

The Vitality Code

How Growth Leaders Master Strategy,
Technology, People, and Culture

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Boston Consulting Group partners with leaders in business and society to tackle their most important challenges and capture their greatest opportunities. BCG was the pioneer in business strategy when it was founded in 1963. Today, we work closely with clients to embrace a transformational approach aimed at benefiting all stakeholders—empowering organizations to grow, build sustainable competitive advantage, and drive positive societal impact.

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Forewords

Like many companies, Workday was experiencing a pivotal inflection point in its growth journey in 2022, two years into the pandemic. Rapid expansion, a surge in acquisitions, and the shift to a hybrid environment had reshaped the company. Half of our workforce had been hired after January 2020 to capitalize on AI-driven growth opportunities, yet because of remote work mandates many were unable to experience firsthand the values-driven culture that helped power the first decade of Workday's hypergrowth. I had joined the company earlier in 2022 to lead corporate strategy, as we prioritized evolving our operating model to enable scalability.

Workday was named number one on the Fortune Future 50 lists of 2018 and 2019, so we understand the benefits of vitality and the challenges of rapid growth. Coming out of the pandemic, one thing that enabled us to sustain that growth and enter the Fortune 500 was to adopt a new talent philosophy that reinforced our culture and our values and strengthened our customer- and people-first mindset. Our goal in sharing our growth lessons and partnering with Boston Consulting Group on this research is to show how the right investments in your strategy, your technology, your people, and your culture can lead to long-term, sustainable growth.

I encourage readers to use this report as a guide for assessing your own corporate vitality and understanding how a scalable, AI-first technology stack can turbocharge your own growth journey, whether you are a pre-IPO company looking to scale or a mature company moving into an adjacent market or industry.



ALEJANDRO MAYER
Chief Strategy and Business Operations Officer,
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Leading a business from the startup phase through the scaleup phase is one of the most exhilarating and challenging journeys in the business world. Boston Consulting Group (BCG) partners with daring leaders of companies at all stages of their growth to help them solve complex growth, innovation, and leadership challenges.

Since our founding in 1963, BCG has been a pioneer in business strategy, helping firms define and redefine their competitive advantage. Dating back to the BCG Growth Share Matrix, we have aspired to be at the forefront of strategic thinking and practice. With our partnership with Workday on corporate vitality, we aim to build on this legacy and to achieve three objectives: First, give leaders a new forward-looking metric to assess the innate growth potential of their business. Second, provide actionable insights that help leaders drive value-adding growth. And third, broaden our vocabulary to better describe corporate performance, from advantage, value creation, and profitability to include vitality.

I invite you to explore our Vitality Code playbook as a source of inspiration and actionable insights for ambitious corporate leaders, whether you are in the first stages of building your startup, in scaleup mode, post-IPO, or even more established and seeking to refuel your engines of growth.



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Introduction

Why Vitality Matters and How to Measure It

The CEO’s job is to balance the pressing operational demands of today with the foresight to invest into the future—keeping one foot firmly on the ground while reaching for the stars.

Achieving this balance is difficult, especially in a world where the next funding round or quarterly earnings demand a fair share of management attention. Although numerous metrics exist to assess a company’s present performance, reliable metrics to guide firms toward long-term, sustainable growth are scant.

What if CEOs had a simple measure—akin to EBITDA or TSR—that captured their company’s capacity to grow profitably in the future?

This is the question we asked ourselves nearly ten years ago as we began to explore the characteristics of the Fortune Future 50, setting us on a path that yielded the

notion of *corporate vitality*. While the methodology has evolved over the years, the core idea remains the same: to give executives a new metric to measure their organization’s ability to win in the future.

Being highly vital is valuable for every company, in every industry. It matters especially for corporate leaders who have already established product-market fit and are seeking to convert their growth potential into scalable long-term value creation.

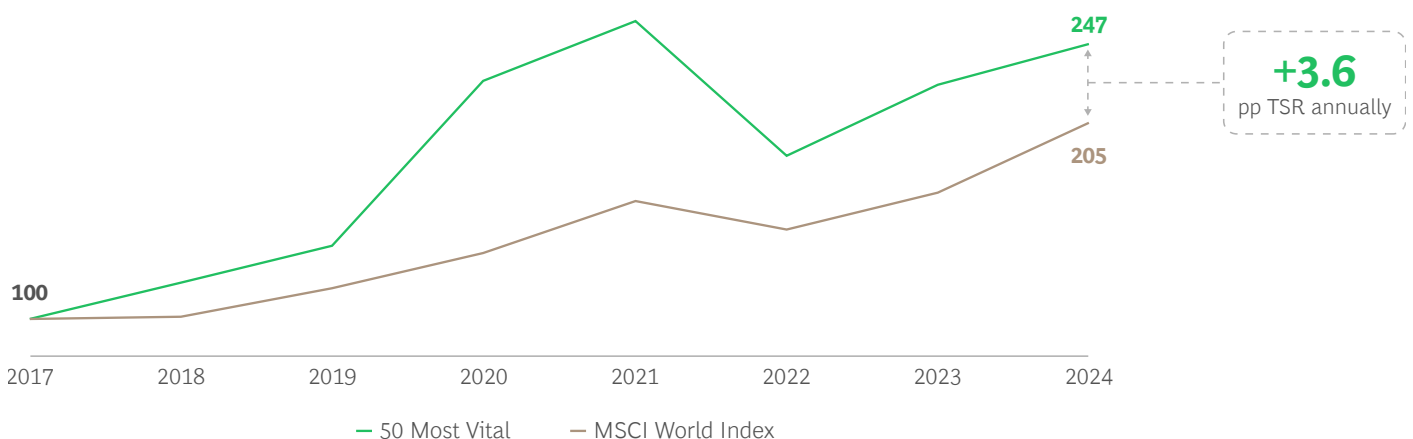
Corporate vitality is a proprietary measure that BCG developed to assess a company’s potential for long-term growth. Companies with high vitality tend to grow faster and create more shareholder value because they build strategic advantage and translate that advantage into sustained performance. (See Exhibit 1.) This sustained performance is measurable. The 50 most vital firms not only have outgrown other firms but also have created (on average) 3.6% more shareholder value every year relative to the MSCI World index.

EXHIBIT 1

Vital Companies Create More Value

A portfolio investing in the Future 50 has outperformed the MSCI World

Total shareholder return
2017 = index 100



Source: BCG analysis.





Note: The chart compares the TSR performance of Fortune Future 50 companies vs MSCI World index. FF50 companies also outperform the S&P 500 and MSCI Growth.

BCG's research has shown that vitality can be measured externally by analyzing patterns we call biomarkers of corporate vitality. These biomarkers go beyond financial indicators to include data from earnings calls and patent portfolios. Over the last ten years, BCG has refined this methodology and now also includes insights drawn from firms' digital technology stacks, M&A strategies, workforce composition, hiring trends, organization structures, and more.

Exhibit 2 illustrates the set of 24 biomarkers that contribute to an overall measure of corporate vitality, which has four key dimensions: strategy, technology, people, and culture. Each dimension is based on measurable data points that together form the “code” of corporate vitality—a set of often-hidden factors that separate companies that are poised for sustainable growth from those that are not.

