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Generative AI and the future of work

The potential? Boundless.

Deloitte AI Institute™

Contents

About the Deloitte AI Institute

The Deloitte AI Institute helps organizations connect the different dimensions of a robust, highly dynamic and rapidly evolving AI ecosystem. The AI Institute leads conversations on applied AI innovation across industries, with cutting-edge insights, to promote human-machine collaboration in the "Age of With".

The Deloitte AI Institute aims to promote a dialogue and development of artificial intelligence, stimulate innovation, and examine challenges to AI implementation and ways to address them. The AI Institute collaborates with an ecosystem composed of academic research groups, start-ups, entrepreneurs, innovators, mature AI product leaders, and AI visionaries, to explore key areas of artificial intelligence including risks, policies, ethics, future of work and talent, and applied AI use cases. Combined with Deloitte's deep knowledge and experience in artificial intelligence applications, the Institute helps make sense of this complex ecosystem, and as a result, deliver impactful perspectives to help organizations succeed by making informed AI decisions.

No matter what stage of the AI journey you're in; whether you're a board member or a C-Suite leader driving strategy for your organization, or a hands on data scientist, bringing an AI strategy to life, the Deloitte AI institute can help you learn more about how enterprises across the world are leveraging AI for a competitive advantage. Visit us at the Deloitte AI Institute for a full body of our work, subscribe to our podcasts and newsletter, and join us at our meet ups and live events. Let's explore the future of AI together.

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Generative AI and the Future of Work

Boundless potential

PART 1

What is Generative AI? How is it being used? Better yet, how can you and your organization prepare people to use it safely and efficiently?

Generative AI is a rapidly evolving branch of artificial intelligence designed to generate new content ranging from text, code, and voice, to images, videos, processes, and other digital artifacts, including intricate protein structures.

AI took a major leap with Generative AI and its ability to disrupt the way we work because of its ability to create content that profoundly supports human expertise and skills—writing memos and reports, designing website graphics, creating personalized marketing strategies, and curating employee learning programs, for example. The examples of Generative AI use cases by industry are boundless and illustrate the breadth of work that can be augmented using Generative AI.

Generative AI is a true disruptive workforce shift, indicative of a future in which humans, work, and technology meld in previously unthought of ways. Moreover, this is the first time a technological revolution of this magnitude has been so widely accessible. Anyone with an internet connection can participate.

Its impact on humans

It's important to keep in mind that Generative AI isn't designed to replace humans, but it is about to change how they work. Ideally, Generative AI can bolster innovation, productivity, and outcomes while making work easier for people.

For business leaders, globally, the challenge is twofold: understanding the possibilities and risks Generative AI brings and preparing for the inevitable organizational change that is headed their way. **The future success of Generative AI will hinge on a renewed focus on humans.**

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PART 2

Generative AI is expected to change the structure of "work" as we know it. But before executives can change workflows or adjust employee roles, it's important to take a deeper dive into what exactly is changing in the work.

Here's the premise: if humans can use Generative AI to complete tasks faster, easier, or better than they could before because the technology has certain skills, then we can start to assign tasks differently. This is a key to success—technology is not directly replacing *jobs*; rather it's changing the tasks and skills we use to get the *work* done.

Work vs jobs vs tasks vs skills: Understanding the difference

WORK is defined as the outcome created by leveraging human capabilities and the tools that have been invented to help accomplish the goal.

JOBS are the traditional construct to describe the work humans do to achieve the outcomes. There's significant concern about jobs disappearing due to Generative AI's ability to automate tasks, but that's not the complete picture. First, tasks aren't jobs. Second, we need to look at skills to understand how jobs will be redefined given the adoption of Generative AI.

TASKS are specific activities performed to achieve work outcomes. Historically, we have thought of tasks as part of the work people perform in jobs, and that's still the case. Tasks require skills and tools to achieve a certain outcome. Generative AI may automate those tasks altogether, freeing up a worker's ability to focus on new tasks, or they make those tasks easier for people and create time for the individuals.

Some tasks humans do better. Some tasks machines do better. Some tasks are better done with a combination of the two.

SKILLS enable us to carry out the tasks necessary to achieve work outcomes. Both humans and Generative AI have skills that can perform tasks to create work outcomes. Understanding the skill sets within an organization and the various job roles that use them can shape the future of work with Generative AI.

By nurturing a workforce equipped to adapt, learn, and evolve with Generative AI, we can help ensure that we are shaping a future in which technology serves as a tool for human empowerment—just as it was always meant to do. The need for humans didn't diminish with the invention of the personal computer; humans got better and faster at accomplishing work. If done well, Generative AI can aspire to the same promise: *Making humans better at work and work better for humans*™.

