three levels are not separate compartments. They are a system. A low NRR — say, 85% — is not just a customer success problem: it is a signal that the product is not delivering on the promises made during the sales process, or that the customers acquired were the wrong customers, or that the onboarding process is broken, or all three simultaneously. A CAC growing 30% year-on-year is not just a sales team problem: it reflects market saturation in the target segment, positioning being challenged by competition, or a go-to-market model that has exhausted its potential and needs redesigning.

An 85% NRR is not a customer success problem. It is a signal that the sales process, the product, and onboarding are misaligned. Scale-ups that understand this fix it at the source. The others keep investing in retention without ever closing the upstream tap.

The 'growth at all costs' era — and its invoice

The 2020–2021 cycle normalised a growth model in which funds accepted burn multiples of 3–5x and above in exchange for ARR acceleration. Many European scale-ups built their internal processes around this logic: fast growth, secondary efficiency metrics. The 2022–2023 re-rating — with tech valuation multiples halving or worse — exposed the fragility of this model brutally. Companies with \$50–80 million ARR but burn multiples above 3x found themselves forced to recapitalise in adverse market conditions, accepting round valuations significantly below prior rounds or surrendering dilutive equity on unfavourable terms.

The lesson is not that growth is wrong. It is that growth without understanding its causes and costs creates systemic fragility. And that funds entering a scale-up today — or evaluating an investment — look carefully not only at the pace of growth but at the quality of growth: is it won in durable customer segments? Does it generate expansion or only new logos? Does it produce margin or consume cash? The answers live in the KPIs — but only if those KPIs are connected to each other in a coherent system.

PART THREE: THE BRIDGE BETWEEN KPIS AND DECISIONS — SIMULATION AND INTEGRATED MANAGEMENT

Defining the right KPIs is necessary. But it is not sufficient. The real challenge is not measurement — it is using numbers to make better decisions, faster, at every level of the organisation. This requires three things that most scale-ups have not yet built systematically: integrated visibility, scenario simulation, and a non-siloed decision process.

First: build the KPI tree — the causal map of the business

The starting point is building a causal KPI tree: a map that shows how operational variables connect to commercial drivers, how commercial drivers connect to the top line, and how the top line connects to the financial outputs that matter to the fund. Not a list of metrics, but a logical structure that makes the cause-and-effect relationships between key variables explicit.

In a B2B SaaS scale-up, this map might start from ARR and decompose it into: ARR from new customers (a function of pipeline volume × win rate × average ACV) + ARR from expansion (a function of NRR minus GRR) minus ARR from churn (a function of GRR). One level down: win rate is a function of pipeline qualification, product competitiveness, and sales cycle length. Sales cycle length is a function of the customer's purchasing complexity, the number of stakeholders involved, and sales team effectiveness. Every node of the tree

becomes an intervention point: an action on that variable produces a predictable — and measurable — effect on the top line.

This structure is precisely what PE firms build in their 100-day plan. Best-in-class practice describes creating 'KPI trees that link operational metrics to value creation' as one of the first governance acts post-acquisition. The problem is that this structure is often built for reporting toward the fund — not as a daily management tool for the company's own leadership. The result is a system that produces upward visibility but does not generate downward decisions.

Second: simulate fund targets — not just report against them

The second shift is moving from monitoring to simulation. Scale-ups backed by PE and VC operate with clear objectives: the fund has an investment thesis, a target ARR at exit, an expected MOIC. These objectives translate into intermediate targets — on growth, retention, margin — that are communicated to management as benchmarks. The problem is that in most cases these targets are managed as reporting KPIs: measured after the fact against whether they were reached, not simulated in advance as to how to reach them.

Simulation changes this dynamic. Instead of asking 'did we hit the ARR target this quarter?' the leadership asks 'which combinations of operational variables bring us to the ARR the fund expects at exit — and what is the probability of each scenario given our current trajectory?' This question requires a model: a system that connects today's operational decisions (hire five additional AEs, launch a new outbound campaign, reduce the onboarding cycle by thirty days) to their effects on the top line and P&L over a 12–36 month horizon.