EXHIBIT 2

The BCG Vitality Index Is a Composite Measure of 24 Biomarkers

Dimension	24 biomarkers (metrics) and how they are defined			
 Strategy	1 Growth ambition	Flesch-Kincaid score of investor reports	4 Equity story	Price/book value
	2 Open innovation	NLP biology/innovation score	5 Productivity	Compensation sentiment score
	3 Growth M&A	% of M&A deals & investments in “hot fields” ¹	6 Focus	% FTE in largest entity
 Technology	7 Capital deployed	% CAPEX/sales	10 Tech stack vitality	Scalability score of IT/tech stack
	8 Research freshness	% patents applied 2020–2024/all active	11 GenAI adoption	% jobs with GenAI keywords
	9 R&D intensity	% R&D/sales (not part of model)	12 Digital enablement	% FTE with leading digital skills
 People	13 Product teams	% FTE in R&D, product, and innovation	16 Cross-functionality	% functional diversity in leadership
	14 Commercial teams	% FTE in customer-facing roles	17 Gender diversity	% female leadership
	15 Growth talent	% growth rate of new recruits' prior firms	18 Geographic diversity	% international talent in innovation
 Culture	19 Cultural memory	1/tenure in firm in years	22 Mission orientation	NLP purpose score
	20 Organizational legacy	\$ revenue as proxy for size	23 Healthy turnover	% FTE entering + exiting
	21 “Minimum viable” bureaucracy	% leadership ² in market-facing roles	24 Engagement	% FTE recommending firm

Source: BCG.

Note: FTE = Full-time equivalent.

¹Hot fields: 100 subindustries with the highest corporate and venture capital investment activity in the last five years.

For firms, vitality is a novel business metric. For cities and countries, it's a pulse check of the global innovation economy: it helps uncover who drives innovation, where it happens, and how nations specialize along industries. (See Exhibit 3.) As of today, the US emerges as the clear innovation leader, with both the highest number of vital firms and the strongest overall corporate vitality. Industry patterns further reinforce this: much of the strength of the US in vitality comes from its concentration of software companies and other key innovation drivers.

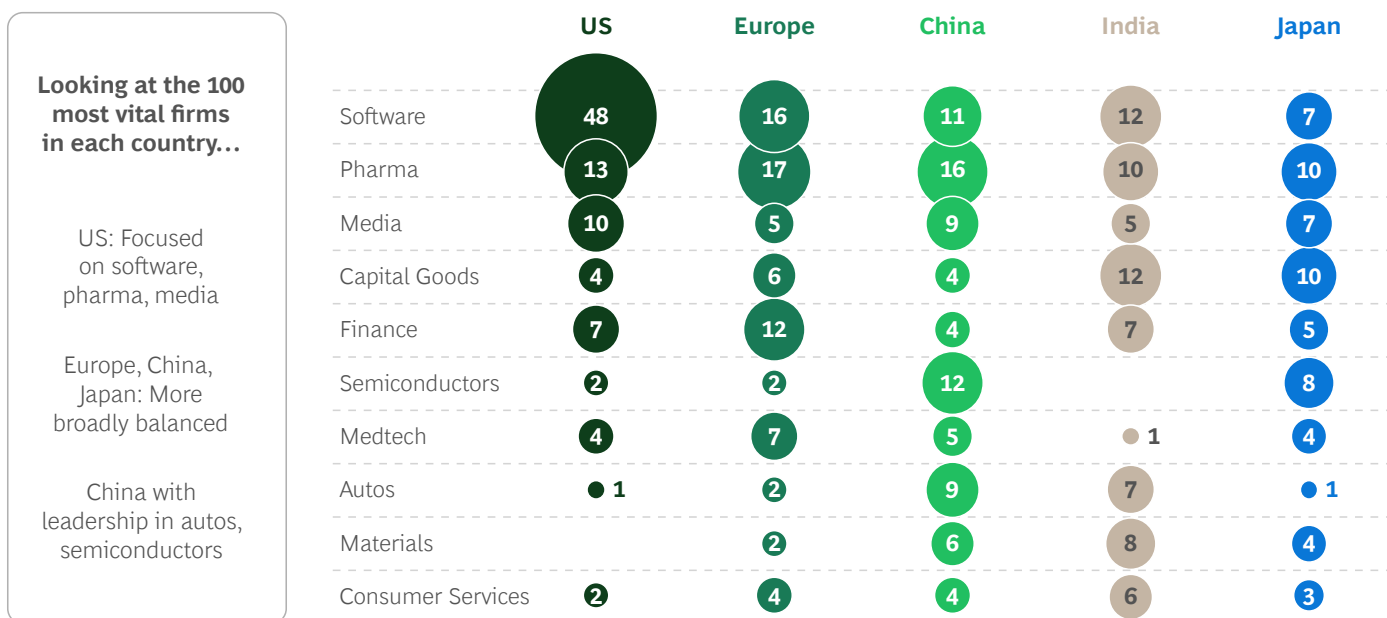
Europe and China, while showing less vitality than the US overall, tend to play different games, with a much broader industrial base in which highly vital firms grow, extending into automotive and clean energy (China) or pharmaceuticals and biotech (Europe).

In the following chapters, we use corporate vitality as a framework to explore the best practices, tools, and strategies employed by executive leaders who have successfully built value-creating growth engines—whether they are navigating the startup phase, scaling their business, or managing post-IPO growth and beyond. (See “Industry Spotlight: A Spectrum of Innovation.”)

Each chapter will explore a critical dimension of vitality—strategy, technology, people, and culture—showing how leaders who prioritize these elements can drive sustained growth and long-term success.

EXHIBIT 3

Nations Have Different Vitality Profiles



Source: BCG analysis.



Strategy

Clear Choices About Where to Play and How to Win

Strategy is deciding what you do and what you don't do. Firms with a winning growth strategy clearly define why they compete in specific markets, where they uncover unique value creation opportunities that others miss, and how they leverage their competitive advantage to sustain long-term success.

Though not the only factor in turning potential into value-adding growth, a winning strategy matters—a lot. It accounts for 30% of our overall vitality index, making it the most important factor of them all. Firms that rank in the top 25% in terms of strategic vitality tend to see revenue growth that is approximately 35% higher and generate up to 7-percentage-point more shareholder value per year.

When evaluating the strategic vitality of firms, we focus on six key biomarkers (**shown previously in Exhibit 2**). Thanks to artificial intelligence (AI), natural language processing (NLP), and vast amounts of text and social media data, it's now possible to quantitatively assess some aspects of firm strategy without relying on internal data.

Take open innovation—companies that actively collaborate with partners in innovation tend to grow faster, probably because they gain access to new ideas and leverage external capabilities. Anduril Industries, a defense technology scaleup, is a great example of open innovation, actively partnering with other technology providers to bring advanced solutions to its customers and speed product development from months to weeks.

