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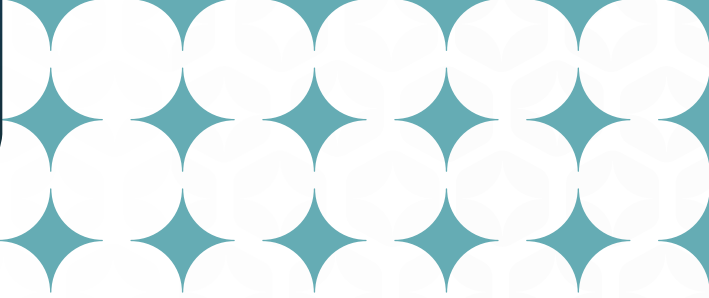
Tech Leader's Guide to Getting Started with GenAI

Everything you need to know to make
implementation seamless

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Introduction

The Tech Leader's Guide to Generative AI (GenAI) aims to answer one simple question: "How do you capitalize on the right GenAI opportunities for your business?"

Whether it's leveraging GenAI to streamline operations and increase productivity internally, or creating competitive differentiation, the question of "How do we do this?" is a big one.

As millions of people realized they could leverage GenAI to address business challenges and increase productivity, a sea of change was triggered. According to Gartner, 80% of tech executives plan to fully adopt GenAI within three years. Furthermore, 74% plan to increase their investments in artificial intelligence (AI) in 2024, and 78% see AI benefits outweighing the risks. Companies that recognize the opportunity of GenAI and put intentional effort into infusing their organization with AI-driven initiatives will thrive.¹

As the world accepts the transformation of AI, now is the time to fortify your AI ambition and build real solutions for your everyday problems. This guide is a comprehensive blueprint to help your organization embrace GenAI and the future of work, diving into topics including use cases, data readiness, security measures, and evolving your team.

74%

of tech executives plan to increase their investments in artificial intelligence in 2024

*Gartner

80%

of tech executives plan to fully adopt GenAI within three years

*Gartner

¹ Gartner: "Hype Cycle for Emerging Technologies", Aug 2023.

Strategic implementation of GenAI

This year's top strategic technology trends are either driven by AI or supported by an evolving AI-influenced world. However, there is a difference between AI and GenAI.

- **AI** applies advanced analysis and logic-based techniques, including machine learning, to interpret events, support and automate decisions, and take actions — ultimately deploying machine learning to complete an action that a human has done in the past.
- **GenAI** refers to AI techniques that learn a representation of artifacts from data and use it to generate brand-new, unique artifacts that resemble, but don't repeat, the original data. This can include text, images, videos, audio, structures, computer code, synthetic data, workflows, you name it.

As of November 2023, GenAI is at the top of its hype cycle for emerging technologies.² We believe it won't take long for GenAI to greatly impact product development, customer experience, employee productivity, and innovation.

In fact, Gartner indicates in 2023 alone, 33% of CIOs had already deployed GenAI technologies, and an additional 15% believed that they would deploy GenAI within the next year. This raises an important question for tech leaders: **how can you leverage the current moment to support your company's integration of GenAI?**

GenAI has the potential to radically transform existing economic and business frameworks,

² Gartner: "Hype Cycle for Emerging Technologies", Aug 2023.



much like the internet and earlier innovations such as electricity. When deployed effectively, GenAI will become a competitive advantage and differentiator, opening up new opportunities to achieve enterprise goals such as increased revenue, greater customer engagement, reduced costs, and improved productivity.

Gartner predicts by 2026, more than 805 enterprises will have utilized GenAI APIs and models and/or deployed GenAI-enabled applications in production environments. This represents a significant increase from less than 55 enterprises in 2023.

If you haven't already started, now is the time to invest in GenAI opportunities for your business.



How will you add value in the era of generative AI? If you aren't attempting to answer this question now by choice, it will ultimately be answered for you by force."

Hendrith Vanlon Smith Jr
CEO of Mayflower-Plymouth

The business opportunity

GenAI provides new and disruptive opportunities to increase revenue, reduce costs, improve productivity, and better manage risk.

