



Leveraging Digital, Data & AI Technologies to Increase Enterprise Value: How Private Equity Firms Are Getting It Right

Caroline Zimmerman
Profusion, carolinez@profusion.com

Shahbaz Alam
Amazon Web Services, shahbaza@amazon.com

Oliver Blaydon
Armstrong International, oliverb@armstrongint.com

Theodoros Evgeniou
INSEAD, theodoros.evgeniou@insead.edu

We are in the midst of a sea-change in how private equity (PE) firms are increasing the value of their portfolio companies. In a world of higher interest rates and competition, financial engineering and cost take-outs are no longer sufficient to meet investor expectations. Data-enabled digital transformation is increasingly seen as the differentiator for increasing enterprise value in this new climate. As PE firms invest in these capabilities, they are developing playbooks for how data and AI can be leveraged to deliver new revenue streams and improve margins. Drawing from 30+ interviews with digital and data experts in PE firms across Europe and the United States and executives at their portfolio companies, we uncover the principles in these playbooks so that all leaders can better understand how they can use these tools to gain lasting competitive advantage.

Keywords: Data, Analytics; GenAI; Generative AI; AI; Artificial Intelligence; Digital Transformation; Machine Learning; Portfolio Companies; Private Equity; Pricing; Demand Forecasting; Growth Model; Business Intelligence; BI; Valuation; Customer Journey; Enterprise Value

Working Paper is the author's intellectual property. It is intended as a means to promote research to interested readers. Its content should not be copied or hosted on any server without written permission from publications.fb@insead.edu

Find more INSEAD papers at <https://www.insead.edu/faculty-research/research>

Copyright © 2024 INSEAD

Contents (click to go directly to desired section)

- Introduction.....2
- 1. Data and data technologies as value enablers5
- 2. Leveraging data and AI to drive innovation*7
- 3. Leveraging data and AI to deliver bottom and topline growth 10
- 4. Leveraging data and analytics to improve strategic decision-making..... 13
- 5. Overcoming cultural barriers to data and AI adoption 16
- Conclusion 19
- Private Equity Explainer..... 19
- Research Methodology.....20

*Stay tuned for an update to this paper on the impact of GenAI in 2025

Introduction

Private equity does very little which isn't intended to deliver significant returns quickly. With a razor-focus on Return on Investment (ROI), PE firms are notoriously cautious about deploying their own capital on centralised resources, keeping internal teams lean. So when the PE world explodes with new roles focused on developing the digital, data, and AI capabilities of their portfolio companies – and they are paying for this expertise *out of their own P&L* – the message is loud and clear: *we are seeing a sea change in how PE firms believe they can generate the highest returns for their investors, and data and digital are at the heart of this change.*

Since 2018, the number of GPs in Europe and North America – across all sizes, investment theses, strategies, sector focuses and geographies – with at least one person focused solely on leveraging digital and data to create value across the portfolio has exploded from a handful to over 100 of these individuals. Compensation for these roles has skyrocketed, from £250k per year with no carry in 2022 to £450k in annual salary *plus* equity stakes today. Furthermore, GPs are soliciting input from these professionals earlier on in the ownership lifecycle, including in the due diligence process, which in turn underlines the rise in strategic importance of these capabilities. Many LPs are now requiring GPs to incorporate digital value creation plans in their investment theses. Indeed, the digital and data operating function is rapidly becoming recognised as a new professional class within private equity that is here to stay.

What's perhaps even more surprising is that GPs are doubling down on these functions at a time when many organisations outside of PE are questioning the value of their investments in this space. So what is PE doing differently? Why are they focusing on digital and data at a time when others seem to be increasingly cautious? How do they do so successfully, and what are the challenges they face?

The macroeconomic climate plays a significant part in this phenomenon. When interest rates were low, GPs could rely almost entirely on financial engineering (leverage), operational improvements, and cost take-out measures to deliver eye-watering returns. In a world of higher interest rates and increased competition – where all firms are using a combination of these traditional tactics – it's become vital for GPs to add value creation to their toolkits to meet IRR targets, continue satisfying investor expectations, and distinguish themselves from other firms. Within this context, digital and data capabilities – which just a few years ago were seen as an afterthought, even though firms were leaving value on the table as a result – are increasingly considered vital enablers for value creation that firms can no longer afford to ignore.

But the macroeconomic climate is only a catalyst for an underlying pattern: unlike many non-PE-backed organisations, PE firms *are* seeing significant returns from their investments in data and digital. They are consistently getting it right where so many others continue to struggle. So what's

their secret to success? How do the digital and data experts on PE value creation teams advise their PortCos to proceed with their investments in these capabilities so that they deliver value?

Our research uncovered five main principles that lie at the heart of PE's approach to building these capabilities:

1. **Value is clearly defined.** “Value” as it relates to data capabilities can mean different things in different organisations; for some, it may mean increased EBITDA, while for others, an increased ability to make the right decisions. In PE, value refers to enterprise value (EV). If a digital initiative isn't fundamentally going to improve EBITDA or the EBITDA multiple, *they won't pursue it*. This clear alignment around the definition of value is one of the fundamental advantages that PE-backed firms enjoy over other corporates. Furthermore, PE firms don't invest in *data initiatives* per se; instead, they invest in *growth initiatives* that will increase EV. Increasingly, these growth plans revolve around *digital transformation, enabled by data* and data technologies. [\[Read more\]](#)
2. **It's rare for data-driven innovations to affect valuation multiples...but that could change drastically with the advent of GenAI.** The most powerful way that data and AI can affect a company's valuation is to increase its multiple. However, doing so requires fundamentally altering how a company generates revenue – by helping it transition to a different revenue model, launching new product lines, or investing in other forms of innovation that deliver lasting sources of competitive advantage. It's still relatively rare for data-driven innovations to deliver this level of change. For instance, GenAI POCs at PE-backed companies have, so far, primarily focused on *internal productivity gains*, such as coding, data entry, and compliance support, which aren't yet delivering the kind of tectonic shifts that affect the investment thesis. But it is still very early days*. Significant value from technology investments always comes with a lag, and the future is bright. AI features are expected to work their way into product roadmaps over the coming months and years, promising to deliver revenue gains in the form of upsell opportunities and increased market share that could fundamentally reposition a company in their market. However, the opportunities and risks for AI and GenAI vary greatly by industry, so it's important to assess these within an organisation's unique context. As foundational models from various providers become ubiquitous and more easily accessible, a company's proprietary data will be the greatest source of competitive advantage. [\[Read more\]](#)

*Stay tuned for an update to this paper on the impact of GenAI in 2025.

