

The art of AI maturity

Advancing from practice to performance

Growth Markets

Asia Pacific, Africa, the Middle East, and Latin America

Contents

Foreword	Executive summary	AI maturity: Why it matters	AI maturity: What it is	AI Achievers advance from practice to performance	How AI Achievers master their craft	Practice makes progress	Appendix
03	04	06	09	14	17	29	35

The art of AI maturity – a Growth Markets perspective

Foreword

As artificial intelligence technologies become more prevalent, some organizations will lead the change, and others will be fast followers. With growing confidence in AI as a value driver, we see companies in Asia Pacific, Africa, the Middle East, and Latin America (Growth Markets) evolving and maturing along with the technology itself.

Also, governments in these markets, including China, Singapore, and India, have announced ambitious national AI strategies. In the Middle East, AI is at the center of all national economic development plans over the next few years.

While AI continues to attract board level attention and investment, the AI maturity

is still evolving. Within the Growth Markets, the AI maturity is picking up pace with 17% of companies are what we call “AI Achievers”—that is, they leverage AI’s full potential.

In this report, we look at what the AI Achievers are doing right. Our findings demonstrate that Achievers are not defined by the sophistication of any one capability, but by their ability to combine strengths across strategy, processes, and people by scaling AI. The five ways in which AI Achievers master their craft are — 1. Their top leaders champion AI as a strategic priority for the entire organization. 2. They invest heavily in talent to get more from their AI investments. 3. They industrialize AI tools and teams to create a strong AI core. 4.

They design AI responsibly, from the start. 5. They prioritize long and short-term AI investments. In the report, we delve deeper into each of these success factors.

In most cases the right intentions are yet to be converted into actions. While most companies have begun their Responsible AI journey, the majority (94%) are yet to operationalize across all key elements of Responsible AI. To move from principles to practice, organizations need a structured approach to be responsible by design.

We hope that the ‘Art of AI maturity’ will serve as an inspiration for business leaders to pave the way for a successful AI maturity journey for their enterprises. With the strong industry momentum, we project the number of AI Achievers, to

nearly double (to 32%) by 2024 in Growth markets.

Because high-performance today will become business-as-usual tomorrow, there’s an impetus to move quickly and move now.



Senthil Ramani

Senior Managing Director,
Growth Markets, Applied
Intelligence

Executive summary

In fewer than 70 years, artificial intelligence (AI) has evolved from a scientific concept to a societal constant.

Today, so much of what we take for granted in our daily lives, from travel to shopping, relies on machine learning (ML). Companies across industries are investing in AI to drive logistics, improve customer service, increase efficiency, empower employees and so much more.

Like their peers in developed economies, few organizations in Growth Markets (GMs) are capitalizing on AI's full potential.

According to our analysis of approximately 500 companies in GMs, only 17% of firms have advanced their AI maturity enough to achieve superior growth and business transformation. We call them the "AI Achievers."

Another 30% of firms are somewhat advanced in their level of AI maturity, while the remaining 53% (the majority) are merely testing the waters.

This decades-long journey to AI maturity is now in high gear. Even pre-pandemic (2019), AI Achievers already enjoyed 56% greater revenue growth, on average, compared with their peers. And in 2021, executives who discussed AI on their earnings calls were 96.7% more likely to see their firms' share prices increase—up from 64.2% in 2018.

In short, advancing AI maturity is no longer a choice. It's an imperative for every industry, every organization and every leader.

53%
of firms are still testing the AI waters.

17%
of firms have advanced their AI maturity enough to achieve superior performance and growth.



What do AI Achievers do differently?

While there's clearly a science to AI, our findings demonstrate there is also an art to AI maturity. Achievers are not defined by the sophistication of any one capability, but by their ability to combine strengths across strategy, processes and people.

Here are five ways AI Achievers master their craft:

- 1. Their top leaders champion AI as a strategic priority for the entire organization.**
- 2. They invest heavily in talent to get more from their AI investments.**
- 3. They industrialize AI tools and teams to create a strong AI core.**
- 4. They design AI responsibly, from the start.**
- 5. They prioritize long- and short-term AI investments.**

Our machine learning models suggest that the share of AI Achievers will increase rapidly and significantly, more than doubling from the current 17% to 32% by 2024.

In short, advancing AI maturity is no longer a choice. It's an opportunity facing every industry, every organization and every leader.

The art of AI maturity

AI maturity: Why it matters

AI maturity: Why it matters

There is a growing consensus that AI is essential to competitive advantage.

In 2021, 46% of CEOs mentioned AI on their earnings calls—when they did, their share prices were 96.7% more likely to increase.

In Growth Markets specifically:

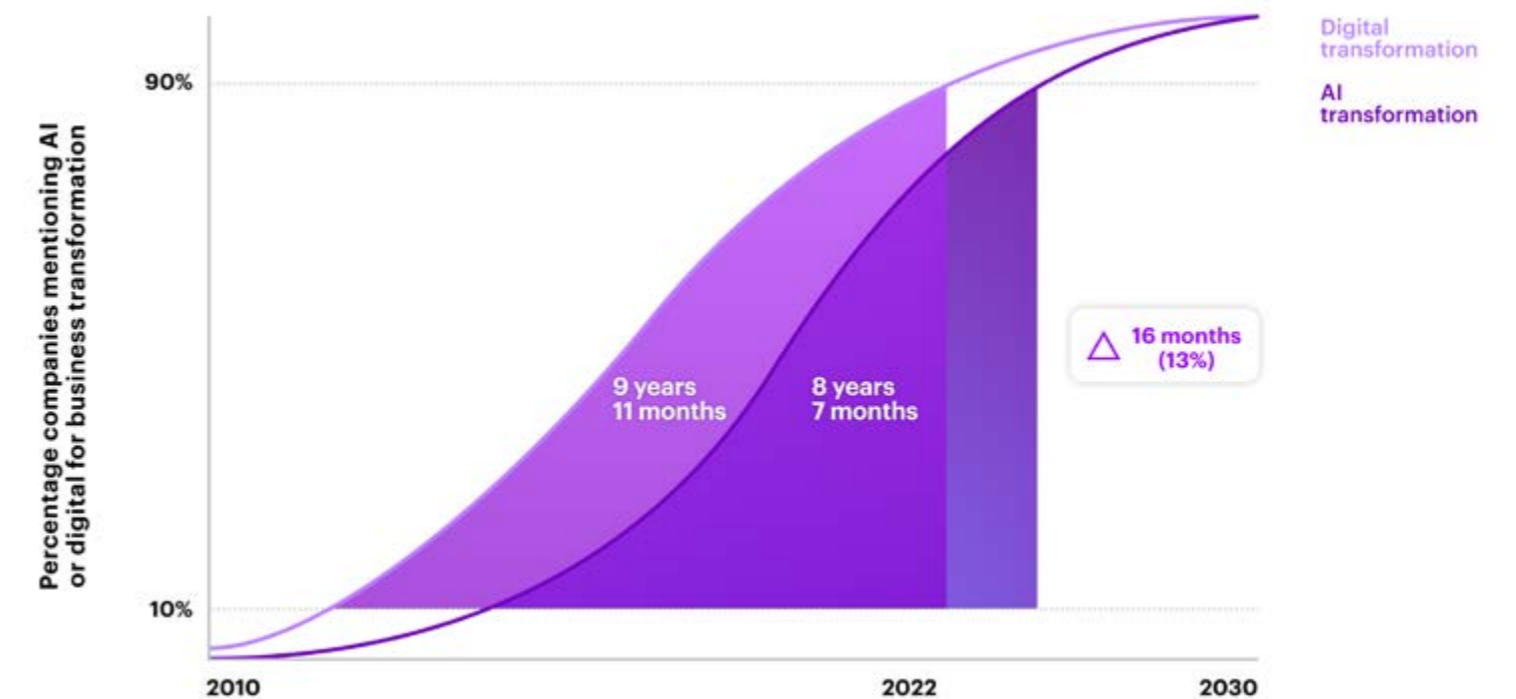
- **67%** of companies have integrated AI into their business strategies and reworked their cloud plans to achieve AI success.

- **38%** of companies said the return on their AI initiatives exceeded their expectations (compared to 42% globally). Only 2% said the ROI did not meet expectations.

AI, accelerated

AI is now widely considered a value driver. We estimate AI transformation will happen much more quickly than digital transformation—on average, 16 months faster (Figure 1).