We split the opportunities into three categories specifically for IT leaders:

Revenue opportunities

Product development: Many CIOs are exploring natural language processing (NLP) applications powered by GenAI for tasks such as chatbots, virtual assistants, and sentiment analysis. These applications can enhance customer service, streamline communication, and extract insights from large volumes of textual data.

Better customer experiences: By 2026, GenAI will significantly alter 70% of the design and development effort for new web applications and mobile apps.³

Productivity opportunities

Automation of repetitive tasks: Reduce manual workload and increase operational efficiency. This can include automating data entry, report generation, and other time-consuming processes. According to McKinsey research, the use of AI technology could potentially add \$2.6-\$4.4 trillion annually to the global economy. Additionally, AI has the potential to automate work activities that currently consume 60-70% of employees' time.⁴

Process improvement: GenAI can speed up developer work by augmented coding or training large language models (LLMs) that generate code. [McKinsey suggests](#) that the direct impact of AI on software engineering productivity could range from 20-45% of current annual spending on the function. This value would primarily come from reducing the time spent on certain activities and relying on AI to assist with coding and architectural design.

Risk opportunities

Data analysis and insights: GenAI solutions can analyze large datasets to uncover patterns, trends, and insights. Whether for business intelligence, predictive analytics, or decision support, GenAI can play a role in extracting meaningful information from data. It can enhance pattern recognition and the ability to identify potential risks to the enterprise more quickly. The use of synthetic data is expected to reduce the volume of real data needed for machine learning by 70% by 2025.⁵

Cybersecurity: GenAI can be utilized for anomaly detection, threat intelligence analysis, and the development of predictive models to enhance cybersecurity measures.

^{3,5} Gartner: "What Generative AI Means for Business", 2023.

⁴ McKinsey: "The economic potential of generative AI" June 14, 2023.

How to get started

For the tech leader, GenAI presents a unique opportunity to experiment, pilot, and guide the c-suite in turning the promise of GenAI into sustainable value for the business.

[Leverage our AI Design Thinking Model to bring your solution to life.](#)

During each step of the process, there are questions you should be asking, and a recommended approach that will provide unique benefits.

56%
of CEOs

say AI is the tech that will most significantly impact the industry over the next three years

*Gartner



Step 1

Crowdsourcing survey and steering committee

The first step is to determine the company's posture for adopting GenAI. Start by conducting a crowdsourcing survey to gather input from your company. This will help you understand where everyone stands and identify areas where GenAI can be most beneficial. The survey will provide data-driven insights to inform decision-making.

Conduct the survey:

[GenAI Project Feedback Survey](#)

Watch the webinar:

[From Concept to Reality: Supercharging Your Business Ideas with GenAI](#)

Next, establish a steering committee comprised of champions from several teams in the business. Having advocates across the organization will help you gain buy-in and support for the transformational changes you seek. Additionally, they will provide valuable insights into the business problems.

"It's not just about applying a machine learning technique or method to solve a known business problem," says Carlos Bertonecchi, Senior Software Engineer at Andela. "All stakeholders involved must understand the domain needs because there are many details that must be addressed and taken into account to develop an AI-driven solution."

It's crucial to properly explain GenAI and its potential if you want to gather the right use cases and get proper buy-in. It's likely that all of your stakeholders have the info you need, they just need to be armed with how it can work. Here's an anecdote to help describe it:

Think of GenAI as someone who learned English or how to speak, but in a featureless square room. It has no context outside of what it's been trained with, but through feeding it data and context learned from examples and stories, audio images, etc, it does its best to imitate and guess what a person will say or do in a situation based on probability. Think of Johnny 5 from the movie, Short Circuit, the image of him reading through a shelf full of encyclopedias in a minute.

These LLMs you keep hearing about give you a Johnny 5 with a good amount of general instruction, but the real supercharge comes when you tie in domain knowledge and specific data from the company, like emails, chats, Salesforce, and internal databases, to give your GenAI bot context around your industry and your company's culture, brand and customer sentiment. That's where you can unlock hyperpersonalization, interesting workflows, and a self-directed engine that can have many tangible business benefits.