That said, **executives should begin to consider "futureproofing" the Generative AI-enabled workforce** because work is apt to shift quickly, and workers will need new skills. The Generative AI revolution holds enormous opportunities for organizations that prepare to adapt and evolve.

The great skills shift

Understanding the dynamic interaction between Generative AI and the workforce's skills and tasks is crucial for executives. By recognizing which tasks can be automated, which can be augmented, which will have limited impact, and which new tasks might emerge, **organizational leaders can devise strategies to navigate the challenges and opportunities posed by Generative AI** and determine what kind of upskilling curricula will be necessary for workers down the road. Such insights will help executives prepare for a Generative AI future—readying their workforce for automation, strategizing for augmentation, appreciating human-centric skills, and even pioneering new roles.

More and more organizations are putting a renewed emphasis on skills as they look to retool their workforce in a Generative AI era and for good reason. Skills-based organizations get results. Deloitte's Skill-based Organization Survey offers some insights: organizations that embed a skills-based approach are **63% more likely to achieve results** than those that have not adopted skills-based practices.

When we talk about Generative AI affecting jobs and skills, we can't overlook the significance of human skills. Emotional intelligence, critical thinking, leadership, and complex problem-solving are innately human attributes—**all are challenging for machines to emulate.**

We have long said it's "humans with machines" and not humans or machines that will transcend leading organizations.

PART 3

Strategies to prepare organizations

In the world of Generative AI disruption, **the role of leadership transcends traditional management.** Leaders must seize the reins, steering their organizations with clear vision and strategic wisdom. It isn't necessary for executives to be Generative AI experts—what is important is to **create and manage by a framework that focuses on and supports leadership's vital role** in guiding Generative AI-induced changes. In this framework, leadership must consider the following:

· **Visibly commit** to Generative AI strategy
· **Champion the benefits** of Generative AI
· **Openly address concerns and resistance**
· **Foster a safe environment for experimentation** and learning
· **Implement guidelines and governance** for Generative AI usage

By adopting a researcher's mindset to explore Generative AI, digging into the technology to deeply understand and experiment with it, and then harnessing the collective human and AI potential in a way that is efficient and humane, leaders can steer their organizations with vision, adaptability, and a deep commitment to human-centric progress.

PART 1

## What is Generative AI and why is it disrupting work?

Did Generative AI create that advertising image you're looking at? What about the 3D model of a protein's structure that a scientist is examining?

In the case of the former, it just might have—and it gave the advertiser the perfect image, in only seconds from a text prompt, to complement the advertising message. That may not be lifesaving, but it's a game-changer for productivity at work.

In the case of the latter, yes, Generative AI can do that—and just did. Scientists at MIT created a computational tool that uses Generative AI to create new protein structures. The innovation has the potential to accelerate drug development and improve gene therapy.[1] That definitely could be lifesaving. Also lifesaving? AI's ability to detect and warn hardhat workers of potential hazards at a mine by predicting weather, oxygen levels, ground stability, and even human behavior and health via the use of wearables.[2,3] Not to mention its ability to correctly diagnose nearly 40% of challenging medical cases using Generative AI technologies. The process can potentially help physicians make sense of complex medical data.

What is Generative AI? How is it being used? Better yet, how can you and your organization prepare people to use it safely and efficiently?
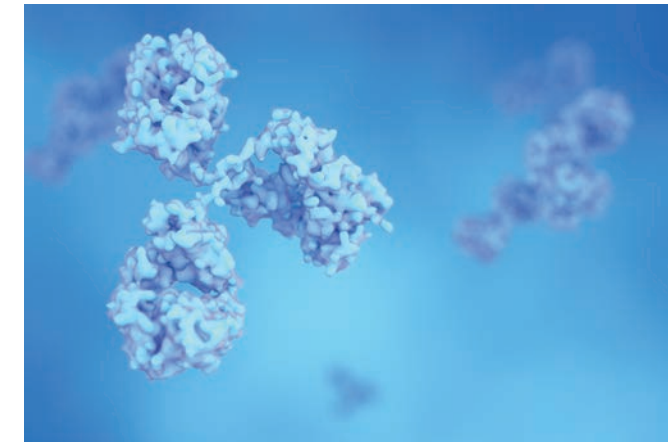
Generative AI is a rapidly evolving branch of artificial intelligence designed to generate new content ranging from text, code, and voice, to images, videos, processes, and other digital artifacts, including intricate protein structures.

This technology operates through a deep learning process, in which the AI is trained on vast amounts of data and produces new content by combining patterns.