Pushed by growth-hungry investors, young companies can fall into the trap of chasing fast growth without a solid foundation. Here are the three major mistakes we see most often:

- **Scaling Too Soon.** Seventy-five percent of startups fail because they scale before they're ready. Growth sounds exciting, but if a company expands before it has a proven business model—one that consistently attracts and keeps customers—it's just setting itself up for trouble. The right timing matters. Rushing into hiring, marketing, or new markets before figuring out pricing, product fit, or the right sales channels usually leads to burning through cash without real progress.
- **Fallacies of Category Creation.** It's tempting to believe that a company can simply invent a new market. In reality, category creation is an arduous, multiyear process that requires reshaping how customers perceive value. This calls for extensive education, thought leadership, and evangelism—far more effort than most companies anticipate. True category leaders, like Salesforce with Cloud CRM or HubSpot with Inbound Marketing, aren't just creating markets; they're shifting paradigms—and that takes relentless commitment.
- **OKRs are not a strategy.** Objectives and key results (OKRs) are a great tool for tracking progress, but they are not a substitute for strategy. Many companies use OKRs to navigate, but without a clear vision and well-defined priorities, doing so can lead to short-term thinking and focus on what is easily measurable. Strategy is about making deliberate choices on where to play and how to win—OKRs should help measure execution, not define the path itself.

These errors can derail even the most promising startups, scaleups, and growth ventures in larger firms.

The world's most vital firms avoid these traps and instead design growth strategies that are credible, investment-grade solid, focused on winnable market segments, and built on foundational insights that better serve customers than their peers.

Investable Unit Economics. SumUp has built a highly predictable revenue model, allowing it to raise debt instead of equity to fund its global expansion. Because of its stable customer cohorts with greater than 100% net revenue retention, SumUp can calculate a clear ROI on its marketing and sales spending, making its core growth engine a truly bankable business case.

The fastest-growing companies operate with this level of strategic discipline and financial foresight—ensuring every dollar spent leads to a measurable return. When a business can predictably turn customer acquisition into long-term profitability, it gains access to better financing options and scales more efficiently. Companies that lack this clarity either struggle to secure capital or risk repeated rounds of equity dilution of existing shareholders.

The Niche Approach. Palo Alto Networks didn't try to dominate the entire cybersecurity market overnight—rather, it started with a focused niche, gained traction, and then expanded aggressively through a series of close to 20 small and midscale acquisitions over the last six years.

As the company's senior director of human resources, Rust Ince-Schroeder, told us: "We started out in so-called next-generation firewalls to build a foothold but soon understood we had to compete on the broader cybersecurity market and build a full platform solution. We're really good at spotting new emerging companies with edge technologies, being a great partner to them to acquire them early and then integrate their products into our own platform in a seamless way to create one integrated experience for our customers."

The most successful companies follow this pattern: they first define and own a specific market segment before broadening their reach. By establishing a strong foothold with a clear customer base, they build trust, drive retention, and create momentum for further expansion. Whether through organic growth or M&A, companies that scale successfully often begin with a well-defined, winnable market that is underserved by larger competitors but works as an effective bridgehead into the broader market.

The Speedboat Approach. Nubank started with a single product—credit cards in Brazil—but understood that long-term success required constantly expanding its market and product offerings. As it scaled, it invested in new financial products and geographic markets, ensuring its growth trajectory never slowed.

The best-run companies actively build new growth engines while momentum in their core is strong but do so without taking their attention off their growing core. To achieve that, Nubank uses "speedboats"—small, high-talent teams with direct executive backing that can experiment and scale new opportunities quickly. Companies that don't proactively create new expansion paths risk plateauing as their initial market reaches saturation.

Transparency as a Weapon. Wise disrupted the financial industry by exposing hidden fees in traditional currency exchange, proving that transparency can be a competitive weapon. Unlike incumbents that profited from customer confusion, Wise aligned its business model with user interests—offering clear, fair pricing that built long-term trust.

The strongest businesses find ways to benefit from increased transparency rather than suffer from it. If a company's model works only when customers don't fully understand it, that business is vulnerable to disruption. Winning companies such as Wise and Nanya Health remove friction, align incentives, and create undeniable value for customers. And they do this in markets that traditionally were large but neglected profit pools for incumbents.

Credible Investor Communication. Siemens Healthineers has mastered the art of capital market communication by telling a credible, data-backed story of how its innovation ambition leads to superior long-term financial performance. The company anchors its innovation activities to a clear goal—tracking the percentage of sales derived from products launched in the last three years—to measure the outcomes of its sizable innovation efforts credibly. This creates a flywheel: sustained investment in innovation leads to superior products, driving higher customer satisfaction, which results in better margins and an improved ability to reinvest.

Since its IPO in 2018, Siemens Healthineers has delivered an annual 12% TSR, proving that the market rewards companies with clear, strategic capital allocation and credible communication of their growth and innovation ambitions. Those that fail to articulate this connection tend to suffer from lower valuations and weaker earnings multiples, as investors struggle to see a credible, compelling long-term growth story.



Technology

Scalable, Future-Ready Stacks

Vital companies that take a strategic approach to technology not only invest heavily in innovations that give them a competitive edge but also adapt their processes and procedures to fully capitalize on these advancements.

Take Generative AI and agentic AI. At BCG, we observe that successful GenAI investments follow the **10-20-70 rule**: only 10% of AI's value comes from algorithms, only 20% comes from software and hardware infrastructure, and a substantial 70% is derived from digital upskilling and process adaptation. AI-enabled applications drive efficiency and innovation across industries, often cutting months from processes. Both agentic AI workflows and AI-enabled systems require highly digitally literate humans to run, supervise, and optimize such systems.

Agentic AI is driving the next evolution of personalization for customers, enabling companies to deliver hyperpersonalized products and services to consumers. “Agentic AI will be unleashed by the co-location of the world’s data,” Nayya Health founder and CEO Sina Chehrazi told us. Nayya Health aims to deploy agentic AI systems on the combined health and financial data it has on its more than 2 million benefits members, to offer specialized financial advice that traditional 401k providers and health care benefits providers with more siloed data can’t. Leveraging those AI-driven insights delivers an important competitive advantage: according to BCG estimates, \$2 trillion in revenue will shift to companies over the next five years that understand how to create **personalized** experiences and communication.

Technological vitality matters. It accounts for 29% of our overall vitality index, meaning it’s the second most important factor. Firms that rank in the top 25% in terms of technological vitality tend to increase their revenues approximately 28% faster and create a sizable 11-percentage-point greater shareholder value per year.

When evaluating the technological vitality of firms, we look at six key biomarkers (**shown previously in Exhibit 2**). These six cover hard investments into digital and nondigital technologies—bits and atoms, the freshness of a firm’s digital technology stack, as well as indicators measuring a firm’s openness to hire for and train for new digital skills (including GenAI). To do so, we scout patent data, data on the digital technology stacks, and social media data on hiring and upskilling trends.

Take research and development. Generating a large volume of patents is a great way to build and protect intellectual property but does not reliably tell us if a firm will grow profitably in the future. What does matter is patent freshness, our biomarker that gauges how quickly a firm is able to renew its patent portfolio. Patent freshness does not take into account the number of patents a firm holds; rather, it measures a firm’s own research momentum and thus also effectively measures a firm’s intention to differentiate itself on the basis of its proprietary technology.