3. **The three most common ways that data and analytics can contribute to top and bottom-line growth are *commercial team enablement, pricing and demand forecasting*.** Data is often a driver of incremental change over radical innovation, so it's more common for data to power EBITDA growth than affect the multiple; however, it can do so powerfully. *Commercial team enablement* is focused on using advanced analytics to help sales and marketing teams curate their to-do lists and measure the effectiveness of their activities, for example by surfacing the characteristics and behaviours of their most valuable customers, targeting prospects exhibiting similar characteristics, and ensuring they are effectively shepherded through the sales funnel. *Pricing* can focus on elasticity modelling, streamlining pricing in a services business, or establishing pricing compared to competitors – all with the goal of setting optimal price points to increase revenue. Machine learning is also a powerful tool for more accurately *predicting demand* for products and services, which in turn allows companies to adjust their inventory, staffing, logistics, and other expenditures to maximise sales while controlling costs. A long tail of further applications for leveraging data and advanced analytics to improve EBITDA include bringing products to market more quickly by identifying bottlenecks in the product development lifecycle, predicting defects or maintenance issues in manufacturing processes, and using data to determine where to open new physical store locations, among others. [\[Read more\]](#)

4. **Growth modelling may be the simplest but most powerful way that data can contribute to enterprise value...even if its benefits are harder to measure.** Traditional BI may evoke dashboard graveyards and scores of poorly-defined KPIs that get lost in the fray. However, there is one subset of BI that remains a powerful enabler for growth: growth modelling. A growth model is a clearly defined set of metrics that surface the mechanics of an organisation's sales engine. Growth modelling is what allows the leadership team and board to improve their strategic decision-making by deeply understand the value drivers of their business and how they can activate them in response to evolving market conditions. Armed with a robust growth model, leadership teams can measure their performance against their business plan, while gaining clarity on where and how much to invest to unlock additional growth. Though it's next-to-impossible to definitively quantify the value of a growth model, in PE it provides the real-time evidence base to support a compelling exit story – which in turn increases the likelihood of a competitive sale. [\[Read more\]](#)

5. **Unsurprisingly, culture matters in PE, too – and building credibility with portfolio companies is key to success.** Just like in non-PE-backed corporates, cultural (rather than technical) barriers tend to be the greatest obstacle to success. Building credibility with portfolio companies is largely dependent on being able to demonstrate that the PE firm has done this before, has a clear vision and roadmap, and can provide evidence for why investing in data (rather than, say, hiring more salespeople or spending more on paid search ads) will deliver tangible benefits. The firms furthest ahead in this space are developing digital, data and AI playbooks that help them repeat successes across their portfolio – though this is more achievable when the underlying businesses are in similar industries. Moreover, senior digital and data operators in PE possess a high degree of business and financial literacy – often honed through previous roles in digital businesses with P&L responsibilities and/or strategy consulting – that complements their technical skillsets. Their fluency in the language and mechanics of growth plays a key part in their ability to overcome cultural barriers and influence senior stakeholders to bring them along the transformation journey. [\[Read more\]](#)

1. Data and data technologies as value enablers

Key action points for leaders

1. Identify growth initiatives, alongside the data and analytics capabilities required to deliver them, instead of stand-alone data initiatives.
2. Where possible, build vertical slices of technical infrastructure that support growth initiatives with clear ROI rather than a horizontal approach that isn't directly tied to growth levers.
3. Less digitally- and data-mature businesses may need to focus on stabilising financially and closing their books on time before investing in broader data initiatives.

Growth initiatives over data initiatives

Data is becoming an increasingly important area of focus in PE firms' value creation plans. "The times when you could buy the assets you wanted and have a pretty decent runway without having to do too much intervention are gone," said one operating partner who is now a C-suite leader at a PortCo. Financial engineering and leverage – the classic PE tools for increasing enterprise value – are no longer enough to provide the quick fix they once did, especially in a market where business impact comes from tech. Firms must work harder than before to create value, and be able to demonstrate their value-add to their investors. Data, and now AI, is increasingly seen as a significant part of the investment thesis and LPs are asking how the GP pulls these levers in fund-raising discussions.

But what kinds of data initiatives are PE firms investing in to generate returns? Certainly not in building data lakes and pipelines to put all the company data in one place in the hopes of creating a single source of truth. "Data dumped into Snowflake that just sits there till someone decides they

might need it someday is actually negative ROI,” said one MD. Another leader also underlined how they would never invest in a data capability for its own sake. “Most companies we invest in have very low data maturity,” they explained, “and putting that maturity in is so expensive that we’re never going to realise the gains from putting the work in. That equation doesn’t really stack up,” they said, in reference to blanket investments in data infrastructure and quality that aren’t clearly linked to growth levers.