For instance, a text-generating AI model can complete a sentence from a prompt, while an image-generating AI model can create new visuals from a simple description. An image of an elephant standing on a bus? Generative AI can create that in seconds. It can also create personalized meal plans and shopping lists with healthy living suggestions.

Its capabilities are far reaching and truly transformative. Generative AI can and should:

· **Accelerate human innovation**, making work easier and helping to solve bigger, more complex challenges

· **Deliver valuable outcomes** and not just for organizations, but for employees and society at large

· **Require thoughtful, purposeful adoption** via experimentation, demonstration, and planning that provokes buy-in from employees

· **Be implemented with only the highest levels of ethics and trust** using the appropriate guardrails, frameworks, and controls.

When humans and machines collaborate, they can achieve something neither could do independently.[5] There's greater impact and value. In the "business" realm, Generative AI can:

· Translate audio into multiple languages

· Revolutionize knowledge management to filter unstructured data

· Provide human-like support for complex banking transactions

· Enhance fraud detection models

· Summarize technical documents

· Automate clinical follow-ups by using notes to create audio messages for patients to schedule appointments
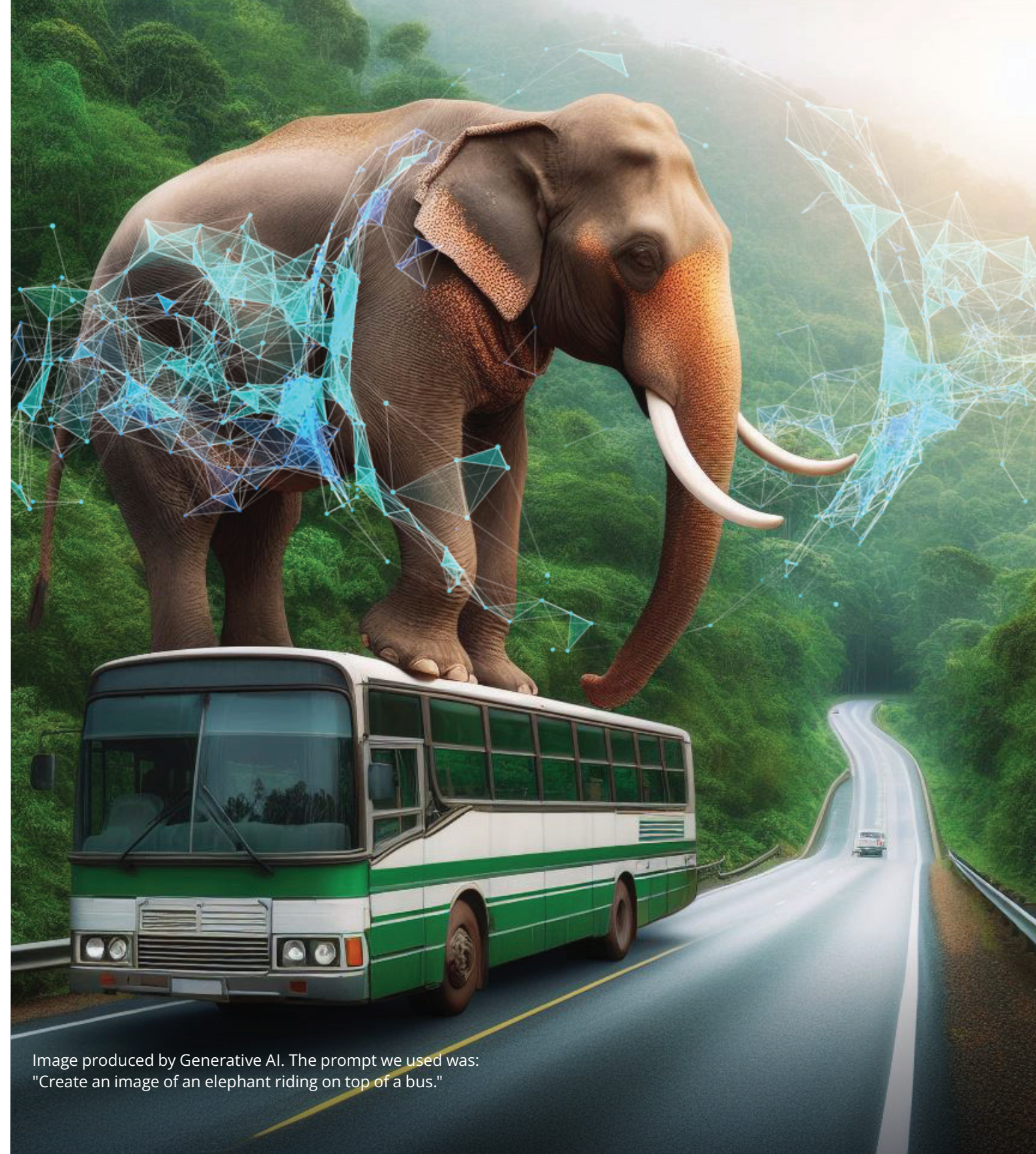

Image produced by Generative AI. The prompt we used was: "Create an image of an elephant riding on top of a bus."