Or take tech stack freshness. Digital technology can be a powerful enabler to help companies scale fast. As Arno Schleussner, head of finance at European fintech N26, told us, it was early investment into highly scalable, cloud-based finance and HR solutions that helped N26 scale rapidly to now more than 1,500 people. But while digital technology can help a firm's growth, it can also hurt it. Here is where our vitality methodology comes into play. We measure the scalability of a company's digital technology stack by capturing millions of data points on how firms use different digital tools—from Microsoft Office and SAP to OpenAI's ChatGPT—and by comparing the technology stacks of the fastest-growing firms in each industry with those of slower-growing companies.

As Nayya's Sina Chehrazi shared: "If you're scaling fast, you can't build for the challenge of today. You must build for the challenge of tomorrow." As a rule of thumb, cloud-based, AI-enabled software stacks are more scalable than traditional solutions. But technology alone is not enough—people play a crucial role. That's why our technology vitality measure also includes two additional biomarkers: which companies are actively building AI and GenAI teams, and which firms excel at training their workforce to adopt digital technologies faster than others.

Missteps in building and scaling physical and digital technology can lead to severe inefficiencies. Three common mistakes often derail growing businesses:

- **Technology Debt.** Startups and fast-growing teams often prioritize speed over sustainability, leading to a buildup of technical debt that becomes increasingly difficult to manage. When teams skip refactoring, disregard coding standards, or fail to invest in solid architecture, they create systems that are brittle and hard to scale. Short-term goals—like shipping a feature quickly—can overshadow the long-term health of a codebase.

GenAI can help combat technology debt—but can also make it worse. On the one hand, it can accelerate code generation and assist with refactoring, improving maintainability when used correctly. On the other, if teams rely on it without proper oversight, it produces poorly structured code that is not well documented. Success depends on ensuring that GenAI is leveraged as a tool for quality, not just speed.

- **Shiny Objects.** For firms large and small, the rush to adopt the latest tech can be a costly mistake. It took years before companies realized that many had pushed digital microservice architectures too soon or switched to programming in Go without a clear need. Facebook still runs on PHP, as does Check24, a fast-growing European price comparison platform. Engineering- and R&D-driven cultures are particularly likely to fall into this trap. To avoid this, Solvay, the European specialty chemicals company, and others are starting to embed business teams in engineering and R&D to establish a clear line of sight to business value.

- **The Tech Difference.** Top engineers are drawn to companies with strong technical leadership, hired by specialized tech recruiters, and attracted by a compelling employer value proposition—one that offers not just fair pay but also growth, learning, and meaningful challenges. Yet many large firms treat tech like any other function, neglecting dedicated tech hiring, failing to create clear career paths for engineers, and offering work that fails to inspire.

Fixing this starts at the top. Companies must "acqui"-hire experienced tech leaders who attract top talent, invest in specialized recruiting, and give tech teams the autonomy to build their own culture. Without this, they risk falling behind in both innovation and execution.

The world's most vital firms develop technology strategies that stay ahead by systematically exploring new technologies, striking the right balance between building and partnering, and making bold bets on transformational shifts before they become obvious.

Built for Tomorrow. N26 ensures that its technology choices don't just solve today's challenges but set the foundation for long-term success. The company chose its finance systems with scalability in mind, avoiding the common pitfalls where growth causes operational bottlenecks that slow growth. Even though the platform is not customer facing, smart integration of the systems allows for leveraging the support functions' tech stack for customer-facing innovation. Constantly reviewing and improving existing systems as the business scales is crucial too. Recently, N26 introduced new integrated systems, which now allow it to run targeted customer acquisition campaigns in a much more cost-effective manner than many of its competitors.

Doing all of this well requires hiring operations leaders who have seen rapid scaling before and recognize that enabling technology for sales, marketing, finance, HR, or operations isn't just a support function—it's a platform for growth. Companies that fail to plan their systems with the future in mind risk accumulating latent tech debt, which requires costly and complex refactoring decisions later, stalling momentum just as they should be accelerating.

Eyes on The Horizon. Zalando, the European e-commerce company, maintains its technological edge by systematically adopting new technologies through its Tech Radar, a decision-making framework maintained by principal engineers and updated monthly. Technologies move through four rings—*assess*, where emerging tools are explored; *trial*, where promising ones are tested; *adopt*, for proven solutions recommended at scale; and *hold*, for technologies deemed not yet suitable.

A key example of validated adoption is Kotlin, a programming language that moved from *trial* to *adopt* after more than 100 applications were built with it in a year, backed by strong engineer feedback. Its concise syntax, null safety, and functional programming features made it a clear alternative to Java. Or take Spark, a platform for data engineering used in many AI applications, adopted by the firm nearly ten years ago. By formalizing its use with coding standards, service templates, and internal guidelines, Zalando ensures smooth adoption while keeping development modern, scalable, and attractive to top talent. This structured approach keeps its tech stack flexible and competitive while avoiding the tendency to adopt new shiny programming languages without validated scalable use cases.

Partner First. Anduril, the US autonomous defense contractor, moves fast by developing technology across all three innovation horizons at once—building foundational platforms, experimenting with new capabilities, and pursuing moonshot ideas in parallel. Instead of seeing “make vs. buy” as a binary choice, it partners early to gain speed and capability, then brings key technologies in-house when they become strategically critical.

Anduril’s work with Area-1, a maker of small, unmanned aircraft, is a good example of this technology strategy. Initially, Anduril partnered with Area-1 so that it could quickly integrate Area-1’s Altius drones into its broader autonomous defense ecosystem (the Lattice platform). After that collaboration proved the value of the technology—and it became clear it would be strategically critical—Anduril acquired Area-1 in 2021. By bringing the Altius drone line and its underlying IP in-house, Anduril could move even faster on core autonomy and counter-drone capabilities without having to rely on an external partner for such a key component.

This hybrid approach lets Anduril stay ahead without getting stuck in either extreme—relying too much on outside vendors or overinvesting in things better sourced externally. Companies that don’t strike this balance risk either moving too slowly or losing control of what should be core to their success.

Tech Leaps Forward. Technology-powered firms must make high-stakes investments in new paradigms, allocating R&D and capital to emerging technologies. These shifts—like Adobe’s move to cloud-based software and AI-driven tools—can typically be made only once every seven to ten years, but failing to act makes catching up impossible.

Adobe’s transition to Creative Cloud required massive investment in cloud infrastructure, AI integration, and workflow automation. Beyond just moving software online, this shift transformed Adobe into a platform, making it easier to continuously innovate and bolt on new functionality. With the cloud as the foundation, Adobe could rapidly integrate AI-powered tools through Adobe Sensei, enabling automated image tagging, intelligent editing, and predictive marketing analytics. The same cloud infrastructure also paved the way for Adobe Experience Cloud and Document Cloud, expanding beyond creative tools into marketing automation and enterprise document services.

In hindsight, the cloud was a defining technology shift. Now, AI is the next frontier. Firms that fail to invest boldly in AI-powered automation, content generation, and intelligent systems may find themselves permanently behind, unable to leap to the next S-curve.