Indeed, data initiatives in PE are never “just” data initiatives; they are often a core enabler of a value-creation plan, but they are rarely considered to be *the growth initiative itself*. Growth plans could include launching a new product, opening a new market, or streamlining pricing – all of which are informed by data analytics, but aren’t seen as “data projects” per se. “We always have a really, really clear value driver that we are trying to solve for,” said one operating partner. With the exception of cybersecurity, everything a PE firm does must be proven to create a tangible increase in enterprise value. “PE firms like ROI and they get ROI,” quipped one expert; data is no exception to this rule.

Vertical investments in foundational capabilities

PE firms will often advise the portfolio company to invest in establishing foundational data capabilities like a data warehouse and automated pipelines, but *always in service of a specific aspect of the value-creation plan*. “You have to tie investments in data foundations to the things you want to do as a business. You have to build a vertical slice of your foundation and then test and integrate that into your value creation initiative, rather than building a big horizontal layer first,” said one head of digital value creation. PE-backed PortCos absolutely invest in data engineering and infrastructure, but the kind that delivers a measurable return rather than the one that puts a black hole in the P&L.

Stabilise the business financially, then invest in more advanced data and analytics capabilities

Some PE firms such as EQT, Hg, Apollo, Blackstone, Triton, Cerberus, TDR Capital, Silver Lake, and others, have aggressively invested in data and include senior data professionals throughout the investment lifecycle, starting from the diligence process. However, some smaller firms do not have the resources to bring in these professionals at such an early stage, and will generally consider investments in data capabilities once they’ve stabilised the business financially, usually after the first 6-12 months of ownership. “Most mid-market companies actually struggle to publish their numbers by the fifth of the month,” said one MD. “So the first focus is on making sure they know what the company has and that they can close their books on time. Only then can you go to the next level,” they added. “Your base is to have a firm grip on what’s going on in the business and you can only do that with timely financial reporting,” said another expert.

What’s clear, however, is that even boutique firms are investing in these capabilities. Indeed, financial metrics are lagging indicators that do not ultimately allow you to steer your business as proactively as when you have a strong grasp of leading, operational metrics that you can drill down into to uncover root causes. These operational metrics “give you a high degree of predictability, transparency and understanding of what’s coming down the line,” said one data leader who has worked in various PE-backed companies, “like being able to see your sales pipeline 180 days out.” The reason capturing these operational metrics is so crucial in PE is that it allows the firm to identify whether the PortCo is achieving the numbers in the business plan that will enable the valuation they

are looking to achieve at exit. If they're not, they want to know as early as possible to examine options for how the business can course-correct.

[\[Back to Introduction\]](#)

2. Leveraging data and AI to drive innovation*

*Stay tuned for an update to this paper on the impact of GenAI in 2025.

Key action points for leaders:

1. The gold standard is the use of data and AI to drive innovations that change a company's valuation multiple, but this is still rare today, so don't feel left behind.
2. GenAI will disrupt some industries more than others, so consider opportunities and risks within your unique context.
3. Cleansed, accessible, proprietary data on which to train models will be the greatest source of competitive advantage in an AI-enabled world.

Data-driven innovations that increase the valuation multiple

The most powerful way that data can affect a PortCo's valuation is by changing the multiple. Doing so requires fuelling business model and product innovations that fundamentally reposition a company, either by changing the industry it's considered to be in (tech companies tend to have much higher multiples than, say, insurance companies) or by creating a new source of lasting competitive advantage. Today, it's still relatively rare for data to play a leading role in the kinds of innovations that deliver multiple increases. But this does happen on occasion – and the trend is expected to significantly accelerate with the advent of GenAI.

For example, one PE firm worked with a healthcare provider to manually purchase, collect and cleanse an AI-enhanced dataset that helped drug manufacturers recruit members for clinical trials for rare diseases. They already had the customer base to market this new data product to, which had a more attractive recurring revenue model than their other products, thus significantly increasing their valuation multiple.

Another PE firm worked with a luxury transportation provider to build an Uber-like service to increase the utilisation of its fleets on return trips, when the vehicles were usually empty. They developed a scheduling algorithm based on reinforcement learning to forecast revenue and demand. Although this formed the backbone of the new service, the leader behind this initiative was careful to note that it was far more than just an algorithm. "It was a whole new brand," explained the Chief Digital Officer. "It involved service design and UX, a platform, and a web and mobile app. We needed an interaction point that was user-friendly and fulfilled a real, latent need." He was able to advise on this initiative due to his dual expertise in data and digital transformation. It was more than simply a data initiative, it was a whole new digital product offering.

While GenAI is becoming a core component of most value creation plans, it isn't affecting the investment thesis...yet

There is certainly a great deal of hype around Generative AI (GenAI). While GenAI is not the answer for every problem facing businesses, as a technology, it is not too complex to explore, and has some relevant and practical applications. Both businesses and individuals can quickly adopt and experience GenAI, which makes it different from other hyped technologies in the past. A McKinsey Global Institute study indicated that generative AI has the potential to generate value equivalent to \$2.6 trillion to \$4.4 trillion in global corporate profits annually.

Most GPs spent the first half of 2023 analysing and assessing the impact of GenAI on their PortCos. The second half of 2023 involved these PortCos experimenting through proof of concept (POC) projects. To date, most of these projects focused on enabling productivity gains in areas such as coding, content creation and compliance that, while noteworthy, don't actually allow a business to drastically cut costs. However, existing use cases for GenAI in PE-backed companies are *augmenting* human capabilities, rather than *replacing* them. This means GenAI may be able to help a business scale without adding headcount, but there is no immediate ROI. "Right now, it's a big tail wagging the dog," said one technology expert serving the PE market. "Management teams want to be able to say to the PE firm, 'Look this is what we're doing with GenAI,' but they're doing the low hanging fruit, which is the internal productivity stuff. It's a bit of a consolation prize," they concluded. Another operating partner confirmed, "We're not doing the cool, sexy, revenue-generating, front-end stuff yet, but it's coming in 2025. Adding GenAI features to your product that you can upsell to customers is a north star," they continued, "but no one is there yet because it takes a lot of work and effort to think about how to build that functionality, how to make it available to customers and price it, and also about the opportunity cost of repurposing people."