Figure 1: We project that AI transformation will take less time than digital transformation

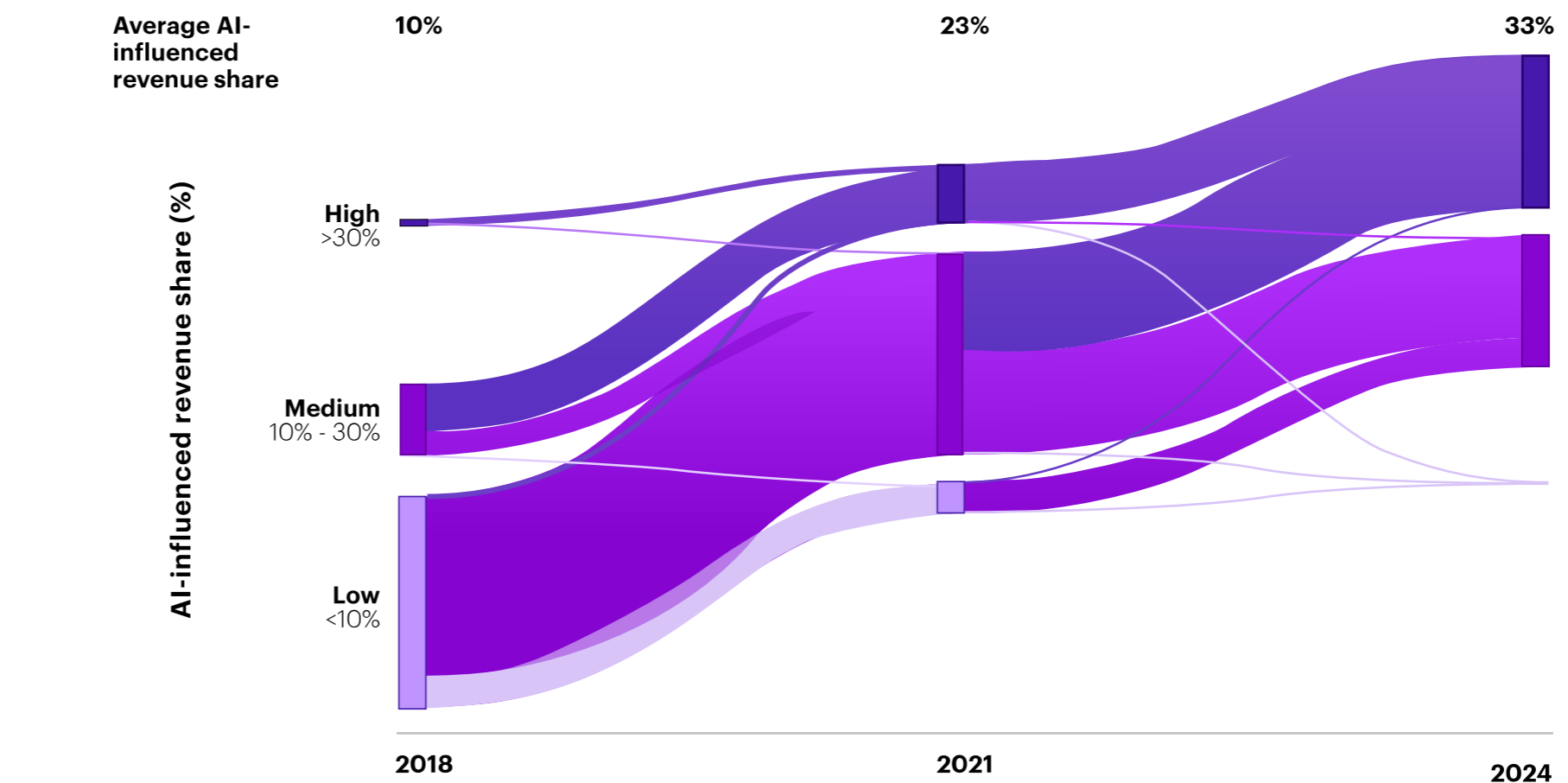


Source: Accenture Research

Note: Our estimate is derived from a natural language processing analysis of investor calls of the world's 2,000 largest companies (by market cap), from 2010 to 2021, that referenced "AI" and "digital" in tandem with "business transformation," respectively. Data was sourced from S&P earnings transcripts.

There's great incentive to move quickly. We found, for example, that the share of company revenue that is "AI-influenced" more than doubled between 2018 and 2021 and is expected to roughly triple by 2024 (Figure 2). In response, companies plan to increase and accelerate their AI investments. In 2021, 21% of companies dedicated more than 30% of their tech budgets to AI development. By 2024, 49% of companies intend to do the same.

Figure 2: Evolution of companies' AI-influenced revenue share from 2018 to 2024*



Legend:

- High >30%
- Medium 10% - 30%
- Low <10%

Note: Color indicates the achieved AI-influenced revenue threshold within each time period.

Source: Accenture Research

Note: *2024 = projected, N = 585

*Definition of "AI-influenced" revenues:

a. Sales of existing products and services made possible through better AI-driven insights on customers, supply chain, channels; **b.** Sales of new products and services made possible by human + AI, **c.** Higher prices through dynamic pricing ML algorithms. These sales include some cannibalization and net new revenues. In contrast, this definition is excluding higher efficiencies in production operations thanks to AI.

The art of AI maturity

AI maturity: What it is



AI maturity: What it is


We designed a holistic AI maturity framework to uncover common strategies for AI success.

Fittingly, our analysis itself was conducted using AI. We applied machine learning (ML) models to unravel massive survey datasets and uncover drivers of AI maturity that would have been impossible to detect using more traditional analytical methods. (More on the methodology in the Appendix.)

Our research found that AI maturity gives companies a strong competitive advantage. Unlocking this advantage comes down to mastering a set of key capabilities in the right combinations—

not only in data and AI, but also in organizational strategy, talent and culture. (See pages 37 and 38 for key capabilities descriptions.)

This includes foundational AI capabilities—like cloud platforms and tools, data platforms, architecture and governance—that are required to keep pace with competitors. It also includes “differentiation” AI capabilities, like AI strategy and C-suite sponsorship, combined with a culture of innovation that can set companies apart.

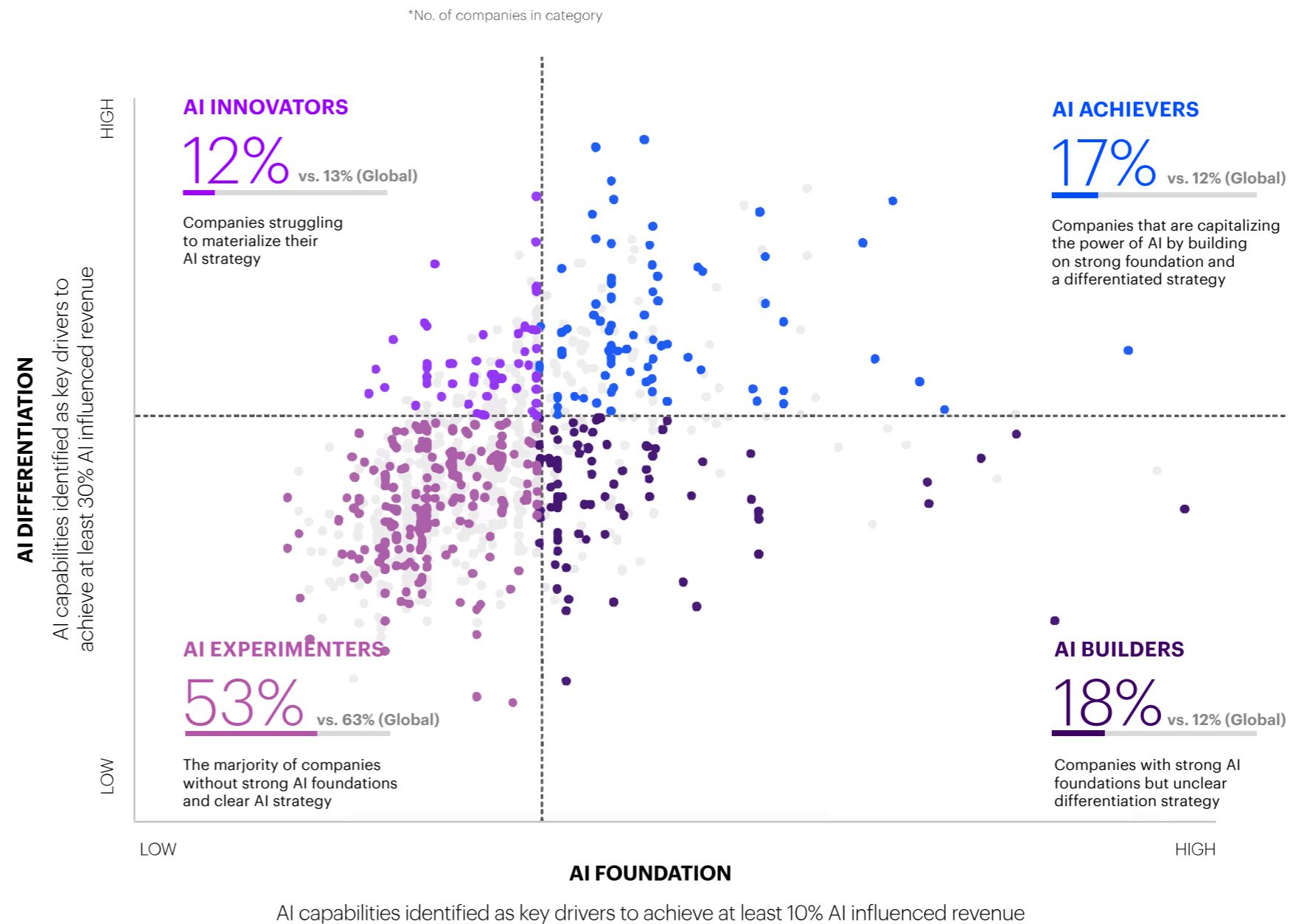


AI maturity measures the degree to which organizations have mastered AI-related capabilities in the right combination to achieve high performance for customers, shareholders and employees.