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Generative AI has experienced accelerated growth and investment in just a few months and its rapid evolution marks a pivotal moment for global executives navigating the future of their industries. ChatGPT, an AI chatbot, is estimated to have reached 100 million monthly active users just two months after launch.[6] And other AI chatbots, like Google Bard and HuggingChat, are quickly infiltrating the market as well. **It is a true disruptive workforce shift, indicative of a future in which work and technology meld in ways previously unthinkable. Moreover, this is the first time a technological revolution of this magnitude has been so widely accessible to anyone with an internet connection.**

The Generative AI landscape is undergoing rapid expansion. Large Language Models (LLMs) are being developed, enterprise platforms are integrating Generative AI models into their systems, and a plethora of Generative AI-based applications are emerging. A significant wave of startups is leveraging AI to pioneer innovative solutions, causing disruptive shifts in traditional sectors. Areas such as content creation, education, software development, and even art and design are all being transformed by these Generative AI-driven innovations.

While creating significant buzz around the possibilities, Generative AI is bringing up new challenges when it comes to the workforce, such as how to reward people for contributing to Generative AI data models.

For example, Shutterstock, a leading global image content provider, recently announced they are training DALL-E models using high-quality photography from its own image library.[7] This direct integration of an AI image generator into Shutterstock's platform enables them to compensate artists for use of their images to train the model. This strategy not only helps safeguard the artists' interests, but also offers unique legal protections and indemnifications for the generative content provided to its end users.

Why Generative AI will impact work

In a few simple words: Because Generative AI can create *original content.*

Shutterstock's image generator is creating net new images based on prompts. While graphic designers can manipulate a photo using software available today, it can take them significantly more time to achieve the same result. And it's not just capable of image creation. Its ability to create content is far ranging.

AI took a major leap with Generative AI and its ability to disrupt the way we work because of its ability to create content that profoundly supports human expertise and skills—writing memos and reports, designing website graphics, creating personalized marketing strategies, and curating employee learning programs, for example. The examples of AI-enabled content creation listed in the table illustrate the breadth of work that can be augmented using Generative AI. It's important to keep in mind, however, that Generative AI isn't designed to replace humans but it is about to change how they work. **Ideally, in its perfect state, Generative AI can bolster innovation, productivity, and outcomes while making work easier for people.**

Generative AI's influence will continue to grow as both individuals and enterprises uncover increasingly innovative uses for it in everyday work and life. It is projected that 40% of enterprise applications will have embedded conversational AI soon, a significant leap from less than 5% in 2020.[8] Generative AI's footprint is anticipated to further expand by 2025, accounting for approximately 10% of the total global data produced.[9] Moreover, by 2027, nearly 15% of new applications are expected to be autonomously generated by AI, saving humans hours of computer coding time, a reality that seems futuristic today.[10] The broad integration of Generative AI signifies an important shift in the future of work, redefining our relationship with technology and reshaping our work ecosystems.

Potential Generative AI innovations by industry[11]