GenAI is expected to significantly affect valuations...in the long-term

Although GenAI and AI aren't impacting valuations yet, there's no doubt they will in the future. "It's going to get embedded into work throughout the whole value chain," said the same expert, "from the frontline of people interacting with customers using a virtual assistant to tell them, 'Here's everything you need to know about this customer and this the stuff you should be talking to them about,' through to creating content and products, all the way to back-office functions and operational tasks around data entry and compliance. You'll still need a human in many processes and applications to check that it's right, but they won't actually be doing the whole thing anymore," they concluded. Those companies who are able to integrate these productivity gains into their business model while incorporating user-friendly GenAI features into their products stand to make exponential gains.

Frameworks for assessing GenAI opportunities and risks given an organisation's unique context

Given its rising importance, most GPs incorporated a GenAI assessment into their Technology Due Diligence (TDD) process, which seeks to assess potential opportunities and risks for an asset. These assessments take into account the often-overlooked fact that GenAI will be relevant to businesses in different industries in different ways, at least over the medium term. Understanding these differences will help direct organisations on where they should focus their GenAI efforts. There are five key capabilities that are useful to think about for Gen AI:

1. Answer – the ability to retrieve information (think chatbots)
2. Edit – the ability to review and improve material
3. Summarise – the ability to describe and synthesise more complex information
4. Create – the ability to generate new ideas or images from prompts
5. Analyse – the ability to reason, categorise, compare, and contrast

The differences that arise from these GenAI capabilities depend on the interaction with the type of product or service of a particular company. Businesses that provide digital services such as marketing, legal, interpretation services, etc. or digital products including software, gaming, insurance and others, will likely see more near-term impact than businesses that provide physical products (manufacturing, pharmaceuticals) or physical services (logistics, hospitality, retail).

Gen AI presents the greatest risks – but also the greatest opportunities – to businesses that provide digital offerings, deal with moving or processing information (as opposed to physical things) and that are unprotected, either by regulation or other practical barriers to entry like very highly specialised domain expertise. The impact of GenAI on these businesses will lead to increased competition from new entrants that are inventing new digital or physical products or transforming their operations, and potentially their entire cost structure to deliver physical services. These digital businesses will need to automate large parts of their processes, given that their customers will have ready-access to (or are already using) GenAI interfaces as a substitute for services they previously paid for. “Most customers do not want to build their own GenAI solution if they can avoid it and will have an expectation that GenAI capabilities are incorporated into the software they purchase,” said one expert. A head of digital at a PE firm furthered this by stating, “I tell portfolio executives, I don’t want to know about your GenAI strategy, I want to know your GenAI *adoption* strategy.”

Proprietary data remains the source of competitive advantage in a GenAI-enabled world

As the race for general purpose models continues, with improvements in accuracy, speed, and cost arriving with each new release, there will not be one model to rule them all. Companies will want the freedom to experiment across multiple Foundational Models (FMs) or Large Language Models (LLMs) and select the best one for their use case – be it the latest general-purpose FM, or a specialised FM trained on a very specific dataset relevant to that business. The key differentiator for companies wanting to build GenAI solutions or applications unique to their business needs will be an organisation’s data. Every company has access to the same FMs, but those companies that use their proprietary data will be the ones successful in building GenAI applications with real business value.

Data is the difference between generic GenAI applications, and those that know one's business and the customer deeply. Using data for GenAI doesn't mean that one has to build their own LLM. While a limited number of companies will build and train their own LLMs with vast amounts of data, the majority will use their organisational data to fine-tune foundational models for their unique business needs or to add context to prompts through Retrieval Augmented Generation (RAG). "Companies that are able to thoughtfully incorporate GenAI into a product's offering will simultaneously delight customers and create a defensive position against known competitors or new entrants looking to disrupt an industry," relayed the technology expert serving the PE market.

[\[Return to Introduction\]](#)

3. Leveraging data and AI to deliver bottom and topline growth

Key action points for leaders

1. Ensure you are using data and analytics to understand the characteristics and behaviours of your most valuable customers and how they are moving through the funnel, so you can better target and convert them at each stage.
2. Leverage analytics not only to model price elasticity, but also to standardise your pricing models across product lines to maximise revenue.
3. Leverage data to better match costs (e.g., staff, inventory) with predicted demand.

Commercial team enablement

Meanwhile, there are far simpler, more immediately actionable, ways that PE firms are leveraging data to deliver EBITDA improvements that positively affect enterprise value across their portfolios. The area that came up time and again as the data investment most likely to deliver measurable EBITDA impact was commercial team enablement. What does this mean? Commercial team enablement can mean two things: first, in the context of a B2B company (or a B2C company involving salespeople), it means that data and AI are used to inform the commercial team's to-do list, usually by identifying a company's most valuable customers, and then making sure the sales and marketing teams are razor-focused on attracting prospects with similar characteristics and pushing them through the sales funnel. Second, commercial team enablement also means that data and AI are used to define the marketing teams' budget and strategy, based on what channels, messaging and creatives are most likely to drive conversion and customer lifetime value (LTV).

These initiatives sometimes include elements of machine learning and traditional AI, such as propensity, churn, cross-sell/upsell, and clustering models, as well as marketing mix modelling, but can also simply include descriptive and diagnostic analytics – or purchasing external data sources

and combining it with their own to identify new, high-value prospects. One operating partner who worked at various PortCos owned by a firm specialised in SaaS businesses described how the firm would, for each of its PortCos, implement the same CRM system with standardised fields and then invest in interns to improve data collection and quality, so that they could measure customer health across their entire portfolio in equal terms. With a strong base of trustworthy CRM data, they would then break customers into value tiers using simple clustering techniques, and then study the characteristics and behaviours of the top tiers. Armed with these insights, they would then target prospects and customers with similar characteristics for acquisition and retention campaigns. “It’s not cutting-edge stuff,” said the operating partner, “but it absolutely added value. The fact that we put the effort in to collect consistent, correct data about our customers, that had much greater value than the fancy AI stuff,” they added.