The companies that scored best in both categories are what we call “AI Achievers.” Meanwhile, “AI Builders” show strong foundational capabilities and average differentiation capabilities, while “AI Innovators” show strong differentiation capabilities and average foundational capabilities. Trailing these cohorts are a fourth group we’re calling “AI Experimenters”—those with average capabilities in both categories.

In Growth Markets, Achievers accounted for 17% of all firms surveyed, Builders for 18% and Innovators for 12%. Together, Achievers, Builders, and Innovators represent 47% of surveyed organizations—10% higher than their combined global representation (37%). AI Experimenters make up the majority (53%) (Figure 3).

Figure 3: Only 17% of organizations are AI Achievers



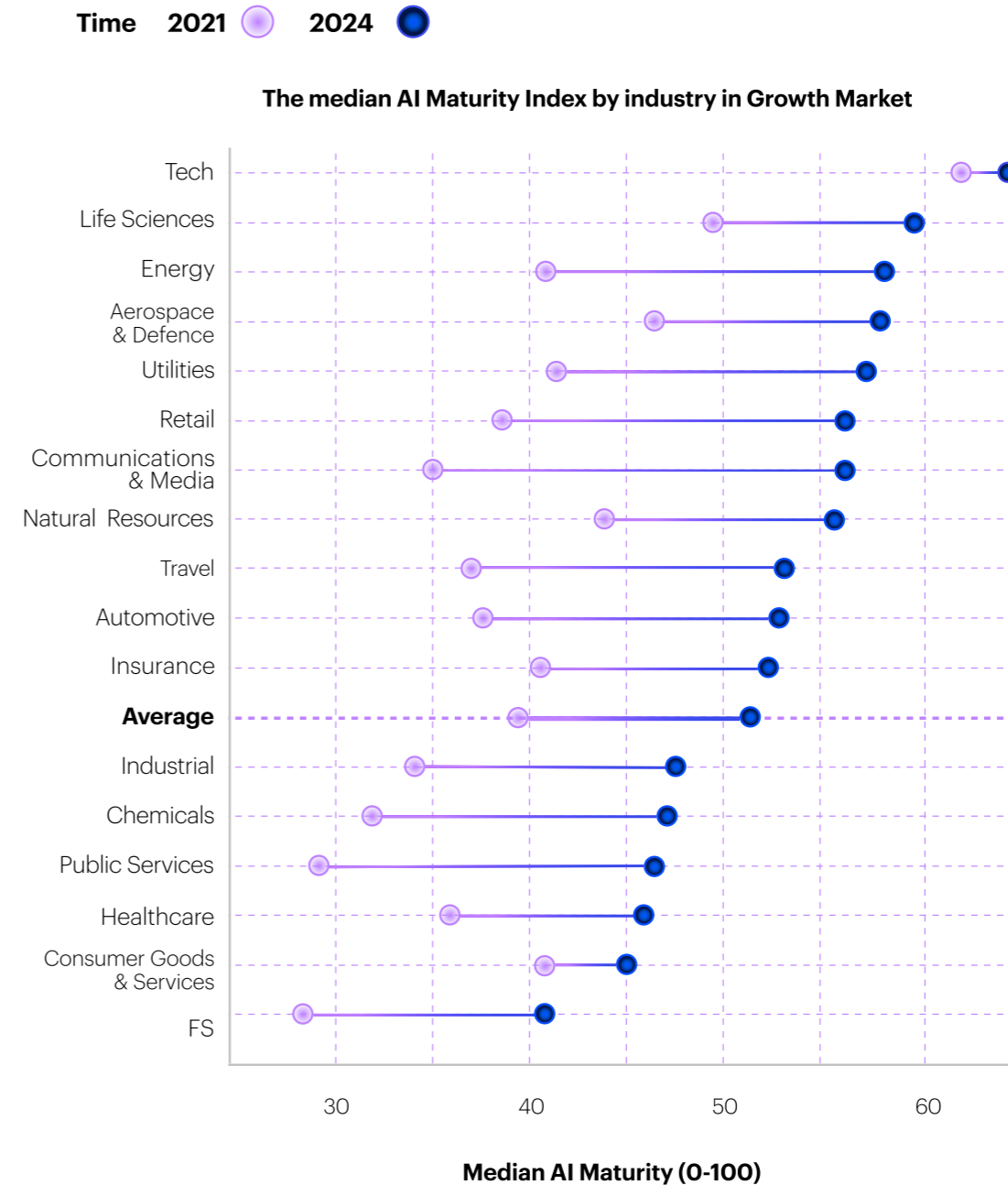
Source: Accenture Research analysis based on a sample of 1,200 global companies and 491 are from Growth Market

AI, applied

While industries like tech are currently far ahead of others in AI maturity, the gap will likely narrow considerably by 2024. In fact, there's growing demand for AI in the life sciences industry, due to the presence of top research institutions in Growth Markets, rising investments in the research studies of various diseases, and accelerated advancements in drug discovery and delivery. In addition, various airlines and airport authorities in Growth Markets are increasingly investing in AI for airport safety, predicting flight arrivals more accurately, customer service chatbots, operational efficiency, etc.

In other industries, a range of factors may be contributing to relatively low AI maturity. Financial Services institutions, for example, still struggle to move projects into production and scale AI across the organization. Meanwhile, healthcare organizations have been slow to adapt to the AI transformation. But many are either experimenting with or actively pursuing AI-enabled tools to bridge the huge gaps in resources and meet challenges created by rapidly aging societies (Figure 4).

Figure 4: Levels of AI maturity by industry, 2021 and 2024*



N = 516 | Source: Accenture Research analysis based on a sample of 1,200 global companies and 491 are from Growth Market

Note: *2024 = estimated scores. Industries' AI maturity scores represent the arithmetic average of their respective Foundational and Differentiation index.

AI, applied across industries

- **A Middle East-based telecom operator** uses an AI-driven bilingual virtual assistant to handle approximately 1.5 million customer interactions—in both Arabic and English—across multiple channels each month.
- **A large chemicals and energy firm** is using drones and AI-powered computer vision to monitor its equipment and remote locations. The upshot: More frequent inspections at lower cost to the company and fewer safety risks for its maintenance workers.
- **One coral conservatory** used AI for reef restoration. Its cost-effective edge computing solution and strategically placed underwater smart cameras allowed for non-invasive observations, from tracking the migration of fish to colder climates to monitoring illegal fishing in protected waters.
- **One of the world's largest metals and mining companies** wanted to enable intelligent, value-driven decision-making across its commercial ore value chain. The company's AI engagement resulted in better detection of possible disruptions in supply chains and a proactive approach to recovery planning.
- **The third-largest bank in Thailand** used AI to unlock the value of data to enhance experiences for consumers, optimize operations and fuel future growth. Their ongoing, multi-year transformation journey combines advanced data and analytics capabilities with people-focused processes and tools.
- **A leading Japanese cosmetic company** used data and AI-driven insights to track marketing ROI, gauge shifts in consumer behavior in a post-pandemic world and drive strategy for sales growth.
- **A large holding company** leveraged AI for workforce transformation. AI and ML models were used to match professional skillsets to specific company roles. Turns out 55% of recruits were matched with optimal positions, increasing performance and retention by 3X.
- **A leading Indonesian telecom company** deployed a best-in-class AI-powered virtual agent for cost-optimization and improving customer satisfaction scores.
- **A leading retail company** leveraged data and AI to create differentiated propositions for their brands. Within nine months, they scaled the business resulting in \$10M from new revenue streams. It's aiming to achieve a \$25M incremental revenue target by 2025.

The art of AI maturity

AI Achievers advance from
practice to performance

AI Achievers advance from practice to performance

AI Achievers are going above and beyond, deploying AI solutions to solve problems and identify new opportunities.

So it's no surprise they thrive when it comes to traditional performance metrics. Pre-pandemic, they already enjoyed 56% greater revenue growth on average, versus their peers. And today, they're 3.7 times more likely than Experimenters to see their AI-influenced revenue exceed 30% of their total revenues.

What sets the AI Achievers apart?