HOW A FUND READS YOUR KPIS

What the fund sees

ARR, growth rate, NRR, burn multiple, gross margin. These are the numbers that go into the board deck and that shape the company narrative. An NRR above 120% can justify an EV/ARR multiple 1–3x higher than a company with NRR at 85%. On a \$20M ARR business, this delta is worth \$20–60 million of enterprise value.

What the fund wants to understand

Why the KPIs are where they are. What moves them. Whether the growth is replicable and sustainable. Whether management has the model to understand this — or discovers it only at year-end. The difference between a management team that says 'churn increased because the market became more competitive' and one that says 'churn increased 4% in the sub-\$50K ACV segment acquired in Q3 2024, where average time-to-value was 45 days versus 18 days in enterprise' is the difference between a fund that trusts and a fund that micromanages.

What determines the exit multiple

The quality and durability of growth. Enterprise customers with high ACV and documented expansion cycles are worth more. NRR >120% is read as proof of pricing power. A burn multiple <1x demonstrates scalable efficiency. Management teams arriving at exit with three years of consistent KPIs and a credible causal narrative achieve multiples 1–2 turns above the sector average.

Third: break the silos — end-to-end management

The third element is the hardest to build — not technically, but culturally. Integrated end-to-end management means that decisions made by one function are visible and coordinated with upstream and downstream functions. The commercial team cannot optimise only win rate without considering the impact of the acquired customer mix on future churn. The product team cannot allocate roadmap solely based on existing customer requests without considering the impact on upsell and NRR. Finance cannot build the budget without integrating operational projections from commercial and product.

In practice, this means building a decision process with a clear cadence: weekly review of leading indicators (pipeline, conversion, product engagement), monthly review of lagging indicators (ARR, NRR, churn by cohort), quarterly review of strategic scenarios (where are we versus the fund's plan, which levers must we activate in the next 90 days, where is the model diverging from original scenarios). And — critically — a single shared model connecting all these levels, rather than three separate models living in three Excel files owned by three different functions.

The most sophisticated PE funds understand this. The framework emerging from advanced best practice describes a three-phase system: 100 days to stabilise governance and install the KPI pack; 12 months to institutionalise operating rhythms and scale identified value levers; a three-year flywheel reinforcing digital and AI infrastructure and building the exit narrative with documented evidence. Each phase requires the company's decision model to be operational, current, and shared.

PART FOUR: THREE RECURRING PATTERNS — AND HOW TO FIX THEM

In European tech scale-ups operating under fund objectives, three dysfunctional patterns appear with regularity. These are not exceptions — they are the norm in companies that have not yet built an integrated management system. Each has an identifiable cause and a concrete response.

Pattern 1: the top line masking the underlying problem

The company grows at a sustained pace — say, 40% YoY on ARR. The board is satisfied. But GRR has declined from 89% to 83% over the past three quarters, silently, because no one has built a monthly churn-by-acquisition-cohort review. The reason: in the prior year's commercial push, the team lowered the qualification threshold to hit new logo targets. Customers acquired below that threshold are now churning at a rate 60% higher than the core segment. If the trend continues, net growth will be below 10% in four quarters — not because of market problems, but because of an acquisition quality issue that was visible in the data months before it manifests in the top line.

The solution is not monitoring more metrics. It is building the causal link between win rate, qualification criteria, and churn by cohort — and making this map visible to management

monthly, not quarterly. A simulation system projecting current GRR onto existing cohorts shows the trajectory 9–12 months before the problem becomes visible in the top line.

Pattern 2: the fund target that becomes science fiction

The fund invested with a thesis projecting an \$80 million ARR business at exit, four years from now. The company is today at \$18 million, growing at 35% annually. If the CAGR holds, ARR at exit will be approximately \$65 million — 19% below target. But growth is decelerating: the market is saturating, CAC is increasing, sales cycles are lengthening. With current trends, the projection falls further still.

The problem is not that the target is unreachable. It is that management has not yet built the simulation showing what must happen to reach it — and what must change versus today. How many additional AEs? With what efficiency? Through what combination of expansion (NRR) and acquisition? In which market segments? With what impact on burn? Without this model, the fund and management are operating two separate narratives that collide predictably in quarterly board reviews rather than converging on a shared, dynamic plan.