Step 2

Identify use cases and readiness

Next, you need to identify use cases and feasible solutions that enhance productivity, drive growth, and enable new business models. We define a “use case” as the targeted application of GenAI to address a specific business challenge, resulting in one or more measurable outcomes.

Use cases are best described as narrow and simple tasks. Start with a narrowly defined task that doesn't require much human intelligence, but consumes a significant amount of time or is performed frequently. Ensure it's a task that can be easily verified upon completion. For example, if someone is asked to write a daily update, it's easy to determine whether or not the update was written and completed.

Use case	Description
Summarization	Take long-form chats, emails, or reports, and distill them down to their core for quick comprehension, without the need to store content in structured databases.
Documentation	Generate synthetic documents that capture essential characteristics, to get a broader training data set beyond real-world examples.
Content creation	Produce new text, images, video, audio clips, or code.
Model Training	Reduce labor intensive processes and costly computing power for big data.
Virtual Assistant	Eliminate tedious, unenjoyable manual tasks with automated virtual assistants.
Privacy enhancement / Fraud detection	Create synthetic datasets that mimic the behavior of fraudsters, to effectively identify anomalies and detect potential fraudulent activity quicker.
Conversational search	Improve employee productivity by quickly and easily finding accurate information and summarizing content through a conversational interface.
Automated report generation	Automatically generate financial reports, summaries, and projections, saving time and reducing errors.
Supply chain optimization	Improve logistics and reduce costs by evaluating and optimizing different supply chain scenarios.
Data augmentation	Generate synthetic data to train ML models, when the original dataset is small, imbalanced, or sensitive.

Collaborate with your committee, CIO, CEO, and CFO to explore how GenAI can disrupt existing business models, unlock new opportunities, and generate additional value for employees. By having a deep understanding of the technical possibilities, you can identify the most valuable opportunities and challenges your people are facing that can benefit from GenAI, as well as those that cannot. GenAI can be a great complement to your existing workforce, and a tool that can make them more powerful.

We recommend starting with an experimentation phase, where you build a portfolio of impactful, measurable, and quickly solvable use cases. Below is a list of thought starters categorized by industry:

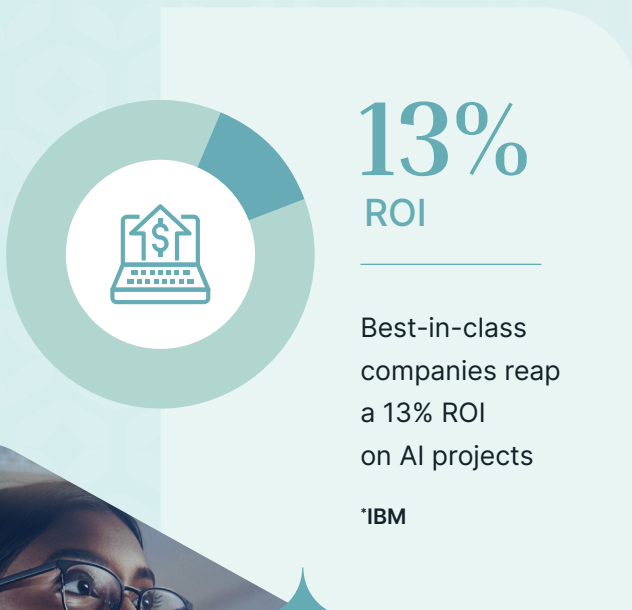
Banking and Financial Services

The financial industry has already integrated AI into many key business processes. One of the biggest use cases is [fraud detection](#); AI can process large datasets to pinpoint anomalies and patterns that could indicate potential fraud. These tools allow banks and financial companies to improve accuracy and protect customer data and account information.

On the customer side, GenAI chatbots can process loan applications, perform credit checks, and recommend financial products to customers. These robo-advisors can also analyze emails, social media posts, and other personal data to find industries and businesses that match customer requirements and long-term goals.