Mastery of multitasking

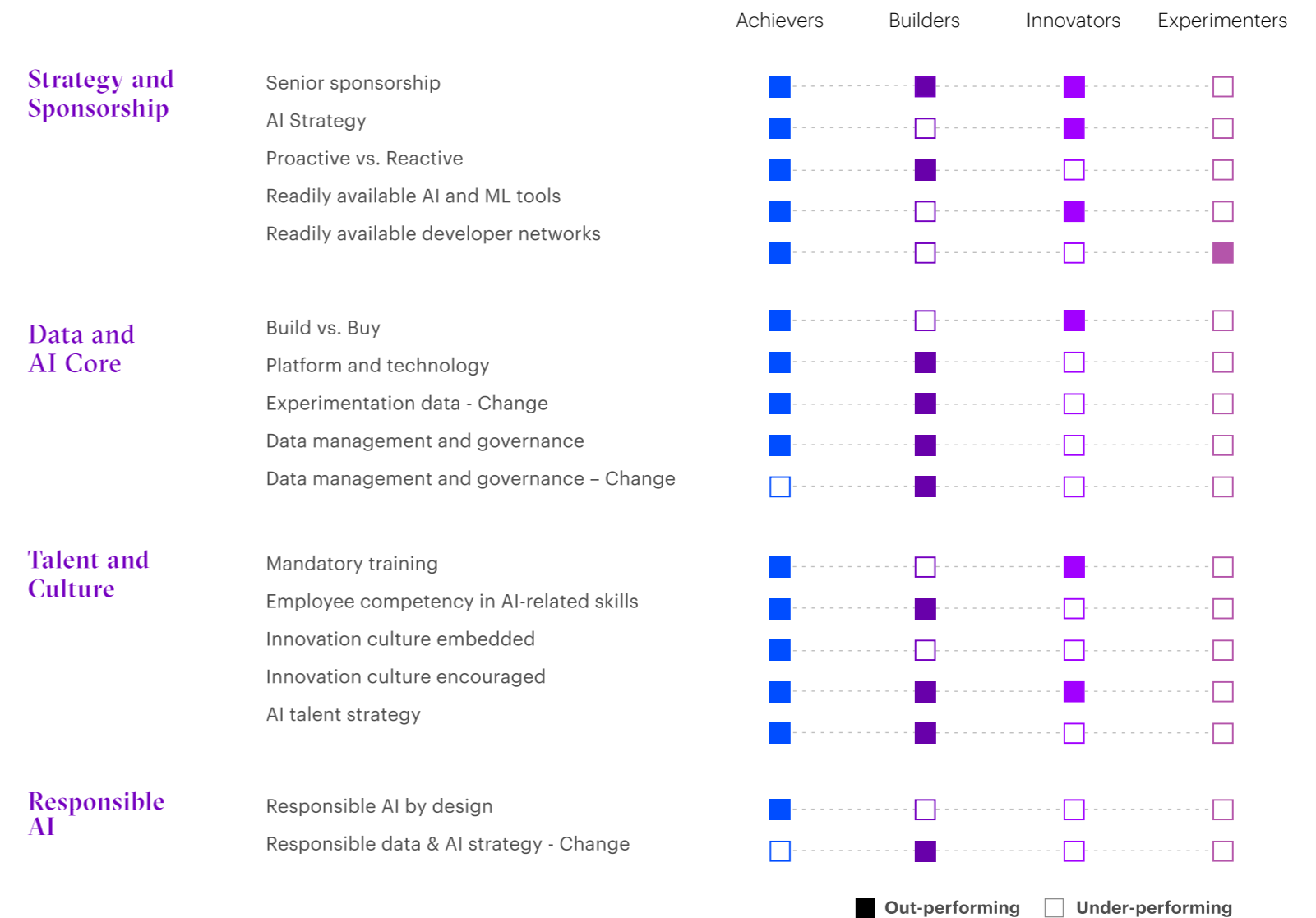
When compared with all other groups, AI Achievers demonstrate high performance across a combination of capabilities.

They are not defined by the sophistication of any one capability, but by their ability to combine strengths across strategy, processes and people.

In comparison, Innovators typically excel at securing senior sponsorship and embrace training for all employees, but they lack the foundational capabilities required to support AI at scale.

Builders, on the other hand, excel at creating data and AI platforms, but they tend to be weaker at cultivating AI fluency and the innovation culture that is needed to drive adoption. (Figure 5)

Figure 5: AI Achievers outperform in nearly all capabilities



Source: Accenture Research

Note: Each cube represents one of the 17 key capabilities. The cube is highlighted when the AI profile is outperforming against peers (higher than the average across all companies in terms of % of companies reaching the mature level).

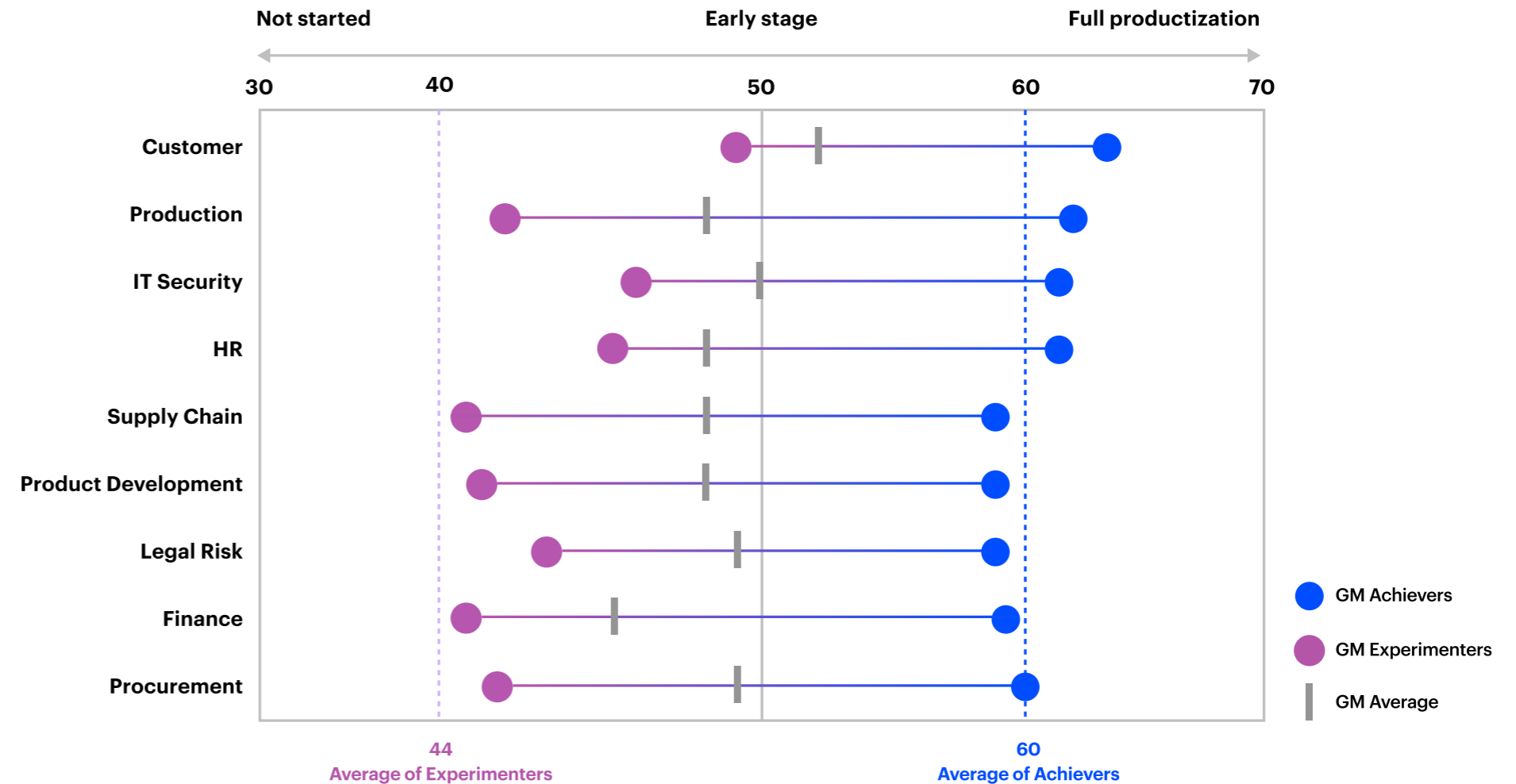
Turning pilots into production

Achievers have largely moved beyond the AI investment “tipping point,” going from experimenting with new AI in isolation to applying AI at scale to solve critical business problem (Figure 6). Achievers are 36% more likely to scale AI pilots across the enterprise compared with Experimenters.

A multinational telecom company with a major market in Japan was facing the challenge of unsubscribing users. They wanted to drive data-led transformation for improving efficiency and driving business growth. They also aimed at strengthening their team of data scientists by upskilling their existing workforce and hiring talent.

A joint venture company was established to help their business challenges. The joint venture created end-to-end data infrastructure across their business and enable them to scale it with cloud migration. The company leveraged data-led transformation to create hyper-personalized offers for clients and drive business growth. Combining data scientist training and analytics & BI environment we were also able to upskill their team and create a future-ready workforce.

Figure 6: Achievers excel at turning AI pilots into production



Source: Accenture Research

Note: Score 0-100, ranging from 0 = AI use case not started, 50 = AI use in early stage, 100 = having AI programs in place for full productization. The chart shows the difference in terms of average score for AI use cases of different functions, between Achievers and other firms. Those differences are statistically significant after controlling for industry, geography, and company size; see Appendix for more details.