This particular PE firm only invests in one sector, so they could afford to be much more prescriptive and follow the same playbook for each of their assets. More diverse portfolios do not have this luxury. “We haven’t done the same project [more than] twice,” said one data professional at a large, diversified firm with a significant data function. However, the same general principle applies: segment existing customers into groups, identify the highest-value groups, deep-dive into their characteristics and purchasing behaviours, understand how they move through the funnel, and focus sales and marketing efforts on attracting, converting and retaining more of these high-value segments.

These insights can be leveraged to, for example, shift the sales strategy from targeting all industries to the one or two that over-index on conversion, or to purchase lists of leads that match the ideal customer profile, or adapt thought leadership content to be more narrowly focused on a certain high-value group. One operating partner explained how she always aimed, in her analysis work with PortCos, to determine “the killer question” that segments high-value customers from all the rest. “Say I’m working with a company that operates a network of dentist clinics. I want to identify the one question, when a patient first walks in, to understand if they are going to be a lifetime customer or they’re just going to get their broken tooth fixed and never return,” they explained.

Another operating partner at a highly diversified mid-market firm noted that their preferred approach is to “box off a group of high-value leads and then work them all the way through the sales cycle. That way you can ask the sales team about how many high-value leads they brought in this week and see how they’re progressing through the funnel, which is much more controllable than trying to see that in general reporting,” they explained.

For portfolio companies that include more automated sales and marketing touchpoints, the same principles apply: identify the characteristics of high-value prospects, optimise marketing spend and channels to target them specifically, and focus email communications on pushing them through the funnel based on automated trigger points (e.g., welcome journey, abandon basket, win-back campaigns, referral and soft loyalty programmes, etc.).

Price elasticity modeling and price rationalisation

The other area that consistently emerged as a value-adding data investment was pricing. Although most PE firms will think of it as a pricing initiative, rather than as a data initiative per se, this is always a data-intensive endeavour. Pricing initiatives, which have a clear, direct, measurable EBITDA impact can be

about creating a dynamic pricing strategy, but also about rationalising prices across territories and product lines, or determining how sensitive to competitor pricing a product is. For example, one digital operating partner described how, for one of their e-commerce companies, they scraped the web to determine competitor prices, matched their products to similar competitor products with the help of a product manager with subject matter expertise, and analysed the data to demonstrate that their competitors were following their pricing strategy. This insight allowed them to implement price increases with the knowledge that competitors were likely to increase their prices as a result (so they would not lose market share), which is exactly what happened.

One pattern we heard repeatedly among PE firms that invest in software companies is that they often work with their portfolio companies to help them shift from a one-off perpetual to a subscription-based pricing model. They will use historical data from the company and benchmarking data to help create a pricing structure for the new offering, which has an impact not only on EBITDA but on the multiple, as the company now has recurring revenue.

Demand forecasting

While pricing and commercial team enablement were the focus areas that came up across PE firms, regardless of size, sector specialisation, or geography, there were other initiatives that also arose, though more sparsely.

These initiatives are often focused on using machine learning techniques to more accurately forecast demand (e.g., walk-ins to a clinic, visitors to an amusement park, or demand for a specific product), and then using these forecasts to better manage costs, such as staff, inventory, or logistics. For example, one PE-backed supply chain company leveraged machine learning to repurpose loss-making forehousing space – the area where trucks arrive, drop off their goods, and turn around – into profitable warehousing space by using publicly available ferry and aeroplane tracking data to predict when trucks would be arriving at the depots and then leveraging these insights to smooth out arrival times.

Better forecasting can also fundamentally alter a company's valuation. One operating partner we spoke to noted that the algorithm they designed was able to accurately predict what prospects would convert 8 months earlier than the sales team, which allowed the PortCo to double the value of their forward-looking revenue, triggering a bidding war for the asset.

Other value creation levers using data and analytics

There is a long tail of further applications of analytics and AI to increase revenues or control costs. Some firms are experimenting with using data to identify bottlenecks in their PortCos' new product development processes to reduce their time to market. Others are using computer vision to quickly detect defects on the production line for one of their assets, which has allowed them to reduce headcount by a significant number. Still others are using geospatial and other internal and external datasets to determine where to open new retail outlets, based on factors such as population density, income levels, and the proximity of competitive businesses.

[\[Return to Introduction\]](#)

4. Leveraging data and analytics to improve strategic decision-making

Key action points for leaders

1. Invest in growth models that capture your revenue and cost levers at an operational level in order to run your business through the windscreen instead of the rearview mirror.
2. Growth models are hard to build at scale, so focus on measuring the parts of the customer journey that are most likely to impact lifetime value, conversion, and major costs.
3. Growth modelling makes your organisation more valuable because you are basing investment decisions on demonstrable facts, which in turn supports a strong growth narrative and a successful exit process.

Growth modelling, explained

PE firms' playbooks for leveraging data to increase value often contain an even more basic starting point: using analytics to help organisations understand their own growth drivers, which is often referred to as growth modelling. What is a growth model, exactly? One MD captured it best when they said: "A growth model is a quantitative description of the inputs for how a business grows. Metrics like the number of new customers, customer retention, average order value (AOV), annual recurring revenue (ARR), activation rates, and so on. That high-level model can then be broken down into its input components, based on the fidelity of the data available inside the company. It's really just about describing how revenue is generated in a company and the cost associated with that revenue," he concluded. It can start out as a spreadsheet or KPI tree that is maintained manually on a quarterly basis, but evolve into something more automated and sophisticated over time. Said another expert: "It's a customer funnel, one that shows where the friction points are. It helps to answer questions like why our trialists aren't converting into customers, where do they land, where do they go next, and start to build out that picture of the customer journey," they explained.