Manufacturing

AI plays a significant role in quality control, production processes, scheduling maintenance and equipment upgrades, and streamlining manufacturing workflows. It can also help improve production forecasts, using [predictive analytics](#) to anticipate future orders and ensure on-time production. "In manufacturing, AI is employed across several lines and layers of operations, from workforce planning to product design, thus improving efficiency, product quality, and employee safety," wrote Akash Takyar, founder and CEO at LeewayHertz.



Retail and E-commerce

There are dozens of AI applications in business for the retail and e-commerce sectors. According to data from [Statista](#), e-commerce companies are using AI for everything from personalization to marketing.

Tools like [Clerk](#) use AI to analyze customer behavior and personalize the sales process in a way that grows sales by 15-30%. At physical retail locations, the [US Chamber of Commerce](#) found that “AI is being used in supermarkets and at mass merchants to keep shelves stocked properly and to help stores keep track of inventory and product demand.”

Online fashion retailers also use [AI-based body visualization platforms](#) to help customers “try on” styles before they click buy. And, like the financial and customer support sectors, AI bots can help answer simple questions about retail returns, sizing, and other product details.



Customer Support

In a world where two-thirds of millennials expect real-time customer service, AI can help businesses meet customer needs without adding manpower.⁶ AI provides the first layer of customer support, enabling a level of [self-service](#) that satisfies basic queries without the need for a live support agent.

Chatbots serve as a valuable complement to human customer service agents by offering round-the-clock availability and efficiently addressing basic queries, such as those commonly found in an FAQ section.

AI for business customer support can help improve employee morale, personalize each customer's interaction with the company, and increase efficiency by handling the time-consuming, routine parts of customer service — such as searching for knowledge articles, routing requests to the right department, and manually typing responses.

Read more: [Artificial intelligence in business: 6 industry applications.](#)

⁶ McKinsey: “The Next Frontier of Customer Engagement: AI-enabled Customer Service”, Mar 27, 2023.

Step 3

Create a GenAI roadmap

Now that you have a list of use cases, it's time to rank and rate them to develop an implementation roadmap. Evaluate variables such as priority, readiness, and resources to help determine what will come first for GenAI implementation.

Priority

It's important to sync with internal stakeholders to understand the business outcomes that should be addressed first. Base priority on your top-line goals and the use cases that will help you achieve them.

To simplify matters, analyze the opportunities and risks of using GenAI in four areas:

- **Internal use cases**

Internal use cases focus on improving employee productivity and wellbeing. It's often easier to start internally and test with employees, to see how you can make their jobs and day-to-day tasks easier before implementing tests with external customer benefits.

- **External use cases**

If the use case improves customer experience and is external, we recommend using a [customer journey map](#) to identify current negative experiences that GenAI may be able to address. Gain a clear understanding of your customer journey and examine pain points across awareness, consideration, service, and advocacy. How does GenAI solve a real customer problem?

75%

of employers are prioritizing AI skills for hiring

*AWS

- **New products and services**

Consider the potential for GenAI to enable the development of innovative products and services that can differentiate your organization in the market. These are areas where GenAI can enhance existing offerings or create entirely new revenue streams.

- **New core capabilities**

GenAI can also strengthen your organization's internal capabilities and processes. Look for opportunities to automate repetitive tasks, improve decision-making through data analysis, and optimize resource allocation.

To implement GenAI in your business, you must identify feasible use cases and ensure you remove any roadblocks that hinder capturing the value of this key driver of innovation and growth.

Read more: [Enhancing Digital Products with AI: A Journey through the UX Process](#)

Readiness

Properly arranging your data is crucial to initiate a GenAI project. You need to have a clear understanding of the data being used and organize it accurately for effective explanation. Think of it as a library's Dewey Decimal System, where books are categorized by topic for easy access.