The art of AI maturity

How AI Achievers master their craft

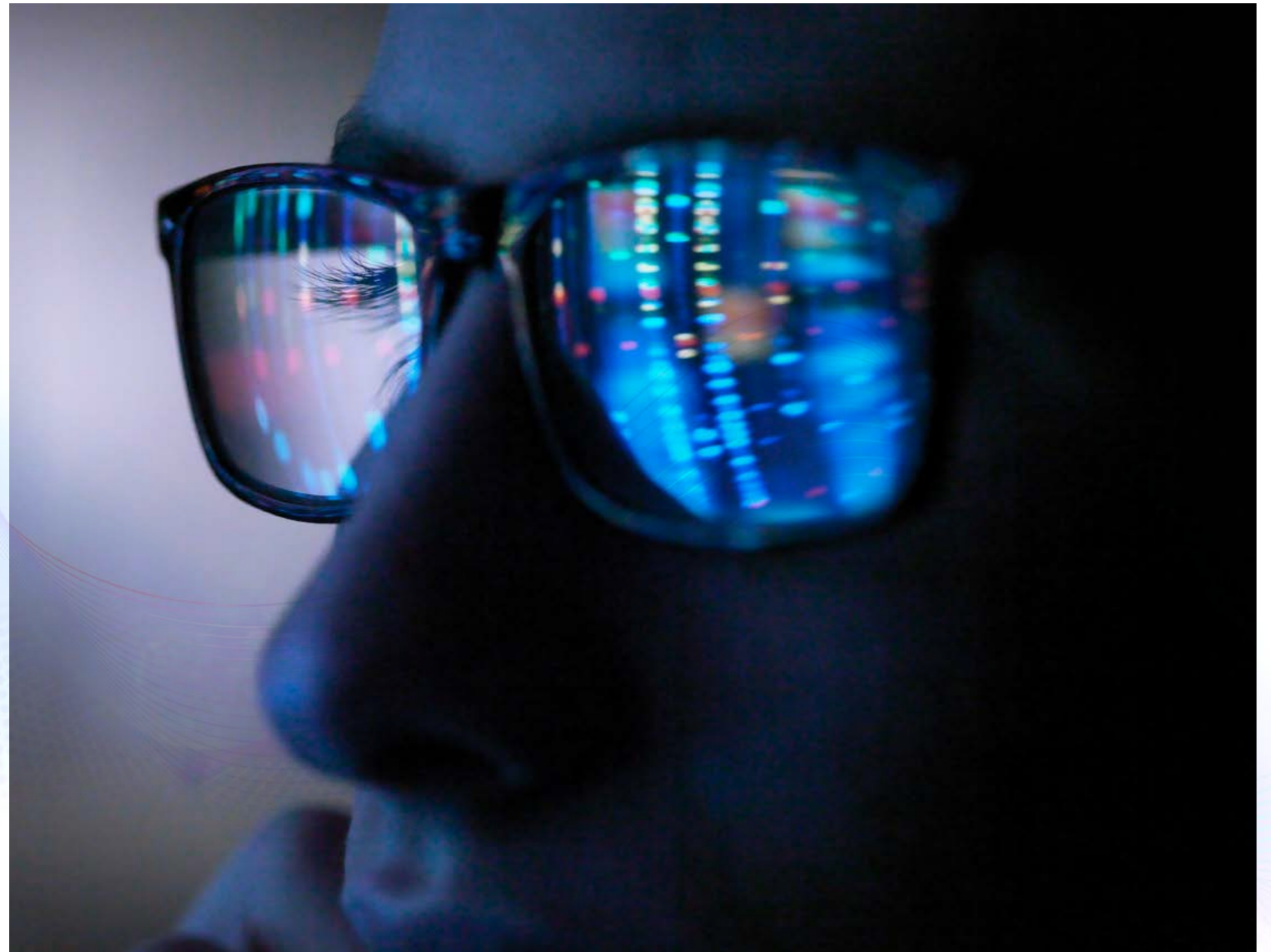
Five success factors

How AI Achievers master their craft

It's worth noting that the potential for AI-mature organizations will evolve along with the technology itself. High performance today will ultimately become business-as-usual tomorrow.

Today's AI Achievers have set the standard and are poised to remain leaders. While science is at the center, they've shown us there is also an art to AI maturity.

They have demonstrated that excellence in areas like vision and culture are just as critical as algorithmic integrity. Our research uncovered five key success factors for AI Achievers.



Success Factor 01

Champion AI as a strategic priority for the entire organization, with full sponsorship from leadership

Companies can create strong AI strategies, but unless those strategies receive enthusiastic support from the CEO and the rest of the C-suite, they're likely to flounder.

Achievers are more likely to have formal senior sponsorship for their AI strategies. We found that 86% of Achievers in Growth Markets have such sponsorship, while only 60% of Builders and just 56% of Experimenters have it.

Our research also suggests that the best AI strategies tend to be bold, even when they have modest beginnings. Bold AI strategies help spur innovation. For CEOs of Achievers, creating a culture of innovation is itself a deliberate, strategic move—one that is used as a vehicle for experimentation and learning across the organization. In fact, 59% of Achievers embed innovation in their organization's strategies, while just 33% of Experimenters do.





For instance, **Lendlease Digital (part of multinational Lendlease Group)** hopes to produce architectural blueprints for buildings using generative design and AI, then use those blueprints to manufacture actual buildings in factories—fitting together all the pieces like LEGO sets. The company’s bold vision starts at the top, led by the CEO of Lendlease Digital, William Ruh.

To encourage such end-to-end innovation, Achievers implement systems and structures that help employees showcase their innovation experiments and seek constructive feedback from leadership. For instance, Achievers tend to be the first to embrace new tools that encourage their employees to experiment and innovate. We found that 25% of Achievers in Growth Markets are already using platforms that allow workers to easily pose

questions and share ideas with colleagues across the company—compared to 6% of Experimenters. That number will only grow as these companies hire more AI talent.

86%
of Achievers have
CEO and senior
sponsorship.

Success Factor 02

Invest heavily in talent to get more from AI investments

With a clear AI strategy and strong CEO sponsorship, organizations are more likely to invest heavily in creating data and AI fluency across their workforces.

We found that 76% of Achievers—compared with 66% of Builders and 59% of Experimenters—have mandatory AI trainings for most employees, from product development engineers to C-suite executives. Because Achievers prioritize efforts to build AI literacy in their workforces, their employees are also more proficient in AI-related skills. This makes it easier to scale human-AI collaboration.

We also found that 56% of Achievers in Growth Markets have employees with consistently high AI skills competencies, while Innovators (42%) and Experimenters (35%) have significantly fewer such employees, on average. Achievers also develop proactive AI talent strategies to stay at the forefront of industry trends. In addition to hiring, this can mean partnering with or acquiring specialist companies to fill critical roles (such as data or behavioral scientists, social scientists and ethicists). It also means having a plan to get these diverse, multidisciplinary workers to collaborate, create and sustain maximum value from the company's data-science capabilities.



What does this look like in practice?

Japanese e-commerce giant Rakuten established an “AI Promotion Department” in 2016 to accelerate efforts to infuse AI into the company’s 70+ diverse businesses. By 2018, the department helped turn more than 30 AI pilot projects into successful offerings.

And a **leading Southeast Asian oil and gas firm** built an AI-powered, “gamified” learning platform to expand employees’

digital fluency. It also created a cloud-based performance reviewer that scrutinized a decade’s worth of employee data to recommend workers best suited for various digital roles. The innovation saved the firm’s HR department significant time filling positions. It also reduced scope for managerial bias in promotional decisions and helped workers assess and close digital-skills gaps.

54%

of Achievers in Growth Market have employees with consistently high AI skills competencies, while Innovators (42%) and Experimenters (35%) have significantly fewer such employees, on average.

Success Factor 03

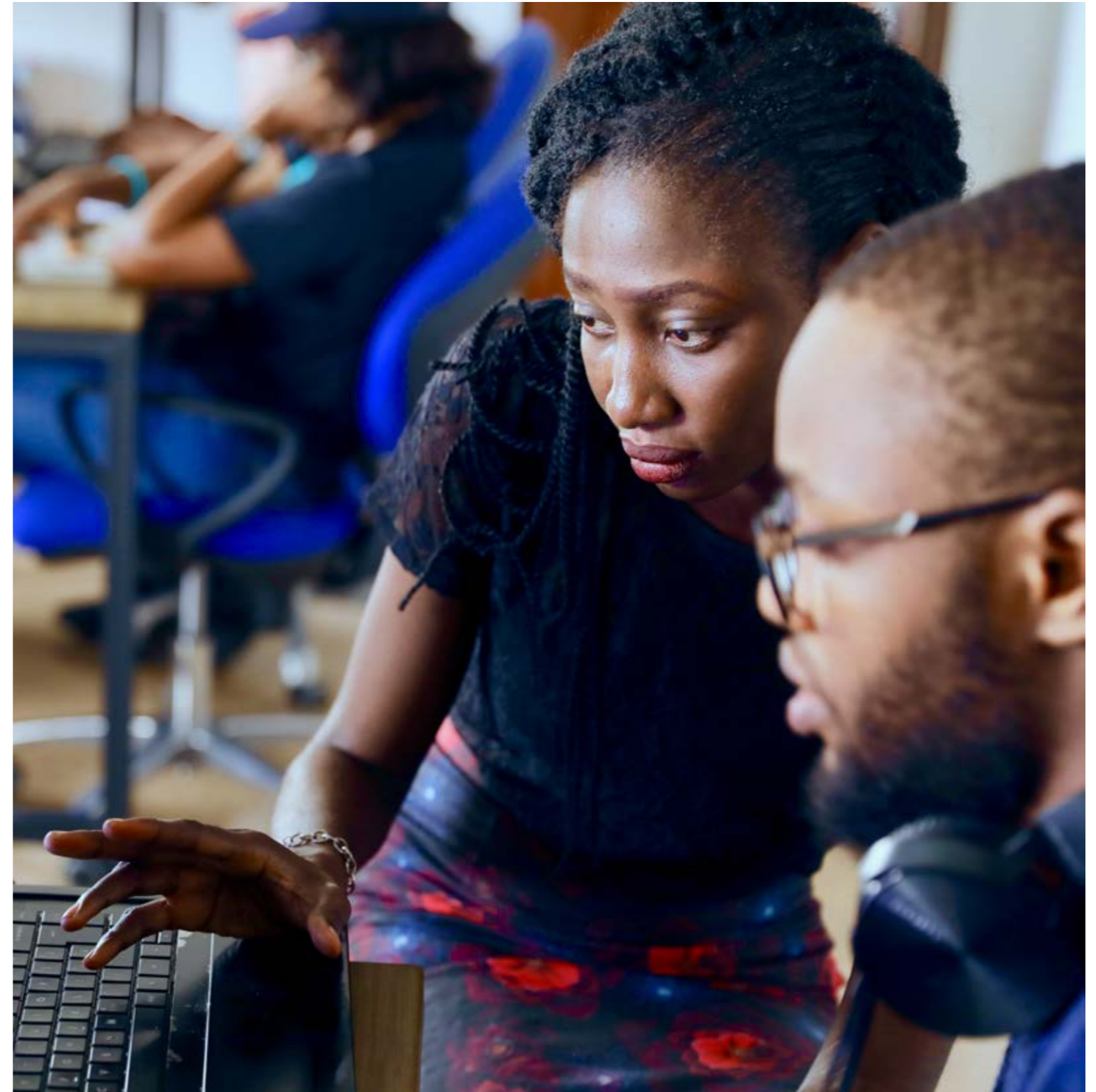
Industrialize AI tools and teams to create an AI core