Growth modelling is distinct from traditional BI. "BI is a hygiene factor rather than something anyone will pay money for," said one MD. "Nowadays, everyone has a dashboard, it's ubiquitous." BI on its own doesn't move the needle on valuations. "The gratification from BI runs out quickly and doesn't bring dollars in," said the founder of a firm specialised in applying data and AI solutions to the investment lifecycle. Growth modelling, or "BI on steroids," as one expert called it, is different because it gives an organisation much greater understanding of its own value drivers. In the words of one Chief Digital Officer, it "allows you to discern what drives performance at the lowest level, to become much more forward-thinking and exercise greater control over the root causes of performance." Another operating partner added: "Understanding the levers of what you can pull and push to increase revenue or decrease cost is how you go from being just a business to being a successful business." While investment professionals will be focused on modelling traditional financial metrics and outputs, such as revenue, free cash flow, etc., digital or data leaders in PE firms

will drill down into the operational layer below it to uncover the mechanics of their own sales engine. As another operating partner put it, “Growth modelling provides visibility on what it takes to grow at a very granular level.”

The value of a growth model for running a business

Building a growth model for a new acquisition is often a first port of call for digital and data leaders in PE firms – not only because it allows the PE firm to understand whether the business is performing against the business plan and underlying reasons for any deviations, but also because it enables data-driven strategic decisions at the senior leadership and board levels. A growth model, which the PE leader builds in close collaboration with the PortCo’s leadership team, is different from traditional KPI reporting because it allows the management team (and their PE owners) to model out the expected returns of *any subsequent growth initiative*. “Growth modelling allows me and the management team to play any growth scenario all the way through and argue it on an EBITDA basis. You can use it to see, based on feasibility and impact assessments, what the expected return of different initiatives is going to be, and then prioritise the ones that look most promising,” explained the MD.

Growth models are a very concrete, actionable way for organisations to become more data-driven at a strategic level. And we know from previous research that this translates to EBITDA impact. Indeed, Forrester has found that data-driven organisations are 8.5x more likely to report 20%+ revenue growth. Crucially, growth models allow the company to, as one Head of Data put it, “improve the quality of board discussion.” This information gives the PE firm clarity on how a company is tracking against its value strategy and whether they have the right management team in place to drive it, while simultaneously giving that management team much greater control over their own business decisions. A company that has their data in order has a lot else in order as well.

The value of growth modelling at exit

Growth modelling may seem like a luxury when there are more pressing or immediate problems, such as putting the right management team or managing inventory issues for a retailer. However, it meaningfully increases the likelihood of a competitive exit. One operating partner we spoke to who is now a C-suite leader at a PortCo mentioned that one CEO they worked with, who had 4 PE exits under their belt, invested in growth modelling as a matter of course because “it takes so much pain away from the exit process,” they explained. “It’s a no-brainer, because you can answer questions that give a lot more confidence to the buyer in how the company has been managed to that point. When you can say, this is the dashboard we look at every week and took these actions based on that information, and this is what happened, it makes you a lot more credible.”

One Head of Data said that, in order to exit successfully, “you need to be able to articulate a really great story of growth and control the whole way through. You need to show that when the market dips and rates go up, you have control over your cash, that you know when to add more salespeople to your team, that you are prepared to meet external factors that are a threat in your industry.” And when you get that right? “You’re going to drive higher exit multiples,” they opined. Having a working growth model “means you’re on the front foot when you get scrutinised, because you know what makes your business tick,” added one operating partner.

One Chief Data Officer on the PortCo side who has helped facilitate multiple exits described what it can be like when a prospective PE buyer is evaluating the company and how rigorously they examine the data. “They are bloody terriers, asking questions the whole way through, like, ‘Do you understand who your best customers are? Do you understand your drivers for LTV?’” he said. “They also ask a lot of questions around why a number went up or down. The speed at which you can return an answer and the quality of your explanation is what the investor is looking to evaluate when they ask you for a cut of data,” he explained. “They want to see if you can get an answer in 24 hours. They don’t expect perfect data, but they do expect you to be able to state your assumptions.” Although it’s impossible to A/B test the value of being able to answer these sorts of questions quickly, the experts we spoke to consistently noted how this ability contributes to achieving an exit at the desired valuation.

However, as one operating partner candidly admitted, end-to-end growth models take time to bring to life – a luxury PE firms don’t always have. “I’ve taken you through what the ideal is,” they said. “Most of the time, it’s chaos. Everyone agrees that this is what we should do in theory. It’s just really hard to do. You need to be relentless and have the time. We don’t always get there,” they admitted.

One Chief Digital Officer also noted that it’s not necessary to accomplish every initiative in the growth plan ahead of the exit to achieve a desired valuation, as long as the growth model supports that narrative. “It can sometimes be enough to show signs of progress [backed by the growth model] to say, we need you to value us on a forward-looking 12 months instead of a backward-looking 12 months, for these reasons,” they explained. The growth model helps companies tell a much more believable story about how the company will perform in the future. “We can say, this is our growth trajectory, backed by evidence, and this our story of how we are going to continue that growth trajectory because we’ve identified the next adjacency and we know what product enhancements are going to capture that adjacency,” said one operating partner who used growth models in each portfolio company they worked with. “It builds confidence that the growth rate is sustainable, that we know what we’re going to target next because we know the market and who we’re selling to,” they concluded.