	TEXT/CODE	IMAGE/VIDEO	SPEECH/AUDIO	3D
ENERGY, RESOURCES & INDUSTRIALS	**Technical document summarization** — Extract information from detailed documentation and synthesize field-reports in specific formats	**New product development** — Create detailed schematic drawings of industrial products and parts to aid in new product development and repairs	**Field virtual assistant** — Enable field agents to access best practices and repair information using natural language while hands-free	**Geological assessments** — Assess both real and synthetic data for oil exploration and the likelihood of finding resources
FINANCIAL SERVICES	**Customer due diligence reporting** — Generate reports on new customers such as KYC (Know Your Customer) processes and summarize them for employees to action and make decisions for customer onboarding	**Fraud detection** — Generate customer signatures to enhance internal fraud models in areas such as credit card authorization, and summarize potential fraud hotspots	**Retail banking transaction support** — Provide human-like support for complex retail transactions including customer applications, questions, negotiations, and more	**Financial model enhancement** — Generate synthetic data to improve and enhance financial models and pressure test an institution's liquidity and processes
GOVERNMENT & PUBLIC SECTOR	**Intelligent case management** — Parse complex government case files for actionable details which are then summarized for rapid comprehension and used to generate reports	**Infrastructure mapping** — Enhance infrastructure mapping and planning processes by generating detailed plans and iterating them using natural language	**Intelligent agents/student office hours** — Provide natural language support for government services and on-demand access to information for students	**Disaster recovery & planning** — Support urban planners and disaster recovery teams with synthetic data (e.g., traffic, population, 'what-if scenarios') to aid in planning and preparation
TECHNOLOGY, MEDIA & TELECOMM-UNICATIONS	**Cybersecurity threat detection** — Summarize areas of high-risk, answer questions, and generate executive reports for malware, anomalies, and potential threats	**Semiconductor chip design** — Iterate and enhance designs based on performance parameters and reduce the development life cycle time	**Translations, subtitles, & descriptions** — Translate audio into multiple languages (e.g., subtitle generation) and provide descriptions to visual media content	**Telecom network maintenance** — Train digital twins on synthetic data to help identify network faults and provide remediations for on-field technicians
LIFE SCIENCE & HEALTH CARE	**Medical history summary** — Summarize patient demographics, medical history, allergies, medications, and other relevant details from Electronic Health Records (EHR) clinical notes to aid hospital intake	**Improved medical imaging** — Generate large sets of synthetic medical images to train imaging algorithms to better identify abnormalities as well as train clinicians to better identify issues	**Automated follow-ups** — Ingest clinical notes to identify patients that will need follow-up and create audio messages that can be sent to schedule them and encourage healthy habits	**New drug discovery** — Generate the structure and function of proteins and biomolecules, accelerating the creation of new drug candidates
CONSUMER	**Personalized supermarket** — Create email campaigns with custom meal plans and shopping lists fine-tuned for each buyer/family and specific to the store and what's available	**Product photography & details** — Generate details and ultra-realistic photographs of new and existing products in different environments	**Conversational retail** — Provide detailed product support and guidance using human-like chatbots in retail stores focused on specific brands and/or categories	**Rapid product design/consumer preference** — Accelerate product prototyping lifecycle through creation of unique and high-fidelity product mock-ups, and create synthetic behavioral data of buyers

While Generative AI holds immense potential, Generative AI and LLM-powered systems including chatbots are not without risks. And, this is prompting discussion around issues such as accuracy, the potential for job losses, and legal questions around intellectual property and ownership. What's more, because the chatbot mimics coherent human phrasing, it may give some the impression that the AI understands the prompts to which it responds, requiring careful consideration in how humans and Generative AI should interact.[12] For example, employees will need to evaluate if customers are interpreting AI systems the way the organization intends.

There is an ever-pressing need for humans to critically evaluate the outputs of Generative AI and ensure quality while enjoying the benefits of efficiency. An AI model has no autonomy or intent; it cannot be held accountable in any meaningful sense.[13]

These models can sometimes produce "hallucinations," or fictional high-confidence responses ungrounded in facts, not dissimilar from humans' dreams that create fictional reality from the information stored in our brains. While a little daydreaming at work may be good for humans, people need the applications they are using to be spot on. Generative AI can't yet provide references for their generated content, complicating validation.

Additionally, these models have a limited context window, meaning they can only work off limited data. The size of the combined input has ramifications for the accuracy of the output. In other words, the model may not have all the information it needs.

For business leaders around the world, the challenge is twofold: understanding the possibilities and risks Generative AI brings and preparing for the inevitable organizational change that is headed their way.
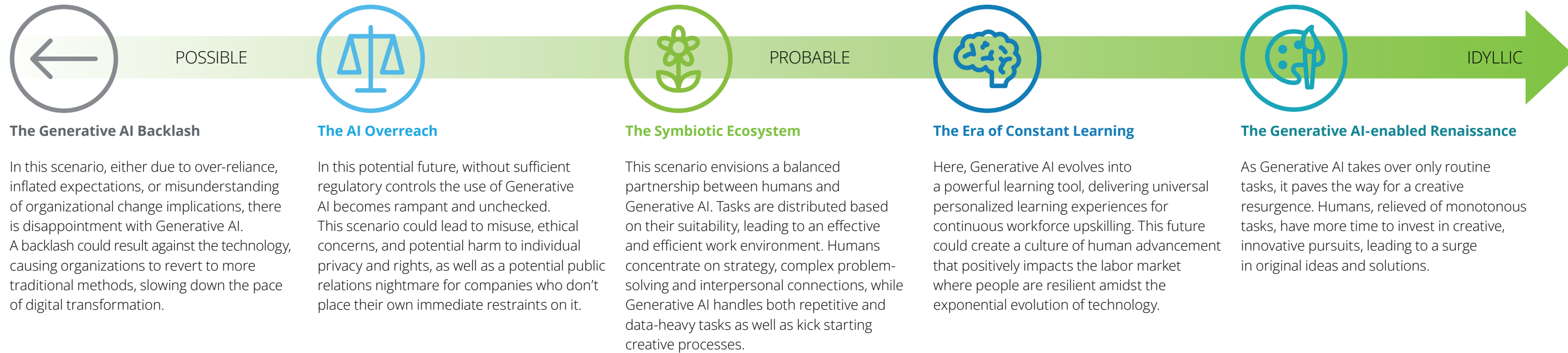
What does this mean for humans at work?