To ensure data is AI-ready, it must meet five criteria:

- **Security:** Implement strong encryption and access controls to protect data from unauthorized access.
- **Enrichment:** Improve data quality by identifying and fixing inconsistencies, errors, and missing values. Standardize data formats for seamless integration.
- **Fairness:** Address biases in the dataset to avoid perpetuating inequalities. Ensure diverse representation for fair model outcomes.
- **Accuracy:** Verify data accuracy through rigorous validation processes and continuous monitoring.
- **Lighthouse principles:** Align AI usage with ethical principles, promote transparency, and establish guidelines for responsible deployment.

The organization of your data greatly impacts the efficiency and cost-effectiveness of your model.

Resources

With the emergence of new tools like GenAI, it is essential to acquire new skills. Make sure your team is equipped with expertise in areas such as machine learning, deep learning, data engineering, and domain-specific knowledge. Employ surveys, interviews, and skills assessments to identify existing strengths and potential skill gaps within your team. Tools like [Qualified.io](#) can help you verify your team at scale. See where your team is at and identify skills so training can be provided.

[According to AWS](#), 75% of employers are prioritizing AI skills for hiring. However, despite their willingness to offer higher salaries, nearly three out of four employers struggle to find candidates with the in-demand AI skills.⁷

Many enterprises know what they want to experiment on, but don't have the resources needed to get the job done. Finding the right person to fill that critical skill gap on a project by project basis can be challenging.

As the adoption of AI accelerates, innovative approaches like education partnerships and collaboration with other organizations become more appealing as they provide access to specialized talent.

This is where a partner like Andela can be invaluable. We can work with you to develop an agile strategy to get the job done, sourcing the right person for the project, quickly, and cost effectively.

⁷ HigherEd Dive: "Employers willing to pay 'premium' for AI-skilled workers", Nov 29, 2023.

Step 4

Instill an exploratory culture

To ensure a successful pilot, set clear expectations with business stakeholders regarding GenAI and its potential. By obtaining buy-in and input from stakeholders early on, you have already laid the groundwork. Continuous communication, sharing of plans, and providing status updates will contribute to the success of the project.

Fabio Soares, Engineering Manager, Data Platforms at Andela, shares his process: “We A/B test everything before we move ahead. Compare techniques, models, and KPIs to understand what is working better and then go ahead with the winner and test it again.”

Read more:

[Avoiding common pitfalls when incorporating GenAI in testing](#)

[Get started with GenAI in 4 steps](#)

It's not always straightforward to quantify the impact of AI on business; however, data from IBM suggests that **best-in-class companies reap a 13% ROI on AI projects**. Consulting firm PWC also points to the “soft ROI” of AI projects, including higher employee satisfaction and retention, skills acquisition, brand enhancement, and a higher valuation of the company.

Additionally, it's important to simulate the potential costs and value realization across your use cases. Aim for a combination of quick wins, differentiating use cases, and transformational initiatives. To measure success and ROI, consider the following metrics:

Technical metrics

- How quickly can a workflow or process be improved?
- What level of hallucination is expected?
- Can it support all languages?

Business metrics

- How is user engagement measured?
- How does AI contribute to retention through hyperpersonalization?
- How much cost reduction can be achieved?

Checklist

Initiate

- Develop crowdsourcing survey
- Determine business problems the company is currently facing
- Identify current and future customer needs

Plan

- Identify use cases
- Make a list that details who will use the product and how
- Make the use cases as narrow as possible (i.e., cut cost, increase productivity)

Execute

- Develop a GenAI roadmap by ranking and rating use cases based on priority, readiness, and resources
- Build the customer journey (whether it's internal, external, a new product, or core capability)
- Detail the major improvements in the user experience
- Ensure you have the right resources in place to design, build, and develop

Monitor

- Share metrics and status reports with your stakeholders early and often
- Track both business and technical metrics
- A/B test everything you can to determine winners and improvements

What not to do

As you begin your GenAI pilot, there are a few common pitfalls you'll want to avoid. Specifically, don't:

- 1. Neglect** the importance of high-quality, diverse, and representative training data.
- 2. Skip** defining clear and measurable objectives for the pilot.
- 3. Forget** to involve key stakeholders, including end-users and decision-makers.
- 4. Ignore** ethical considerations and potential biases in the data.
- 5. Overlook** the infrastructure requirements for scaling the pilot to production.
- 6. Scale** your pilot without proper validation and testing.
- 7. Fail** to document the development process and transfer knowledge effectively.