Another strong motivator for investing in this capability is that LPs are increasingly asking for this. “Growth modelling isn’t just about selling companies of our own,” explained one operating partner. “It’s also about being able to fundraise. LPs are asking these questions, asking us how we manage our portfolio, how we are generating value and ROI on the companies we own,” they explained.

[\[Return to Introduction\]](#)

5. Overcoming cultural barriers to data and AI adoption

Key action points for leaders

1. Build credibility with your leadership team and board by showing how you've done this before and what value it added.
2. Develop digital, data & AI playbooks to ensure repeatability and boost credibility.
3. Where possible, hire digital and data leaders with a breadth of business and technical skills, enabling them to facilitate productive dialogue between technical, business and senior leadership teams.

Building trust with the C-suite

Despite their business acumen and ability to communicate effectively with leadership teams, the digital and data leaders we spoke to still struggle with many of the same cultural issues that face their counterparts in non-PE-backed corporates. In New Vantage Partners' 2022 Data and AI Leadership Executive Survey 2022 found that 92% of companies cite culture – people, process, organisation, and change management - as the biggest impediment to digital and data transformation; PE is no different. One of the greatest points of friction tends to occur with the PortCo management teams themselves, who are generally the ones footing the bill for these growth initiatives, with the PE data professional acting in an advisory role. One operating partner noted that when it comes to investing in growth modeling, “CEOs may see this as a way of getting the PE off their back, or they may actually be engaged and see it as a way for the firm to be asking better questions and be an active partner. Still others may be reticent to give the firm that level of transparency, like, ‘You're not the one running the company.’ Even as a majority owner, you have to sell to them that they really need this,” they explained. After all, it is a big ask – even for a CEO with an appetite for data-driven decision-making – given that they've probably already been required by the PE firm to cut their costs by 20%.

“Anything you force through doesn't work. These things have to be done very softly, one to one, we have to build trust and ease ourselves in,” explained one Head of Data. “Successfully terraforming digital transformation in these environments is at least as much about people and culture as it is data and technology,” said one expert. “If you force new ways of working on experienced people at any level they feel you're telling them they don't know how to do their jobs. If you work with them to understand what, why and how they work and what they'd change if anything were possible, they're more likely to embrace it,” they added. This needs to be done at all levels though, or anxious employees will find ways to delay the roadmap, which rapidly erodes ROI.

Getting this balance right is challenging, even in businesses majority-owned by the PE firm in question. “It's really hard to get it right because so many things have to fall into place,” conceded one MD. “I have to have leadership who understand the potential. CEOs are hired for their specific

industry experience, track record in sales, or financial acumen. They are usually not up to date on the latest data engineering projects. So we have to educate them on the importance of building the right data foundations and data systems and the benefits this brings, although this has become easier today because GenAI has caused everyone to have FOMO around data,” they quipped.

Building data and AI playbooks to deploy across the portfolio

A crucial element in building trust with leadership teams is to be able to demonstrate, as the PE firm, that you know what you’re doing and can provide benchmarks and use cases to prove it – in short, that you have a playbook for data and AI across your portfolio and understand how it applies to each company. “If you come in right from Day 1 and say, ‘We’ve done this before, here are the 3 initiatives we always do, and this is the cost and support model, and here are the consultants who will get it done, and these are non-negotiables if you want to be part of our portfolio,’ that actually builds credibility with you as an investor,” said one operating partner. “Where it really falls apart is if you go in two years after you’ve acquired the company, after you’ve let them run the way they wanted to run and say, ‘Trust us this time, we have this new thing that you need pay for that we’ve never deployed in any industry,’ what that looks like is that you’re trying to get more control and scrutinise them more,” they explained. Backlash and resistance often follow in these cases.

Having clearly defined playbooks for digital, data and AI can build credibility quickly – including with LPs – and has become a huge area of focus for PE firms over the last three years. Typically, these playbooks are repeatable templates for how to create value with digital and data, your data and AI governance, and many other aspects of digital transformation. However, only those firms specialised in SaaS investments, where there is homogeneity in the underlying businesses themselves, are winning in this race. (Cultural tensions are often lower by default in these companies as well, as they are more naturally attuned to using data and technology and embracing change.) But for the vast majority of firms who own a tremendous variety of businesses across sectors and geographies, repeatability remains elusive. “Being able to create a standard set of operational metrics across a portfolio implies that you think along standard lines and have an operational understanding along standard lines. But that’s rarely the case,” said one operating partner.

Quickly assessing data and AI maturity to help set the agenda

Part of successfully building relationships with portfolio companies is understanding exactly how far along they are in their data journey when a PE firm first acquires them. A smattering of PE firms conduct a data maturity assessment during due diligence, but this evaluation often starts post-acquisition. One leader’s framework simply involves asking the leadership team what their KPIs are. “The answer tells me loads,” they explained. “If the C-suite can’t name them at all, that’s a big red flag, because it means the team is not aligned. If they can name them but they disagree, or they can but it’s too many of them, that means that they have data but they’re not joined up and not understanding what the key drivers of their business are. If they can name them and people know how they’re defined (which is never *entirely* the case) that’s when you know that the leadership team has direction and drive; it means they understand how each of them fits into driving revenue or efficiencies to make the business a success. Once they’re all aligned on that, it makes the business run so much better. With just this question, I can understand where they need help,” they concluded.

Business leaders first, with a specialisation in data and digital

Another key element that enables PE firms to overcome cultural barriers in their portfolio companies profiles generally possess a strong technical background, but are complemented by a broader range of business skills, including experience in operations research, digital marketing, product management, finance, or strategy consulting. Many of these leaders also had P&L responsibilities in digital businesses before transitioning to PE. They are business leaders first, with a digital and data specialisation, rather than “data experts,” which in turn makes them more credible at the board and executive leadership level. They tend to speak first in the language of growth, and secondarily in the language of technology. Their breadth of experience across technical, commercial and leadership skills make them “unicorns” that are able to influence, persuade, listen, challenge, and frame problems at the executive level, all while being able to deep-dive into technical details and project execution – while successfully acting as translators between these two levels of detail. It’s rare to find such a broad range of skills in a single individual – which helps to explain their at times eye-watering compensation packages.