It almost goes without saying—and at the same time it can't be overemphasized—that Generative AI's future success will hinge on a *renewed focus on humans.*

By nurturing a workforce equipped to adapt, learn, and evolve with Generative AI, **we can help ensure that we are shaping a future in which technology serves as a tool for human empowerment. Despite all the hype, it's not meant to replace humans, but to better unlock human potential— *just as technology was always meant to do.*** The need for humans didn't diminish with the invention of the personal computer. They got better and faster at accomplishing work. If done well, Generative AI can aspire to the same promise: *Making humans better at work and work better for humans*™. That being said, executives should begin to consider "future-proofing" the Generative AI-enabled workforce because work is apt to shift quickly and workers will need new skills.

Of course, the nature of future trends and disruptions is inherently uncertain. Generative AI could as easily take a divergent path of concern versus one of allure, as Deloitte's futurists point out in their report, *Generative AI Dichotomies.*[14] But developing a keen understanding of current trends and potential workforce implications is a necessary and integral part of an organization's Generative AI strategy. Executives should aim to create a forward-looking, human-centered approach that leverages Generative AI capabilities, prepares their workforce for the unknown, fosters a culture that embraces this transformative technology, and positions their organization at the forefront of their industry. **Those companies that are quick to adapt are likely to be at an advantage.**

Part of seizing opportunities involves preparing the organization for *multiple different futures.* Before you think about how to harness Generative AI today it's important to explore potential futures in this rapidly changing landscape. Consider these future scenarios as you plan for the organizational impacts of Generative AI.

POSSIBLE   PROBABLE   IDYLLIC

The Generative AI Backlash

In this scenario, either due to over-reliance, inflated expectations, or misunderstanding of organizational change implications, there is disappointment with Generative AI. A backlash could result against the technology, causing organizations to revert to more traditional methods, slowing down the pace of digital transformation.

The AI Overreach

In this potential future, without sufficient regulatory controls the use of Generative AI becomes rampant and unchecked. This scenario could lead to misuse, ethical concerns, and potential harm to individual privacy and rights, as well as a potential public relations nightmare for companies who don't place their own immediate restraints on it.

The Symbiotic Ecosystem

This scenario envisions a balanced partnership between humans and Generative AI. Tasks are distributed based on their suitability, leading to an effective and efficient work environment. Humans concentrate on strategy, complex problem-solving and interpersonal connections, while Generative AI handles both repetitive and data-heavy tasks as well as kick starting creative processes.

The Era of Constant Learning

Here, Generative AI evolves into a powerful learning tool, delivering universal personalized learning experiences for continuous workforce upskilling. This future could create a culture of human advancement that positively impacts the labor market where people are resilient amidst the exponential evolution of technology.

The Generative AI-enabled Renaissance

As Generative AI takes over only routine tasks, it paves the way for a creative resurgence. Humans, relieved of monotonous tasks, have more time to invest in creative, innovative pursuits, leading to a surge in original ideas and solutions.

As we navigate these and other diverse scenarios, the need for agility, continuous learning, and adaptability becomes paramount. The guiding principle should be to look for opportunity in uncertainty. It's about leveraging disruptions as springboards for growth and turning challenges into catalysts for success. A blend of technical and adaptive skills can prime the workforce for the Generative AI era.