Successful projects using GenAI

Given the relative newness of GenAI, some wonder if this technology will deliver ROI. At Andela, we believe that GenAI initiatives will not only generate ROI, but will also improve workflows for the future.

There are limited examples of successful GenAI projects today, though that is changing as many companies are moving past the testing phases. As such, organizations that begin adopting are able to recognize a competitive advantage. Here's how a few companies that have worked with Andela on their GenAI initiatives are seeing competitive advantages:

- 1. Improving manual processing:** A rapidly growing law firm was able to save 80% of their team's time (hundreds of manual hours) on researching and drafting legal documents through GenAI's creative prompt engineering. They implemented an advanced LLM tool within Salesforce, configured to efficiently process over 2,000 documents. This tool pulled relevant data from a spectrum of documents, transformed PDFs and images, and came equipped with improved response mechanics and built-in document templates.
- 2. Creating content:** A media company leveraged text to image creation using stable diffusion to generate high-quality images in record time. They developed an infrastructure for the LLM solution and fed it specific prompts to get the image they were looking to create in a fraction of the time it would normally take someone to manually develop.
- 3. Personalizing user experiences:** A weather broadcast channel leveraged a GenAI-powered approach to generate personalized weather forecasts and individualized recommendations for their current and future users. They started with an in-depth data review and merged various data sources to create a comprehensive, context-aware recommendation system, geared to accommodate millions of user data points efficiently. They delivered precise, tailored forecasts and significantly enhanced user engagement, reaffirming its industry-leading position and setting new benchmarks for meteorological services.
- 4. Enhancing predictive modeling:** At Andela, we leverage LLMs to help with hyperpersonalization for our clients, sourcing exactly the right technologists based on their needs and requirements. We built our proprietary Talent Decision Engine™ to learn from thousands of data points from across the hiring lifecycle, from skills and experience to geography, language proficiency and more to match technologists with clients. The artificial intelligence and machine learning algorithms helped to accelerate the time-consuming acquisition process making it up to 60% faster than before.



The future of GenAI

While much of the world focuses on the immediate response to pilot emerging tools, we believe there's even greater potential in the long-term. As the brightest minds begin to trial this new tool, possibilities expand to seamlessly integrate into your existing workflows — possibilities that can benefit your customers, your teams, and your people without them realizing.