Platforms for a Digital Workforce. As agentic AI becomes a part of more and more business operations, companies need structured systems to manage these digital workers and make sure they can collaborate seamlessly with full-time or contingent workers. Intuit is integrating AI agents into its operations with a structured approach, ensuring they are effectively managed alongside human employees. Its AI-powered Intuit Assist, combining classical artificial intelligence, generative AI, and agentic AI, has reduced TurboTax support contact rates by 20% by automating processes like tax form analysis, while broader automation efforts are expected to generate nearly \$90 million in efficiencies for fiscal 2025. Internally, AI is also streamlining finance operations, cutting down on manual data entry and improving workflow automation.

Intuit’s approach highlights the growing need for businesses to not just adopt AI agents but to manage them with clear oversight—onboarding, monitoring, and refining their roles to ensure long-term value.

Every firm is born vital and can stay vital. Vitality is a deliberate choice that builds competitive advantage.





People

High Talent Density and Skills-Driven Workforce Design

Fast-growing companies take care of their people, their products, their profits—in this order, to paraphrase Ben Horowitz. They recognize that talent, adaptability, and alignment drive their competitive advantage. By prioritizing high talent density—hiring top performers, demanding excellence, and fostering growth—these businesses achieve lasting success. The best companies cultivate environments where ambition, learning, and effective execution flourish, and with advancements like agentic AI, they can scale revenue to significant milestones without requiring large-scale hiring.

People matter. People vitality accounts for 18% of our overall vitality index. Firms that rank in the top 25% in terms of people vitality tend to increase their revenues approximately 29% faster and create 5-percentage-point greater shareholder value per year.

To measure people vitality, we use social media data provided by Revelio Labs to capture six biomarkers that alone and together correlate with companies' sustained revenue growth (**shown previously in Exhibit 2**). Product teams, commercial teams, and growth talent are measures of the relative size and talent density of teams close to the value creation engine of firms—the talents dedicated to inventing and building new products (R&D, innovation, product development) as well as to delivering these products to customers (business development, marketing, sales, go to market).

We also look at measures of cognitive diversity at the executive leadership level and at the innovation team level, reflecting the fact that a healthy variety of viewpoints usually leads to better decision-making outcomes.

Take “growth talent.” Here, we look at a firm’s ability to attract business builders, people who have seen fast-scaling firms from the inside, a crucial component of every talent strategy.

Or take global diversity. Firms that hire globally have many advantages, from benefiting from lower-cost locations, to broadening their talent pools and bringing in fresh relevant viewpoints.

Or take Whatsapp. As Mubarak Imam, former director of growth, analytics, product, and strategy at the firm, told us, “If you are designing for 2 billion people, you want the most diversity you can have on your teams. When many voices and cultures are represented, you design better products.”

Even the best scaling ambitions fail without the right people to make them happen. It’s a very human tendency to slip into bad habits that weaken leadership, misalign teams, and slow execution. Three common mistakes first slowly and then quickly hinder even super-scaling organizations:

- **Failing to Hold the Bar.** As you grow past the first 30 to 50 people, the fastest way to dilute talent density is to relieve your A-players of key responsibilities in hiring. A-players tend to choose people who challenge them. Others—whether out of insecurity or convenience—don’t, which leads to a slow but compounding decline in team quality. A-players, on the other hand, seek out excellence, raising the bar for everyone. Hiring is destiny, and anything less than a relentless pursuit of top talent, driven from the top, sets the company up for mediocrity. As a result, the CEO and the entire C-suite need to view hiring and people leadership as one of their top three priorities.
- **A Me-First Mindset.** When managers fight for larger teams, bigger budgets, or visibility at the expense of enterprise-wide goals, the company loses. True leaders don’t measure success by the size of their squad but by the impact they drive across the organization. The best ones understand that sometimes, the right move for the business is a smaller team, fewer projects, or giving up resources for the greater good. A people culture that celebrates impact over volume requires promotion criteria for managers that are tied not to the size of their teams but to their impact per capita.

- **Fuzzy Leadership.** Many managers believe their job is to make decisions and give direction. In reality, true leadership is about distilling complexity into clarity so that teams can focus on execution instead of navigating chaos. The best leaders act as a buffer, shielding teams from organizational noise, cutting through ambiguity, and ensuring that priorities are razor sharp. True leadership isn't just about making decisions—it's about clarity, alignment, and intensity, as Microsoft defines it. The best leaders don't just make decisions; they inspire, empower, and build teams that are stronger tomorrow than today.

The world's most vital firms develop people strategies, tools, and tactics that help them put people first. By doing so, they leverage global talent, cultivate extreme talent density, hire strategically for each growth stage, and maintain a founder's mindset to drive innovation and scalability.

Global Talent, Global Reach. WhatsApp's pre-acquisition success was powered by global diversity—not just in its user base but also within its early team.

Unlike many tech companies that designed for their home market first, WhatsApp was built for the world from day one. Its diverse workforce brought lived experiences from different regions, offering deep insight into the challenges of unreliable networks and expensive data and the need for secure communication. This cognitive diversity wasn't just a nice to have—it was a strategic edge. It enabled WhatsApp to design a product that felt intuitive to a grandmother in Brazil, indispensable to a journalist in Turkey, and secure enough for activists in regions where free speech was at risk. By hiring globally and thinking beyond Silicon Valley, WhatsApp didn't just scale—it became a lifeline for billions.

Talent Density as an Edge. SpaceX, the leader in cutting-edge aerospace technology that powers the advance of space exploration and commercial space flight, operates with a philosophy of extreme talent density. Rather than hiring to minimize weaknesses, SpaceX builds teams by amplifying individual strengths, ensuring that every key function is staffed with high-energy, high-impact individuals. The company embraces the idea that hiring world-class executive talent is difficult and that failures are part of the process—but it also recognizes that the right hires can be transformational. At SpaceX, key teams are kept lean but highly empowered, positioned close to the core value engines of the company.

This principle, along with the “directly responsible individual” concept, ensures accountability and accelerates decision making. Companies that don't actively curate and empower top-tier talent risk stagnation, while those that maintain a high talent bar create a sustainable edge.

Skills-Based Hiring. Workday has implemented a structured, data-driven approach for its own teams to identify and hire talent based on critical job skills rather than traditional credentials. In a recent project in its sales organization, Workday identified seven essential skills for account executives, allowing recruiters to assess candidates more effectively. This approach resulted in the hiring of more than 400 account executives in nine months, reducing time-to-fill by 32% and increasing offer acceptance by 11%.

Beyond hiring, Workday is using its own AI-driven tools to standardize skill definitions, map workforce capabilities, and facilitate internal mobility. With 80% of job profiles now mapped to business-critical skills, Workday's investment in reliable skills data provides a foundation for strategic workforce planning, upskilling, and career development to support the growth of the company.

Marines, Army, and Police. Fast-growing companies require the right mix of talent to drive innovation but also build efficient processes that can scale. In the words of LinkedIn founder Reid Hoffman, companies need “marines, army, and police”—each playing a distinct role in the company's scaling journey. “Marines” are renegades, highly innovative people who often reject structure and process. The “army,” in this analogy, is talent that is comfortable building structures from scratch but requires some direction to perform. The “police” consist of talent that is often hired later and required to effectively operate within the structures others have built.