PART 2

What is Generative AI's likely impact on human jobs?
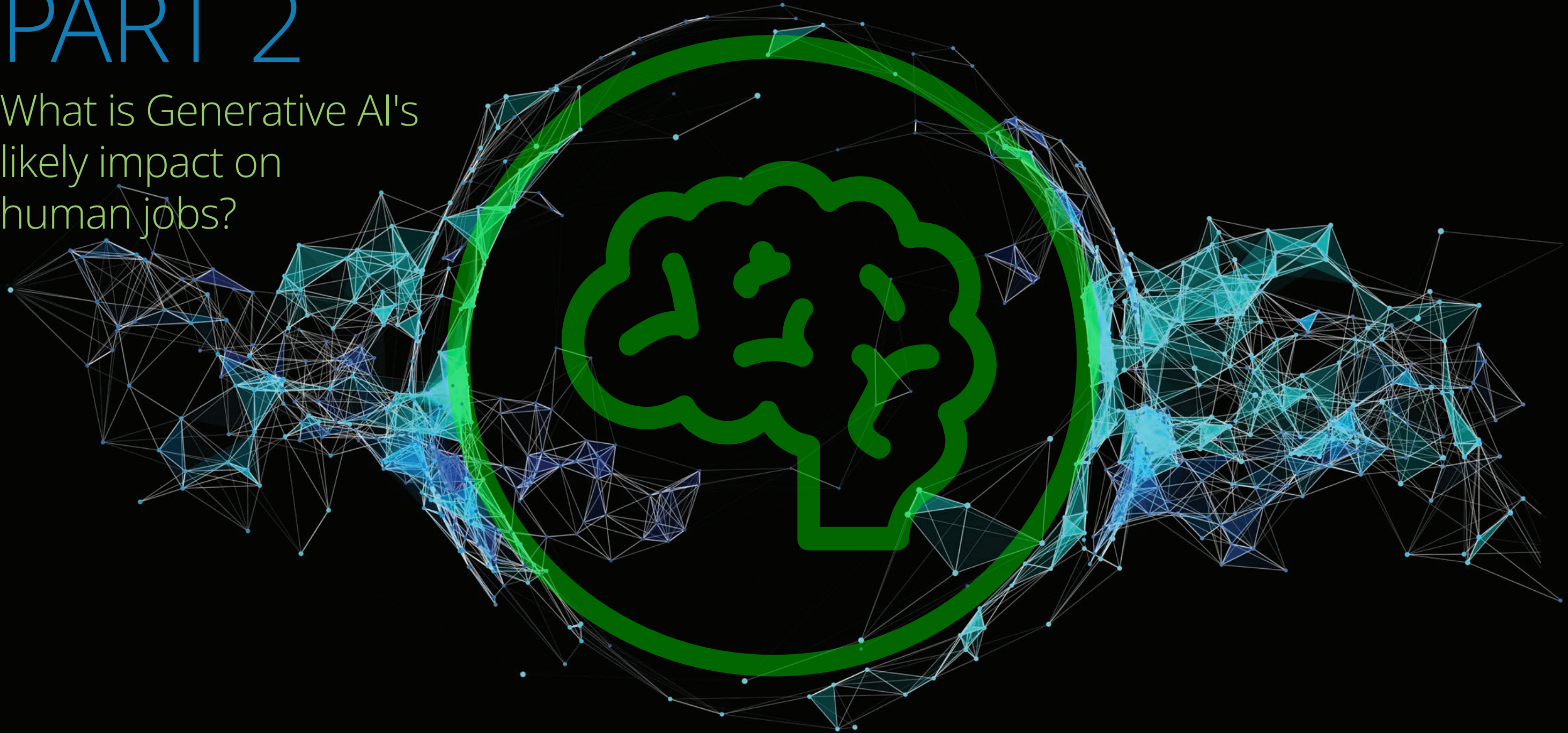
With the potential for widespread integration of Generative AI, organizations are on the precipice of a significant shift in the nature of work, with implications cascading to the workforce and workplace.

Predictions for Generative AI's impact on the future vary, but there's no doubt that in this new era we'll see work impacted— in both large and small ways with entirely new jobs created. Just take a look at the research.

A report from Goldman Sachs was one of the first to make predictions on the impact of Generative AI on the workforce, saying that as many as 300 million jobs could be impacted in some capacity, with some work (7% of current US employment) being substituted with Generative AI, other work (63%) being complemented by it, and with the remainder (20%) being unaffected.[15] In addition, the report said that it is reasonable to expect a productivity boom with widespread adoption increasing global GDP (Gross Domestic Product) worldwide by 7% over a 10-year period.[16] These numbers have broad, sweeping impacts on the labor market. People will need support and training to make the transition successful. Thoughtful consideration should be made about what humans like to do and what work they'd prefer to be automated as organizations evaluate the technology and the value it can bring to productivity and work.