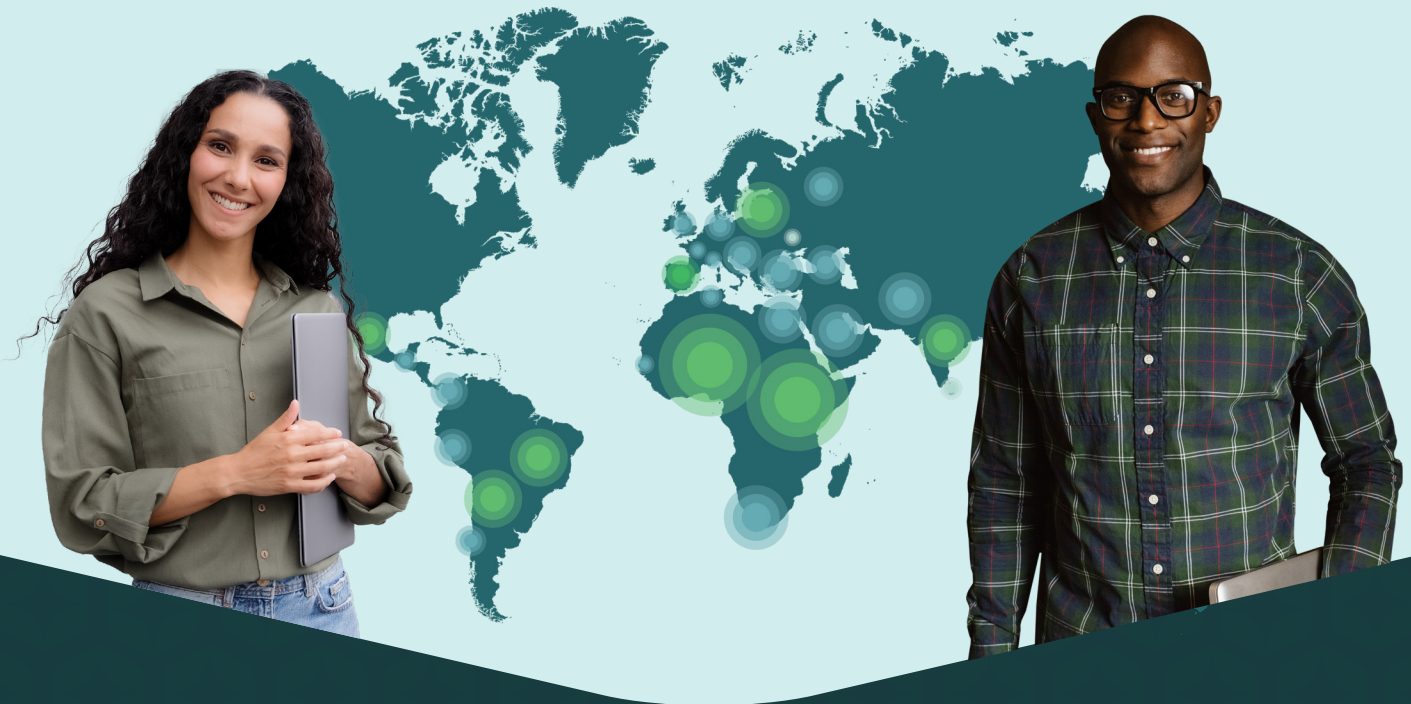
By entrusting technology with tasks traditionally handled by humans, it unlocks new potential. Integration into routine workflows that is seamless will empower your team and your customers for the day-to-day and have even more profound effects in the future. This shift allows you to redirect focus towards strategic initiatives, liberate time for new endeavors, and improve efficiency.

The long-term effects of this technological transformation are barely within view:

- **People** are liberated from repetitive tasks, allowing more time for creativity and skill development.
- **Customers** will have a better experience that they don't realize is GenAI driven, but provides more personalized, engaging interactions that anticipates their needs.
- **Businesses** will reap the benefits of long-term agility and efficiency. Data-oriented tasks are simplified, allowing for a more agile and adaptive business environment.



At Andela, we're excited to play a part in this technological advancement as organizations around the world embrace the future of GenAI. If you're interested in learning more about how we can help you deliver on your GenAI objectives, [contact us today](#).



About Andela

Andela is the world's largest private talent marketplace, fundamentally changing how teams work by expanding the hiring pool and streamlining the complete hiring lifecycle into a single platform. Today, we stand as one of the first AI/ML driven Talent Cloud companies with a 94% customer satisfaction rating and over 600 successful clients. Andela Talent Cloud provides an AI-driven platform that helps enterprises source, qualify, hire, manage, and pay global technical talent in one integrated platform. Powerful AI-matching algorithms learn from thousands of touch points in the hiring journey to pinpoint the best technologists up to 70% faster at 30-50% less cost than other hiring approaches.

Market leaders partner with Andela to help rewrite their workforce strategies to include global, remote-fluent talent from emerging geographies such as Africa and Latin America to scale their teams and deliver projects faster. With a community of over 4 million technologists, Andela caters to specialized disciplines such as Application Engineering, Artificial Intelligence, Cloud Computing, and Data & Analytics.

The world's best brands trust Andela, including GitHub, Mastercard Foundry, ViacomCBS, and Mindshare. Discover more about Andela [here](#).

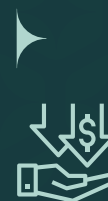


Performance

Hire

70%

faster when you partner with Andela



Savings

30%-50%

less cost than other hiring approaches