Another priority for Achievers is building an AI core: An operational data and AI platform that taps into companies' talent, technology and data ecosystems, allowing firms to balance experimentation and execution. An AI core helps organizations productize their AI applications and integrate the technology into other applications.

An AI core also works across the cloud continuum (from migration to innovation), provides end-to-end data capabilities (foundation, management and governance), manages the machine learning lifecycle (workflow, model training, model deployment) and provides self-service capabilities. AI cores are, in turn, managed by dedicated interdisciplinary teams of machine learning engineers, data scientists, data

domain experts and systems engineers. To build AI cores, Achievers harness the power of internal and external data, making that data trustworthy and storing it in a single enterprise-grade cloud platform—complete with appropriate usage, monitoring and security policies.

To extract value from their data quickly and effectively, Achievers in Growth Markets are also 43% more likely, on average, than Experimenters to either develop custom-built, machine-learning applications or work with a partner that offers solutions-as-a-service. Achievers are also more likely than Innovators to use AI for innovation, tapping into readily available developer networks that can swiftly productionize and scale successful pilots.





To strengthen their AI cores, Achievers often collaborate with external experts to stay on top of breakthroughs in science and engineering. In 2020, for example, American Express partnered with the Indian Institute of Technology Madras to create a Data Analytics, Risk and Technology laboratory at the prestigious university. Such innovation ecosystems help Achievers develop AI apps tailored specifically to their needs.

A leading Indian bank deployed AI at scale to achieve higher growth and efficiencies across multiple verticals, such as retail and SMB, liquidity & risk management, wealth management and more. It identified priorities and devised a roadmap including strategy, technology & infrastructure, and talent. With an enterprise-wide data lake and AI/ML platform, as well as a robust literacy program, they were able to leverage the value of data and AI across the organization.

Success Factor 04

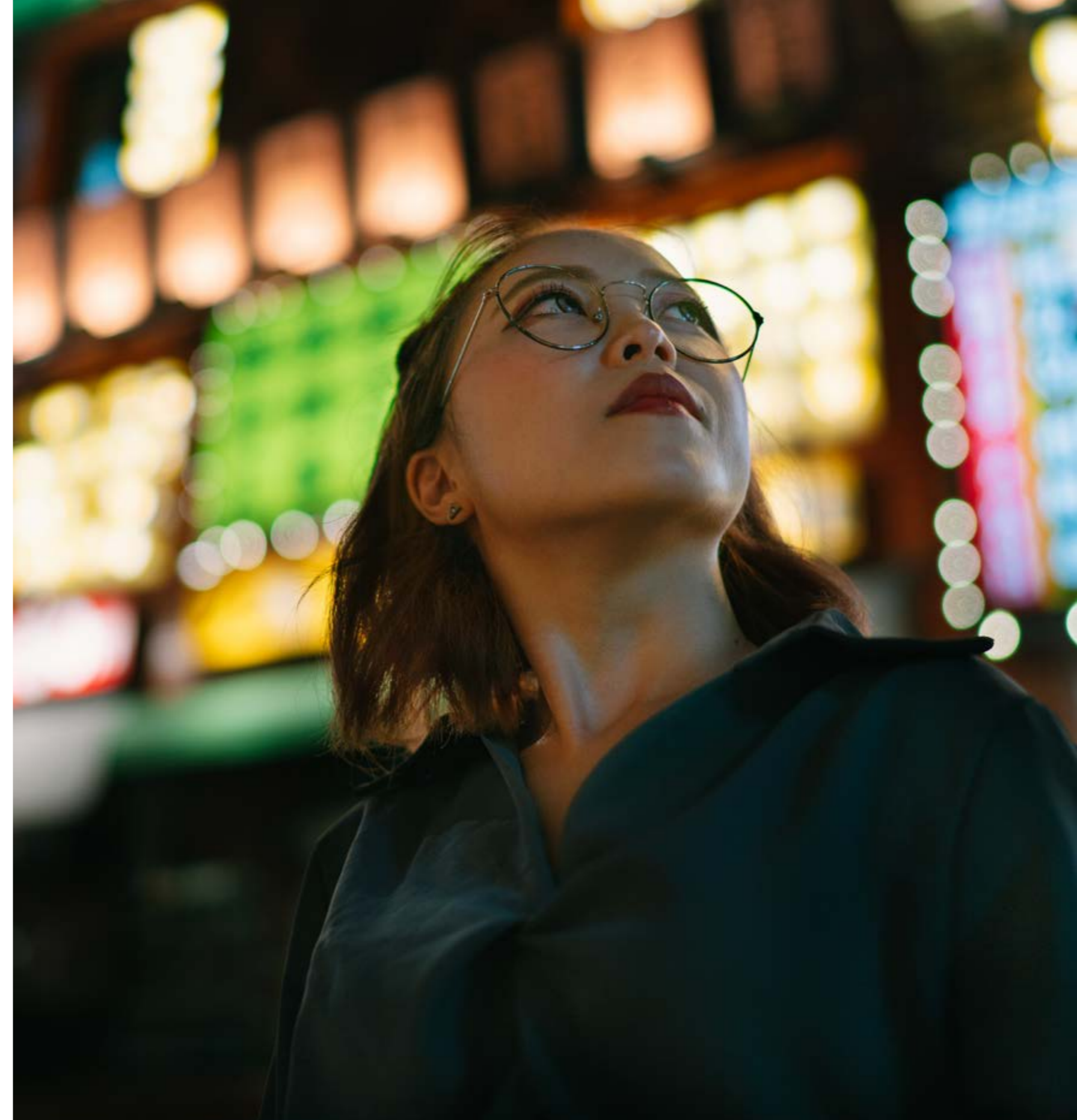
Design AI responsibly, from the start

Adhering to laws, regulations and ethical norms is critical to building a sound data and AI foundation. The potential for regulatory changes in many countries makes the challenge even more daunting.

In a separate Accenture study of 850 C-suite executives, we sought to gauge attitudes toward AI regulation and assess organizations' readiness to comply. Nearly all (99%) respondents believed that regulation would impact them to some extent, while 81% indicated that

compliance is a company-wide priority. In fact, many organizations view AI regulation as a boon rather than a barrier to success.

The ability to demonstrate high-quality, trustworthy AI systems that are "regulation ready" will give first movers a significant advantage in the short- and long-term, enabling them to attract new customers, retain existing ones and build investor confidence.



Achievers are consciously applying responsible AI with greater urgency than their peers. In Growth Markets, they are on average 36% more likely than Builders and 64% more likely than Innovators to be responsible by design. This means Achievers are designing, developing and deploying AI that empowers employees and businesses, and impact customers and society fairly.

For instance, **The Monetary Authority of Singapore (MAS)**, the country's central bank and financial regulator, recognized the benefits that AI can provide to financial firms.

Yet MAS was also wary of the threat posed to firms and markets by the illegal and/or unethical use of AI. It helped launch the Veritas initiative, which aims to support the responsible use of AI in the finance industry. The effort has produced a practical methodology and first-of-its-kind toolkit that offers detailed guidance on how to use AI leveraging the FEAT principles—fair, ethical, accountable and transparent.

Even though only 8% of the companies surveyed had already implemented responsible AI practices, 42% of surveyed companies aspire to do so by the end of 2024.

In 2018, Achievers in Growth Markets devoted 15% of their total technology budgets to AI. In 2021, that rose to 29%. By 2024, they expect to devote 36%.


Success Factor 05

Prioritize long- and short-term AI investments

To avoid being left behind, most companies need to aggressively increase their spending on data and AI. One reason Achievers in Growth Markets get more out of AI is simply because they invest more in it. We found that in 2018, Achievers devoted 15% of their total technology budgets to AI, while in 2021 they devoted 29%. In 2024, they plan to devote 36%.