Pattern 3: growth that consumes more resources than it produces

ARR grows, but the burn multiple has deteriorated from 1.8x to 2.7x over the past six quarters. The company is burning €2.70 of cash for every euro of net new ARR. The causes are distributed across multiple functions — the commercial team grew faster than revenue; infrastructure costs increased; the cost to serve new customers proved higher than estimated. But no one has an integrated view of these three phenomena. Finance sees the burn. Commercial sees the sales costs. Operations sees the delivery costs. No one sees the complete picture — and no one has the mandate to build it.

The solution requires a single source of truth connecting revenue, operational costs, and cash in a dynamic model. Not three separate dashboards updating at different times with different logic. An integrated model that allows the CFO to answer in real time: 'if we increase the commercial team by 20% next quarter, what is the effect on burn over the following four quarters, accounting for ramping time and the average acquisition cycle?'

PART FIVE: IMPLICATIONS BY ROLE

Integrated KPI management and scenario simulation are not tools that concern only a single function. They have different — and complementary — implications for the different actors who govern a scale-up.

For PE and VC Funds

Investment in an integrated KPI management system is among the most asymmetric returns available in a portfolio. A company arriving at exit with three years of consistent KPIs, documented causal narrative, and a management team that can answer 'why' to every number in the board deck achieves multiples above the sector average. Not for aesthetic reasons, but because it reduces perceived acquirer risk. An NRR above 120% with cohort data demonstrating its sustainability can command a 1–3x EV/ARR premium versus a company with similar metrics but without that documentation. The 100-day plan is the right instrument. But it must install a real management system — not only a reporting pack for the fund.

For CEOs and Scale-up Management

The temptation to manage only the top line is understandable: it is the most visible number, the one against which success is perceived, the one that generates board enthusiasm. But it is also the quintessential lagging indicator — the one that reveals problems with the greatest delay. CEOs who govern their scale-ups well invest in understanding the causes of growth, not only in measuring growth. This means building the causal model, feeding it with real operational data, and using it to guide resource allocation decisions — not to produce slides.

For CFOs and Finance Leaders

The CFO's role in fund-backed scale-ups has expanded significantly in recent years. It is no longer only the custodian of the budget and investor reporting. It is the builder of the information architecture that connects operations, commercial, and finance into a coherent system. This means investing in integrated FP&A systems, building the model that connects operational KPIs to the P&L, and ensuring the budgeting process starts from operational drivers rather than financial targets handed down from above. A CFO who responds to the fund with 'churn increased due to market conditions' without cohort analysis to support it is failing the role. A CFO who responds 'churn increased 3.2% in the SMB segment acquired in Q2 2024, we have identified the three primary causes and are already seeing a 40% improvement in post-intervention cohorts' is creating value.

CONCLUSION: UNDERSTANDING AS COMPETITIVE ADVANTAGE

In 2025, the European tech scale-ups attracting the best investors and achieving the highest valuations are not necessarily those growing fastest. They are those that understand their growth most deeply. That can distinguish quality ARR from fragile ARR. That connect today's operational decisions to tomorrow's financial outputs. That arrive at the board with a simulation — not only a report.

This is not an advantage reserved for large or well-capitalised companies. It is a methodological choice that can be built regardless of size. The causal model, the KPI tree, the scenario simulation tied to fund objectives: these are accessible tools. The decision to

invest in them — and to build the management discipline that makes them operational — is the variable separating scale-ups that govern their own trajectory from those that merely follow it.

Growth is necessary. But understanding that growth is the real competitive asset — **the one that determines not only whether the fund target is reached, but at what price and with what story.**

ABOUT THIS RESEARCH

This paper is based on an analysis of the European tech ecosystem and PE/VC-backed scale-up management frameworks conducted by Vedrai S.p.A. in February 2026. Market data on European tech investment (2025 VC deployment, unicorn count, deal value distribution) is drawn from the Atomico/Sifted 'State of European Tech 2025' report and PitchBook data. SaaS KPI benchmarks (NRR, GRR, CAC, growth rates, ARR per employee, Rule of 40, burn multiple) are aggregated from SaaS Capital, High Alpha, Pavilion, ChartMogul, and Benchmarkit for the 2024–2025 period. PE management frameworks (100-day plan, KPI governance, value creation plans) are synthesised from AlixPartners, Grant Thornton, and industry best practice.

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