A Founder Mindset at Scale. Databricks chief people officer Amy Reichanadter recalls her first meeting with the company's founders in 2019: “When I first interviewed with the founders, I knew immediately that my role here would be unlike any other. Ali, our CEO, had extraordinary clarity about the company he wanted to build—the kind of innovation he wanted to lead and the culture he was determined to create.”

Since joining, Amy has acted as a strategic translator, partnering closely with Ali and the founding team to scale that vision. Together, they focus on operationalizing core cultural principles, leading talent strategy, and enhancing the overall employee experience—ensuring they remain aligned as the company grows. From a commitment to truth seeking and a bias for action, to leading with first principles that shape leadership, innovation, and hiring, these cultural cornerstones enable Databricks to scale rapidly while preserving its founder-driven ethos. Maintaining this will be essential as the company continues to expand in 2025 to meet global demand for its AI and data intelligence offerings.



Culture

Adaptive, Aligned Values That Scale with the Business

“A company’s culture is the foundation for future innovation. An entrepreneur’s job is to build the foundation,” as Brian Chesky, co-founder and CEO of Airbnb, famously said. He means that culture shapes what work gets done and how it gets done.

While GenAI and other tools can accelerate growth, truly scalable success demands an environment where people instinctively make good decisions aligned with company values that deliver on the company’s long-term objectives. The best companies build cultures that naturally attract and amplify talent and design their operating model such that their target culture is reinforced, not hindered, by processes and procedures.

That’s also reflected in BCG’s vitality index: cultural vitality accounts for 24% of our overall vitality index. Firms that rank in the top 25% in terms of cultural vitality tend to increase their revenues approximately 60% faster (that is, on average 4.6% per year revenue growth, up from 2.7%) and create a significant 11-percentage-point uptick in shareholder value.

Assessing the cultural vitality of a company based on external data is a hard, if not nearly impossible, task. That’s why for culture, our six key biomarkers (**shown previously in Exhibit 2**) are best understood as proxies, meaning they measure characteristics of organizations that generally have more open, fluid, growth-oriented cultures, without trying to do the near impossible and quantitatively evaluate the culture of a firm. For most of these biomarkers, we rely on signals we get from social media, as well as analyst call transcripts that we assess with natural language processing algorithms.

We measure a company’s size (using revenue as a proxy) because larger firms—often also older ones—tend to be less dynamic. Unlike for humans, however, there’s a “cure” for aging. Amazon, for instance, famously structured itself into modular teams that communicate via open APIs. Similarly, when faced with the need for transformation, large firms such as Siemens AG have recently opted to split into smaller, more agile units.

We also examine the average employee tenure at a company and find a strong negative correlation between staff tenure and future growth potential. The reason is turnover—faster-growing firms actively hire and fire more frequently, continuously refreshing their talent and execution capabilities. While turnover can be disruptive, it also reinvigorates organizations, helping to strip away the bureaucratic bandage that accumulates in more stable firms.

Interestingly, we see positive signals when employees recommend their company to others but no clear link between overall employee happiness and growth potential. This suggests, perhaps soberingly, that optimizing for happiness may not align with the conditions that drive maximum growth.

The biggest mistake in managing culture during a startup’s transition to a scaleup is failing to deliberately reshape it at critical inflection points. Many founders assume that their early culture—built on agility, informality, and tight-knit trust—will scale naturally. It won’t. Cultures typically “break” at around 150 employees (a limit known as Dunbar’s number), and what worked in the early days often becomes a liability at scale.

High-performance CEOs recognize that this shift requires clarity about which values and behaviors must evolve, even if it means parting ways with early employees who were once indispensable. Some of the brightest early contributors struggle to make the leap, and failing to acknowledge that—clinging to the past out of loyalty or fear—can cripple growth. Bringing in new senior leaders also alters culture dramatically, whether it’s a VP, a C-suite hire, or a new CEO altogether. The best leaders don’t pretend otherwise; they address it head-on, ensuring the team understands that this is an intentional evolution, not a betrayal of the past.

As a startup shifts from being a “large small” company to a “small big” one, the leadership requirements change entirely. Founders excel at creating something from nothing, but scaling demands a different skill set—operational excellence, structured decision making, and, as Anthropic’s head of people, Hannah Pritchett, notes, trust. She told us, “The value we place on ‘high trust, low ego’ drives a culture of collaboration and cooperation within the company that I think is really thrilling.” By actively nurturing a culture of trust, Anthropic onboarded 700 to 800 colleagues in the past year alone, fueling its growth while maintaining focus and alignment at scale.

The most successful organizations cultivate cultures that are intentional, embedded in operations, and adaptable to change. They treat culture as a strategic asset—designing it to attract and retain talent, aligning it with decision making, and reinforcing it through key moments that define trust and loyalty.

Culture as the Second Product. “Culture is the second product you build and sell to your employees. It must be unique, relevant, and valuable—acting as a talent magnet.” This is how Brian Halligan, co-founder and executive chair at HubSpot, framed it when asked about the *why* of culture.

Just as a great external product attracts and retains customers, a strong internal culture attracts and retains top talent. HubSpot’s approach ensures that its culture remains dynamic and continuously evolves to support innovation, collaboration, and long-term employee engagement.

Companies that fail to invest in their culture as strategically as they do in their core product risk losing their most valuable asset: their people.

A Culture of Strategic Insight. At Procter & Gamble, strategy isn’t a static document—it’s a living, breathing framework that evolves with new insights and market shifts. P&G continuously updates and refines its strategic direction on the basis of deep consumer insights, ensuring that decision making remains data-driven and forward-looking. This iterative approach keeps the company agile and allows it to maintain its market leadership across generations. By linking strategy closely to insights, P&G ensures that every product launch, marketing campaign, and investment decision aligns with real consumer needs.

Companies that fail to keep their strategy dynamic risk becoming obsolete, while those that treat strategy as a continuous learning process stay ahead of the curve.

The Importance of Key Moments. GetYourGuide understands that a company’s culture is shaped not just by policies and mission statements but also by the defining moments in its journey. In times of crisis or rapid growth, how a company responds creates its cultural DNA.

For instance, during the COVID-19 pandemic, GetYourGuide chose to refund all of its customers rather than simply retain prepayments, reinforcing its commitment to trust and long-term relationships. In a similarly bold move in 2020, it retained all its employees despite booking zero revenue and offered staff the option to replace a small part of their fixed salary with stock options—an offer accepted by a large proportion of the team.

Airbnb experienced a similar make-or-break cultural moment when it committed to reimbursing hosts for guest damages, despite having no legal obligation to do so, demonstrating its dedication to the community.

By prioritizing customer and employee trust over short-term financial gains, these companies created cultural memories that inspire loyalty from employees and customers alike. Organizations that recognize and act decisively in defining moments craft cultures that stand the test of time.