Achievers also understand that their AI investment journey doesn't have a finish line. There is, they frequently note, no "peak AI." These companies know they have only scratched the surface of their AI transformations and that the quality of their investments matters just as much as the quantity. For Achievers, continued investment largely involves expanding the scope of AI to deliver maximum impact, while "cross-pollinating" AI solutions and redeploying resources in the process.

For example, **the Saudi government's National Center for Artificial Intelligence** is on a mission to unlock the value of data and AI as a national asset to fulfill the larger digital vision of the country. The center accelerated the development of AI capabilities in priority sectors like energy, healthcare, agriculture and government—and it will play a pivotal role in the execution of the country's national AI strategy. Early returns have been so successful that the Kingdom of Saudi Arabia will allocate the strategy a budget of \$20 billion by 2030.



**We project the share of
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Markets to nearly double
(from 17% to 32%) by 2024.**

The art of AI maturity

Practice makes progress



Practice makes progress

The concept of using AI to solve business problems isn't new.

The concept of using AI to solve business problems isn't new. By 2019, there was evidence that scaling AI beyond proofs of concept had a significant impact on ROI. Then the pandemic hit. For many organizations, enterprise-wide transformation was a matter of survival. For others, it became a catalyst to thrive.

AI Achievers in Growth Markets are thriving. Across industries, they've moved past cloud migration to innovation. But the AI itself isn't the secret to their superior performance—it's how they're approaching AI that makes them different. They've established that AI maturity is as much about people as it is about

technology. As much about strategy as it is about implementation. As much about responsibility as it is about agility.

Every organization should be assessing its own AI maturity. To get started, Figure 7 has some sample questions for C-suite leaders, according to Accenture's AI maturity assessment. There are also tools available to help benchmark AI maturity and establish clear paths to progress and performance.

As AI technologies become more prevalent, the future of all businesses is going to look very different—some will lead the change, and some will be

subjected to it. Those who transform will be the ones whose teams master the art of AI maturity, using cloud as the enabler, data as the driver and AI as the differentiator.

How can AI help you differentiate?

Figure 7: AI maturity assessment: sample questions for C-suite leaders

Category	Key questions
<p>Strategy and Sponsorship</p>	<ul style="list-style-type: none"> • Does your C-suite have clear accountability for data and AI strategy and execution? • How do you identify potential value, and how are business cases prioritized—considering the potential risks and alignment with the overall strategy of the organization? • Are you allocating enough delivery resources to build AI products and services in-house, and are you able to get the most out of your ecosystem partners?
<p>Data and AI Core</p>	<ul style="list-style-type: none"> • To what extent do you have a cloud platform and technology strategy that supports your AI strategy? • Do you have an effective, enterprise-wide data platform, as well as strong data management and governance practices, to meet business needs? • Are you using data science and machine learning teams effectively across the lifecycle of AI development?
<p>Talent and Culture</p>	<ul style="list-style-type: none"> • Is your data- and AI-literacy strategy aligned to your business objectives? • To what extent have you prioritized data and AI fluency for senior leaders, business stakeholders and employees across your organization? • Do you have a holistic talent model to scale, differentiate, retain and develop AI talent (diverse, dedicated teams of machine learning engineers, data scientists, data-domain experts and data engineers)? • How are you institutionalizing a data and AI culture within your organization?
<p>Responsible AI</p>	<ul style="list-style-type: none"> • Do you have an enterprise-wide framework to help you operationalize responsible data and AI from principles to practice? • Are you applying a consistent and industrialized responsible data and AI approach across the complete lifecycle of all your AI models? • Are you methodically tracking the evolution of AI-related laws and regulations across the different jurisdictions in which you operate, while anticipating and preparing for future changes?

Source: Accenture Research

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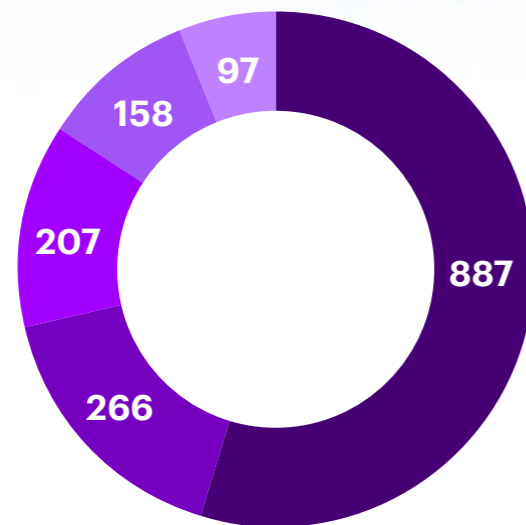
About the research

Accenture surveyed 1,615 executives (including CEOs, C-Suite, CAIO's and Data Science Leaders) from the world's largest organizations (with revenues greater than \$1 billion). The survey was carried out across 15 countries and 16 industries, and fielded between August and September, 2021. In this report we have highlighted the AI maturity trends in Growth Markets.

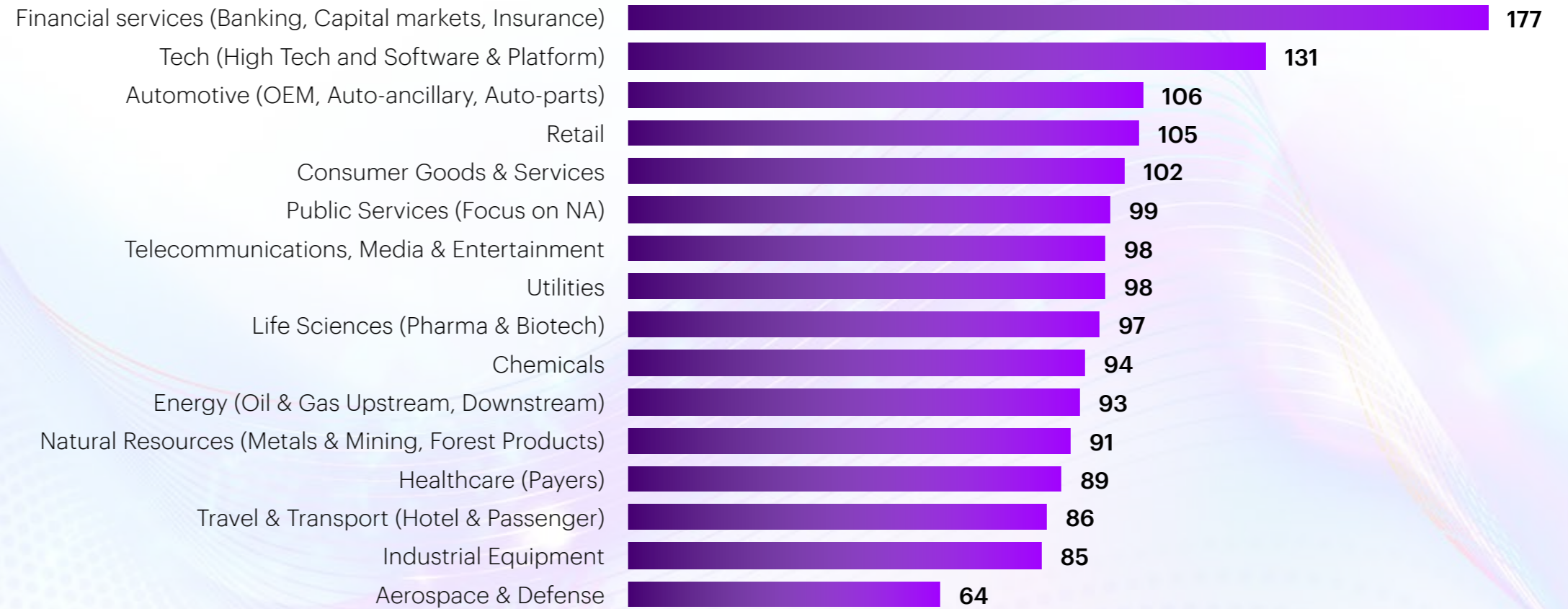
Survey includes those organizations who have at least agreed upon some basic AI strategy and have begun implementing relevant tools, to those who have a core AI strategy in place.

Revenue (USD)

- \$1 - \$4,9 billion
- \$5 - \$9,9 billion
- \$10 - \$19,9 billion
- \$20 - \$49,9 billion
- \$50 billion or more



Industries



Countries

- | | |
|-----------------|-------------------|
| Australia (116) | Italy (69) |
| Brazil (65) | Japan (102) |
| Canada (98) | Singapore (38) |
| China (111) | South Africa (76) |
| France (93) | Spain (65) |
| Germany (87) | UK (173) |
| India (77) | US (403) |
| Israel (42) | |



Appendix

Survey

From August to September 2021, Accenture surveyed 1,615 C-suite executives at 1,176 of the world's largest companies—present in 16 industries and headquartered in 15 countries. In this report we have highlighted the AI maturity trends in Growth Markets.

Interviews and case studies

We interviewed 25 CEOs, Chief Data Officers and Chief Analytics Officers. We also interviewed Renée Richardson Gosline (Senior Lecturer at MIT Sloan School of Management and Principal Research Scientist at MIT's Initiative on the Digital Economy) and Christine Foster (Chief Commercial Officer at The Alan Turing Institute), as well as numerous AI experts at Accenture. Through research and client work, we also developed over 40 company case studies on AI transformation.