High financial literacy

Furthermore, data and digital leaders on PE value creation teams tend to have very high financial literacy, which gives them a stronger grasp of an organisation’s business model as a whole, and therefore of where data can add value most effectively. “As a technologist, I’m not just here to *build* things, I’m here to *grow* things,” said one MD. “If you don’t understand the financials, there is no way of doing that. So that’s where you start. When I get involved in a diligence process, I look at every single line item in the financial statements. I’m looking for patterns to see what has doubled, grown, trended; I’m looking for things that don’t make sense or are out of balance; I’m looking for big changes or things that are different compared to their competitors,” they added. For example, the team may notice that marketing spend has doubled while revenue has stayed flat; she might propose that a marketing mix model or better SEO search optimisation could be key to unlocking greater marketing ROI, and thus improved EBITDA. This level of fluency in financial statements is rare in data leaders at traditional corporates.

Digital, data and AI product integration

These leaders’ holistic approach to problem-solving means they rarely build (or advise portfolio companies to build) standalone data artifacts such as predictive models or dashboards. Instead, they tend to build digital products that solve an overall problem for the end user. For example, one digital operating partner worked with an automotive PortCo to ingest connected car data and use it to predict when a car part was likely to break down. They then worked with the PortCo to create a digital app that alerted drivers when a part was likely to break down, and offering them the option to book a maintenance appointment with a garage. It was this end user experience, rather than the model alone, that drove new interactions and revenue opportunities with customers.

Or take one of the pricing examples cited earlier, focused on helping software companies shift from a one-off to subscription model. This transition requires far more than just a new pricing structure. It requires a significant shift in systems, people, and ways of working that the data/digital expert must

also manage in order to deliver value. The data expert in PE firms is keenly aware that this is also part of their role, and will plan for these dependencies from the beginning.

[\[Back to Introduction\]](#)

Conclusion

We are in the midst of a sea-change in how PE firms are increasing the value of their portfolio companies. In a world of increasing interest rates and competition, financial engineering and cost take-outs are no longer sufficient to meet investor expectations. Data-enabled digital transformation is increasingly seen as the differentiator for increasing enterprise value in this new climate.

Data-driven digital innovations that increase a company's multiple are the holy grail for increasing enterprise value, as affecting the multiple (rather than EBITDA only) tends to have the biggest overall impact on valuation. Though still quite rare today, these are expected to accelerate, as PE firms increasingly invest in digital and data capabilities, including GenAI. Meanwhile, there is a wealth of opportunity for leveraging data and AI to increase EBITDA – simple, data-driven solutions that help organisations focus on high-value customers and prospects, optimise their pricing, and better predict demand for their products and services, all of which can deliver meaningful increases in profit. On an even more basic (and potentially powerful) level, data is the raw material for portfolio companies to capture their own growth drivers – and leverage this understanding to make more profitable investment decisions as they scale, while providing the evidence base for their exit narrative.

Delivering value using data is as much (if not more) a question of cultural change over upgrades in technology. Leaders that succeed in this space are as well-versed in communication and finance as in the latest advances in data infrastructure and AI. It is these leaders – strategic doers who can influence the C-suite and inspire them with the art of the possible, while also being able to bring technical solutions to life – who are best-placed to help PE firms deliver lasting value.

[\[Return to Table of Contents\]](#)

Private Equity Explainer

Private Equity (PE) firms, also known as General Partners (GPs), are organisations dedicated to buying and selling companies, typically within a 3–5-year investment horizon at multiples of the purchase price. They invest in these companies using capital raised from institutional investors such as pension funds and family offices, known as Limited Partners (LPs).

GPs often take majority stakes in privately-held, mature SMEs, though larger PE firms may also buy much larger companies, including taking publicly-held organisations private. GPs' business model focuses on charging LPs a combination of fixed fees and a share of profits, known as carry, as they

sell the portfolio companies (PortCos) in their fund, often in parallel to raising fresh capital. The valuation of these PortCos is calculated based on their profit, multiplied by an industry multiple. GPs' goal is to increase the valuation of the PortCos during the holding period, so they rarely invest in any activities that are not expected to have a direct impact on profit – in the form of revenue increase or cost reduction – or on the multiple itself, usually in the form of a business model innovation that fundamentally alters a company's positioning in the market.

Digital and data experts at GPs are part of a lean value creation team that advises PortCos on how they can increase the value of the company through strategic growth initiatives, most often focused on increasing profit and, less frequently, on increasing the multiple. We spoke to these experts to explore topics such as: How can PE firms best achieve their goals leveraging technologies such as data and AI? What are the new opportunities, but also challenges, for the sector that data, analytics, and AI create? What are the key value drivers of these technologies in this space? What can PE firms learn from other industries, and vice versa?

[\[Return to Table of Contents\]](#)

Research Methodology

We interviewed 30+ senior digital, data and AI leaders on value creation teams at US and European GPs, from £3B to over £400B in assets under management (AUM), as well as C-suite executives from these firms' portfolio companies. The GPs ranged from those specialising in a single industry vertical, such as B2B SaaS companies, to large cap firms with highly diversified portfolios across multiple sectors and geographies. We considered GPs' approach to digital and data a pattern or a trend once we heard similar approaches repeated across at least 8 firms. Furthermore, we focused on investments in data and AI, but digital is such a fundamental part of data and AI investments that we have also included it here.

[\[Return to Table of Contents\]](#)