Cultural Onboarding at Scale. Bringing in 10,000 employees in a year is no small feat—especially for a company built on deep technical expertise. ASML’s workforce grew nearly a third from 2021 through 2024, a necessary but complex expansion. “It always feels like a roller coaster,” said Christian Wilfling, senior vice president of HR and chief HR operations officer.

Rather than just filling seats, ASML focused on integrating new hires quickly and meaningfully. The key? A strong, intentional culture. By codifying its core values—Challenge, Collaborate, and Care—ASML ensured that every newcomer understood both their role and the company’s way of working. Skill-building programs, leadership development, and interactive “career festivals” showcased internal growth opportunities, helping employees map their future within ASML.

To further support career navigation, ASML embedded AI-driven skill-building recommendations and job matching into its HR platforms. Employees receive tailored career paths, skill-based learning suggestions, and access to an internal gig-based system that enables them to take on short-term projects, build expertise, and explore new roles. By aligning talent development with culture, ASML transformed rapid growth into an opportunity to strengthen its workforce and future-proof the company.

Trusting Talent to Own the Truth. Databricks believes transparency fuels innovation by trusting employees with the full picture—both wins and setbacks. “We still have an email list that goes to the entire company, and anybody can post on it,” said co-founder Arsalan Tavakoli. This open forum surfaces both good news and bad, ensuring problems are tackled fast and ideas move freely. While most companies tighten control as they scale, Databricks bets on its people to handle the truth, collaborate across teams, and drive continuous innovation. By keeping communication open, the company maintains its startup energy and empowers employees to push boundaries without hesitation.



A Message to Founders, CEOs, and Senior Executives

As you steer your startup through the exhilarating, yet challenging phases of growth—from the raw hustle of the startup mode to the inspiring, visionary leadership demanded in scaleup and beyond—you’re stepping into a unique role that will evolve in fascinating ways.

In the early days, in the founding stages, you were all in—investing sweat and determination as every task felt like a battle. But as you transition into scaleup mode, your role shifts dramatically. It becomes less about the daily grind and more about strategic vision, inspiring your team, setting up the rails that keep the organization running and scaling, and managing an increasingly risk-averse organization while nurturing your corporate vitality. You’re not just driving a product or service anymore; you’re now building a resilient team of executives, staff, and (soon) even autonomous agents who will carry forward your vision.

And if you’re a seasoned CEO leading a larger, more established firm, the dynamics are different—but the leadership challenge is no less real. You may not be building from scratch, but you’re continuously rebuilding—navigating complexity at scale, fending off complacency, and orchestrating change across sprawling teams and legacy systems. Your job is to keep the company’s edge sharp, even after decades of success. That means balancing operational discipline with innovation, leveraging scale without letting it stifle agility, and renewing your culture while honoring its roots. Growth, for you, is less about ignition and more about reinvention.

As you reflect on your path and prepare for the future—whether that means an IPO, a strategic acquisition, or continued innovation—here are questions to ponder as you look at growth today and tomorrow:

- Are you on a path of sustained, value-creating growth with your firm? What are the teams, programs, and initiatives that drive this growth for you?
- Do you have any blind spots in strategy, technology, people, or culture, and if so, what’s your first step to address them?

- How reliably can you model and forecast your return on growth investments, and what could you do to build a better approach?
- Do you have a digital technology stack that helps you grow, and do you manage to put actionable real-time data in the hands of your people?
- How do you ensure that as your company grows, you continue to raise—rather than lower—the bar for new hires and leadership teams?
- How do you adapt your leadership style as your organization transitions from a startup to a scaleup and beyond?

For CEOs leading large, established firms, the vitality challenge is just as urgent—and in many ways, even more complex. Longevity doesn’t preclude reinvention. In fact, more than 105 of the world’s 1,000 most vital companies are more than 100 years old. These enduring organizations prove that age can be an asset, not a liability—if paired with bold leadership, a relentless commitment to innovation, and the ability to rewire legacy systems without losing the core of what made them great. In a world of accelerating change, your role is to unlock new growth while safeguarding the institutional strength built over decades. That requires not just sustaining what works—but letting go of what no longer serves.

Whether you’re at the helm of a small or large firm, one thing never changes. At the heart of this journey, you are *the one in the arena*—the leader who dares greatly, who stands at the crossroads of ambition and challenge, of risk and reward. You are building something that didn’t exist before, forging a future not just for yourself but for your team, your industry, and the world beyond. Keep pushing forward, keep learning, and keep leading. We are rooting for you. Your success is not just yours—it’s ours as a society.

Industry Spotlight

A Spectrum of Innovation

Not all industries are alike when it comes to vitality. Four stand out, with median vitality scores above all other: software and technology (often also called communications, media, and technology, or CMT), health care, professional services, and automotive.

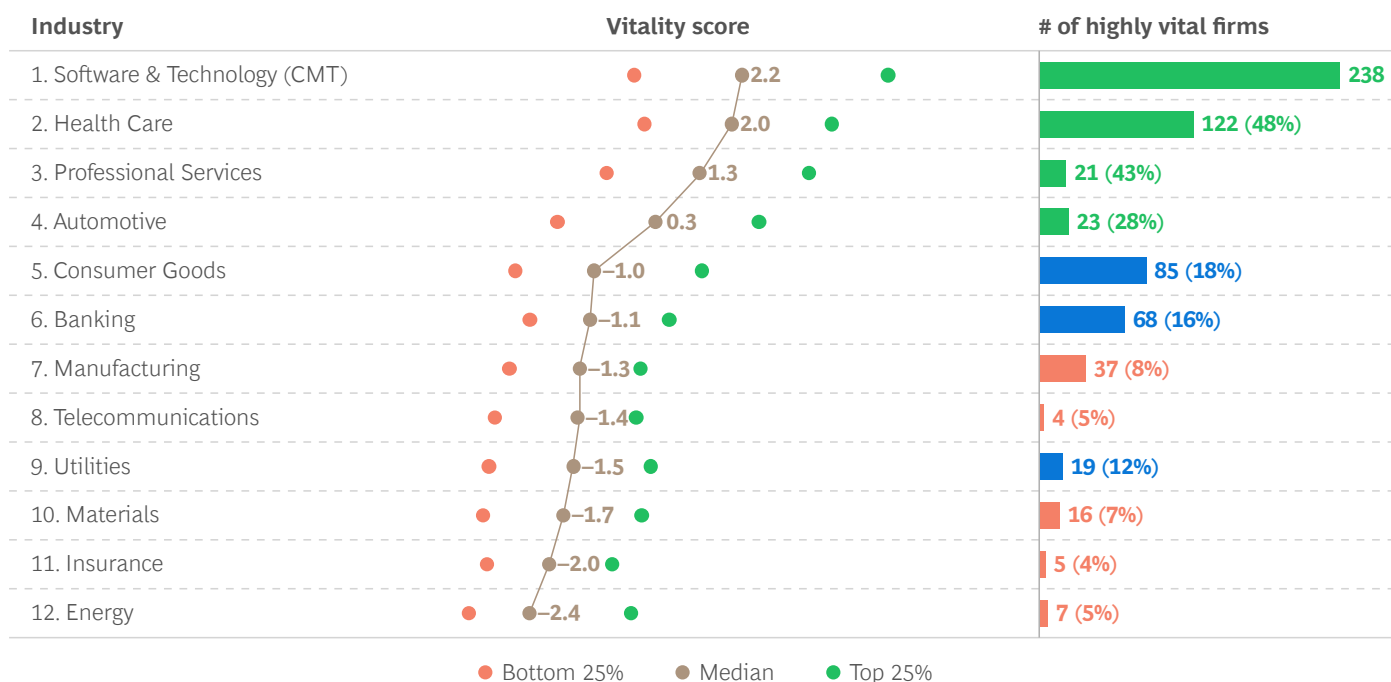
These industries don't have much in common, except a certain innate predisposition toward inventing or embracing new technologies as relatively early adopters, in part to avoid their own disruption. As a byproduct, these industries often give birth to new, fast-growing firms, which in itself drives industry vitality.