Design thinking

We ran a MURAL session with more than 15 senior data scientists to validate our AI maturity model.

Economic modeling and data science

To assess companies' AI maturity, as well as other measures of performance, we took the following steps:

1. Identified key capabilities of AI maturity

We sought to understand the key capabilities that contribute to reaching both an "entry" level of AI maturity (i.e. deriving at least 10% of revenues from AI-influenced initiatives from 2018 to 2021) and a higher level of AI maturity (i.e. deriving more than 30% of revenues from 2018 to 2021). To do this, we built two machine learning models that account for more than 80 capabilities that contribute to the two different levels of AI maturity (see box below).

$$R_i = \beta_0 + \beta_1 X_{it} + \beta_2 \text{Capabilities}_{it,t-1} + \beta_3 \Delta \text{Capabilities}_{it} + \beta_4 \text{Capabilities Interactions}_{it,t-1} + e_{it}$$

R_i represents the level and evolution of a company's AI-influenced revenues (sustaining at >10%, reaching >30%)
With i = company, t = 2021 and $t-1$ = 2018, X_{it} includes controls for industry, firm size and company location (country).

The model is a linear probability Lasso model, a K-fold cross-validation with 10 folds performed.

2. Defined "foundational" and "differentiation" capabilities

In our models, we classified $\text{Capabilities}_{it,t-1}$ and $\Delta \text{Capabilities}_{it}$ as AI foundational capabilities; $\text{Capabilities Interactions}_{it,t-1}$ are—as the name suggests—capabilities with interaction, with strong senior sponsorship and a well-defined AI strategy. We classified these interaction terms as AI differentiation capabilities.

From our models, we discovered that AI foundational capabilities have stronger explanatory power in the first model of "sustaining at >10%" than AI differentiation capabilities; in the

second model of "reaching over >30%", AI differentiation capabilities have stronger explanatory power. In other words, AI foundational capabilities are essential to building the necessary foundation for organizations to enter the AI race. Meanwhile, AI differentiation capabilities are key for organizations to reach the next level of AI maturity.

3. Built the AI maturity index

We built two indexes that measure companies' AI foundational capabilities and AI differentiation capabilities, respectively, as identified by our two models. An overall AI maturity index is built as the arithmetic average of both AI foundational index and AI differentiation index, which is indicative of their probability of achieving high AI-influenced revenue. The median maturity index of all companies is 36/100.

4. Constructed AI profiles based on foundational and differentiation capabilities

The AI foundational capabilities and AI differentiation capabilities indexes were

then used to construct a matrix. We used the top quartile as a threshold on both axes to cluster all the companies from the survey into four groups:

- **AI Achievers**—the top quartile on both foundational and differentiation median maturity index: 64/100
- **AI Builders**—the top quartile on foundational but not on differentiation median maturity index: 44/100
- **AI Innovators**—the top quartile on differentiation but not on foundational median maturity index: 50/100
- **AI Experimenters**—all remaining companies median maturity index: 29/100

5. Measured Achievers' financial premium

To assess AI Achievers' financial performance, we used data from S&P Capital IQ to build the following

regression model: $\text{Revenue growth}_i = \beta_0 + \beta_1 X_i + \beta_2 \text{AI Achiever} + e_i$
(i = company, AI Achiever as the dummy variable, and X_i including controls for industry, firm size, and company location).

6. Measured Achievers' stakeholder performance

To assess Achievers' stakeholder performance in the areas of customer experience, sustainability, workforce, and supply chain, we built scores from 0-100 in these respective areas using data from FactSet, Arabesque, Oxford Economics, and S&P Capital IQ, which measure companies' performance against their industrial peers. The difference between Achievers and other companies is highly statistically significant ($p < 0.01$) for customer experience and sustainability.

The following offers more detail on each area.

- Customer experience reflects how companies strengthen their sales pipeline by developing strong customer relationships; our measures include consumer trust,

customer churn, product quality and safety, and an overall customer-centric mindset.

- Sustainability reflects how companies strengthen their commitment to environmental stewardship; our measures include greenhouse gas emissions, ecological management, resource use, water and waste efficiency, and various environmental solutions.
- Financial reflects how companies deliver profitable growth and operate efficiently.
- Workforce/employee experience reflects how companies unlock their workforces' full potential; our measures include compensation, employment quality, employee turnover, occupational health and safety, and training and development.
- Supply chain reflects how companies manage risks associated with their supplier networks and inventory levels; our measures include supplier diversification, supplier risk, and inventory management.

7. Measured the speed of AI transformation vs. the speed of digital transformation

To understand how fast companies undergo AI transformation compared to digital transformation, we used the frequency of mentions of both terms on companies' earnings calls as a proxy. To do this, we performed a natural language processing analysis of investor calls of the world's 2,000 largest companies (by market capitalization), sourced from the S&P earnings transcripts database. (Note: Our analysis included 744 companies with a consistent history of earnings calls during 2010-21.) Finally, we built predictive S-Curve models that estimated the time, henceforth, that it would take for 90% of such companies to mention the aforementioned terms on their earnings calls.

Key Capabilities

Strategy and Sponsorship

1. **Senior Sponsorship:** Organizations have an AI strategy that is developed by the Chief Analytics Officer, Chief Data Officer, Chief Digital Officer or an equivalent. The CEO and the Board actively sponsor and share accountability for the strategy and associated AI initiatives.
2. **AI Strategy:** Organizations not only have a core AI strategy aligned to the overall business strategy, but they also dedicate tools and tactics to execute it and continuously track their performance against that strategy.
3. **Proactive vs. Reactive:** Organizations have the resources (such as technology, talent and patents) to proactively define and demonstrate how AI can create value vs. apply AI

as a reaction to a need. They're first-movers instead of fast followers in terms of applying AI for business value.

4. **Readily Available AI and ML tools:** Organizations work with an ecosystem of technology partners to access machine learning models and tools to help innovate new products and services.
5. **Readily Available Developer Networks:** Organizations tap into an ecosystem of technology partners to access developer networks that support the development of new products and services.

Data and AI Core

6. **Build vs. Buy:** Organizations develop custom-built AI applications or work

with a partner who offers solutions-as-a-service, vs. purchase "off-the-shelf" AI solutions with little-to-no customization.

7. **Platform and Technology:** Organizations apply the necessary cloud, data and AI infrastructure, software, self-serve capabilities and industry best practices, and they adopt the latest tools available from platform and technology partners.
8. **Experimentation Data—Change:** Organizations improved their use of experimentation data between 2018 and 2021, effectively translating into a higher data and AI maturity. Experimentation data is the use of internal and external data to design new models and generate new insights. To do that, organizations use enterprise-grade cloud platforms to

keep data clean and trustworthy, and to support decision making at greater speed and scale.

9. **Data Management and Governance:** Organizations scale their data management and governance practices to increase data quality, trust and ethics across entities —e.g. by implementing master data management and ensuring security, compliance and interoperability.
10. **Data Management and Governance—Change:** Organizations improved their data management and governance practices between 2018 and 2021, effectively translating into a higher data and AI maturity.

Talent and culture

- 11. Mandatory AI Training:** Organizations enforce AI-specific training programs to improve AI fluency, which are tailored for senior leadership and specific functions, e.g. salesforce, product engineers, etc. They also create deliberate opportunities for employees to learn and apply AI in their roles.
- 12. Employee Competency in AI-Related Skills:** Organizations regularly measure the competency level of employees to determine where further training is needed to improve overall acumen. They measure and build expertise in critical areas like coding, data processing and exploration, business analytics, domain and business acumen, machine learning, visualization and more.

- 13. Innovation Culture Embedded:** Organizations ensure innovation is part of the day-to-day work environment. They encourage mindsets, behaviors and routines that all serve as a vehicle for experimentation, collaboration and learning from ideation to product development to market launch.
- 14. Innovation Culture Encouraged:** Organizations promote and reward innovative mindsets and behaviors including entrepreneurship, collaboration and thoughtful risk-taking.
- 15. AI Talent Strategy:** Organizations have an AI talent strategy—hiring, acquiring, retention—that evolves to keep pace with market or business needs. They also have an AI talent roadmap for hiring diverse AI-related roles, beyond

just ML engineers—such as behavioral scientists, social scientists, and ethicists.

Responsible AI

- 16. Responsible AI:** Organizations have an industrialized, responsible approach to data and AI across the complete lifecycle of their AI models—an approach that can meet changing regulatory requirements, mitigate risks, and support sustainable, trustworthy AI.
- 17. Responsible AI—Change:** Organizations have improved their responsible data and AI practices between 2018 and 2021, effectively translating into a higher data and AI maturity.

References

¹ <https://news.stanford.edu/news/2011/october/john-mccarthy-obit-102511.html#:~:text=John%20McCarthy%2C%20a%20professor%20emeritus,He%20was%2084>

² Accenture Research analysis of the world's 2,000 largest companies by market capitalization mentioning AI in their earnings calls. Formula is based on CEOs of companies that had earnings call in 2020, and CEO was present at the call, and CEO mentioned AI. 46% of these CEOs mentioned AI in their earnings calls, in 2021 up from ~35% in 2017.

³ Accenture Interview

⁴ <https://www.nytimes.com/2020/07/13/business/coronavirus-retraining-workers.html>

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