But here's the good news for all of us. Every industry includes highly vital firms. For example, 85 consumer goods firms, 37 manufacturers, and 68 banks globally exceed the median vitality score of software and technology, an ambitious benchmark. Even in the least vital sector, energy, which skews heavily toward oil and gas, 7 firms globally meet this standard.

To explore these industry dynamics further, we take a deep dive into four key industries:

- Software and technology (#1)
- Professional services (#3)
- Financial institutions (banking at #6, insurance at #11)
- Manufacturing (#7)

Leading the Way: Software, Technology, Services, Health Care, and Automotive



Source: BCG analysis.

Note: "Highly vital" defined as median CMT vitality or above.

Software and Technology

This industry stands out, driven by rapid innovation and the adoption of breakthrough technologies—first the internet, then mobile, cloud, and now agentic AI. Its economic influence extends far beyond software, transforming key industries such as retail, insurance, and banking.

However, the industry is facing disruption from AI-driven content personalization, decentralized platforms, and global telecom competition. GenAI is transforming media production but also challenges software as a service business models, raising concerns about data security and intellectual property. Decentralized platforms, powered by blockchain and creator-driven models, challenge content monetization and moderation, creating regulatory uncertainty.

Meanwhile, intensifying global competition in 5G, 6G, and semiconductor supply chains forces governments and enterprises to navigate restrictions, tech alliances, and infrastructure self-sufficiency, reshaping the telecom landscape.

Despite these challenges, software and technology firms are among the world's most vital, driven by technology that enables faster scaling than other industries. On an industry level, their strength comes from superior strategy, strong capital and talent access, and technological advantage. However, many grapple with maintaining high talent density amid rapid growth while sustaining a strong performance culture at scale. Leaders here need to ask themselves:

- How can we empower our people with data to drive growth initiatives?
- How can we sustain high talent density during periods of high growth?
- How can we reinforce our high-performance culture?

Professional Services

Professional services firms span a wide range of disciplines, including management consulting, legal advisory, financial services, technology, and business process outsourcing. These firms tend to be highly vital. They are shaped mostly by their talent and software stacks. The most successful differentiate themselves not only through expertise but also by leveraging advanced digital tools, automation, and AI-driven insights to enhance efficiency and decision making.

The professional services industry is facing a complex set of challenges as it navigates talent shortages, rapid technological disruption, and evolving regulatory demands. The scarcity of skilled professionals is driving up labor costs and increasing competition for top talent, pushing

firms to invest in automation, AI-driven analytics, and digital service delivery. At the same time, shifting client expectations and new possibilities from AI and agentic solutions require firms to rethink their service models, balancing efficiency with high-touch, relationship-driven advisory work.

Business leaders in professional services firms looking to build a competitive edge through vitality should consider these critical questions:

- How can we attract and retain top talent in an evolving labor market, ensuring we appeal to the next generation of professionals with flexible work models and purpose-driven careers?
- What strategies can we implement to integrate AI and automation effectively, not only to enhance efficiency but also to empower human expertise rather than replace it?
- How can we refine our client engagement approach to deepen relationships, foster trust, and deliver high-value, empathetic service in an increasingly digital-first world?

Financial Institutions

Financial institutions encompass a diverse range of players, from banks and asset managers to payment providers and insurers. Their vitality varies widely, with younger, tech-driven firms in asset management or payment services often outperforming established ones. Insurers typically lag behind the industry average in vitality—only 5 insurers worldwide are more vital than the median software and technology firm. Banks and asset managers, on the other hand, tend to be more vital on average, with 68 banks globally showing vitality at or above the level of a typical median software and technology firm.

The financial sector is navigating rapid transformation driven by AI automation, embedded finance, and evolving regulations. Banks and insurers must adopt AI for fraud detection, risk modeling, and personalization while managing data security and compliance risks. Embedded finance is dissolving industry boundaries, integrating financial services into e-commerce and tech ecosystems, forcing traditional players to rethink engagement. Open banking regulations fuel competition by giving consumers greater control over their data, enabling fintechs to poach profitable customers.

Meanwhile, heightened scrutiny of digital assets, anti-money-laundering policies, and cybersecurity demands a careful balance between innovation and compliance. Geopolitical uncertainty, central bank digital currencies, and the rise of stablecoins further reshape cross-border transactions and financial stability strategies.

The most resilient banks and insurers leverage GenAI to enhance core processes while cautiously developing digital challengers to counter emerging disruptors. Forward-looking leaders of startups, scaleups, and grownups in financial institutions can ask themselves these questions:

- Where do we see the biggest disruption risks to our business, and how can we fend them off through targeted investments into growth initiatives?
- How can we leverage AI-enabled technologies to help our finance, HR, and business operations teams steer the business and drive the right decisions?
- How can we balance innovation and compliance to build trust with regulators and keep our license to operate?

Manufacturing

Manufacturing is a vital and highly diverse set of industries, from machines, to process industries, to aeronautics and defense. The most vital firms in manufacturing embrace software technologies to create compelling services ecosystems around their products and balance the need for supply chain resilience with targeted growth investments.

Challenges for the industry abound, however. Many players are facing disruption from AI-driven automation, smart factories, and shifting geopolitical trade dynamics. GenAI is transforming production processes but also challenges traditional labor roles, raising concerns about workforce adaptation and IP security. Smart and connected factories, powered by the internet of things, edge computing, and digital twins, are reshaping operational efficiency but introduce complexities in cybersecurity and data governance.

Meanwhile, intensifying global competition in raw materials, semiconductor supply chains, and trade policies forces manufacturers to navigate tariffs, compliance risks, and regional alliances, redefining supply chain resilience and industrial self-sufficiency.

The most vital manufacturing firms harness digital technology to develop integrated hardware and software solutions that are difficult for customers to replace. This creates lasting value, which can be partially captured through subscription-based or service-driven revenue models. However, many companies face challenges not only in scaling technology adoption but also in fostering cultural change and guiding their workforce through this transformation. Success depends on helping employees see these technological shifts as opportunities rather than risks. Manufacturing leaders must ask themselves these questions, among others:

- How can we build the geopolitical muscle to build more resilient supply chains?
- What targeted growth initiatives create more digital services revenue?
- How can we better leverage digital and agentic-AI-based technologies?

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