Another study estimates that 80% of the US workforce could have at least 10% of their tasks freed up by machines, while 19% could have at least 50% of their tasks automated.[17] This study also indicates that the implications of Large Language Models (LLMs) to the workforce are complex and uncertain and depend on various factors such as the adoption rate, the complementarity or substitutability of human and machine skills, the distribution of benefits and costs, and institutional and regulatory responses.[18]

Women may need more transitional support and training as Generative AI sweeps through organizations. As many as 8 out of 10 women (58.87 million) in the US workforce are in occupations highly exposed to Generative AI automation versus only 6 of 10 men.[19] Overall, 21% more women are exposed to AI automation than men, even though men outnumber women in the workforce.[20] These impacts are due to the affected occupations being populated by more women than men, including office and administrative support, health care support, education and library services, as well as community and social services.

As many as **8 out of 10 women** (58.87 million) in the US workforce are in occupations highly exposed to Generative AI automation versus only **6 of 10 men**.

Creative services and entertainment industry workers also have valid concerns to contend with— will Generative AI infringe on their intellectual property?

Will it compromise creative quality? (43% believe it will.[21]) Will their jobs disappear? Indeed, with generative AI chatbots, like Google Bard and HuggingChat, now capable of autonomously producing content, it's valid for creators to question where they fit in the future landscape. And question they do: **Research suggests that nearly 40% of entertainment industry workers in the US have reservations about Generative AI's effect on their roles.**[22] AI is also a sticking point in the recent Writers Guild of America strike—a specific demand was that studios should not use AI to write or rewrite literary material for use in the production of film and television. Further implied in the demand is that the "writer" must be an actual person.[23] These concerns also play out across the advertising world, where AI can be used to create ad copy. While this efficiency is undoubtedly appealing

to businesses, it may leave novice copywriters and ad designers in the awkward position of needing to "learn the ropes" of their craft, while simultaneously being asked to use AI to replace some of that learning curve. Budding professionals, eager to carve out a place for themselves, now face competition not just from their human peers but from sophisticated technology that boasts vast experience right out of the box. For young aspirants, the playing field might seem frighteningly unsure.[24]

So, what's the way forward for people dependent on content creation? First and foremost, it's crucial to recognize that while Generative AI can generate content, the depth, nuance, and cultural awareness of human creation are irreplaceable. As some analysts predict, human-made content could even attain a premium status amidst the Generative AI content deluge. Moreover, it's imperative for educational institutions to evolve. Beyond traditional learning, emphasis on real-world experience through avenues like internships, apprenticeships, and practical training could bridge the widening experience gap. **Preparing students for a world intertwined with Generative AI will be pivotal.**

Generative AI can improve efficiency, create customized experiences, and spark new capability. While the impact to workers is likely a story of augmentation versus replacement, for many, AI still represents a potential existential threat to their professions. And while the nuances and cultural insights offered by human creators may never be entirely replicated by machines, the fears surrounding complete job automation are real and valid.

How worried should certain workers be? The answer lies somewhere between "extremely worried" to "not worried at all."

As Generative AI continues to evolve and its applications proliferate, the perspectives on its implications for the global workforce are as varied as they are numerous.

Reports and forecasts on the number and types of jobs that might be lost or changed are released daily, leading to a swirl of ever-evolving statistics and projections. **The truth of "how worried?" probably lies somewhere in the middle of the spectrum.** Generative AI will undoubtedly disrupt existing jobs and require new skills and capabilities, but it will also enable new opportunities for productivity, performance, and creativity. The exact nature of these changes and their overall impact on the workforce is a dynamic landscape that evolves as Generative AI itself develops.

Some data suggests that in the past, automation technologies increased wage inequality, as workers performing routine tasks saw their job opportunities diminish, and wages decline relative to others. But the initial fears of job loss due to Generative AI may be misplaced. Research from MIT suggests that workers with the least education and career preparation may benefit *most* from Generative AI.[25] This research observed a 14% productivity increase among contact center agents who used a conversational AI assistant, with the largest gains seen among new or low-skilled workers. **These workers were effectively *upskilled* by the technology, rather than replaced.**[26] The Generative AI-enhanced workers increased the number of customer chats resolved per hour by 13.8%.[27] Furthermore, less experienced workers resolved 35% more chats per hour with the Generative AI model, while productivity was flat for highly skilled workers.[28] The study details that minimal impact for highly skilled workers is because they already experience best practices for efficiency and the tool may even serve as potential distraction or reduce the quality of their work.[29] **The use of the Generative AI model also improved customer sentiment,** leading to fewer requests to speak with a manager and more efficient transfers to relevant departments. In addition, companies like Samsung are announcing enterprise versions of Generative AI chatbot solutions to enhance employee productivity, while protecting the safety of their own data.[30] Indeed, Deloitte has its own version too.
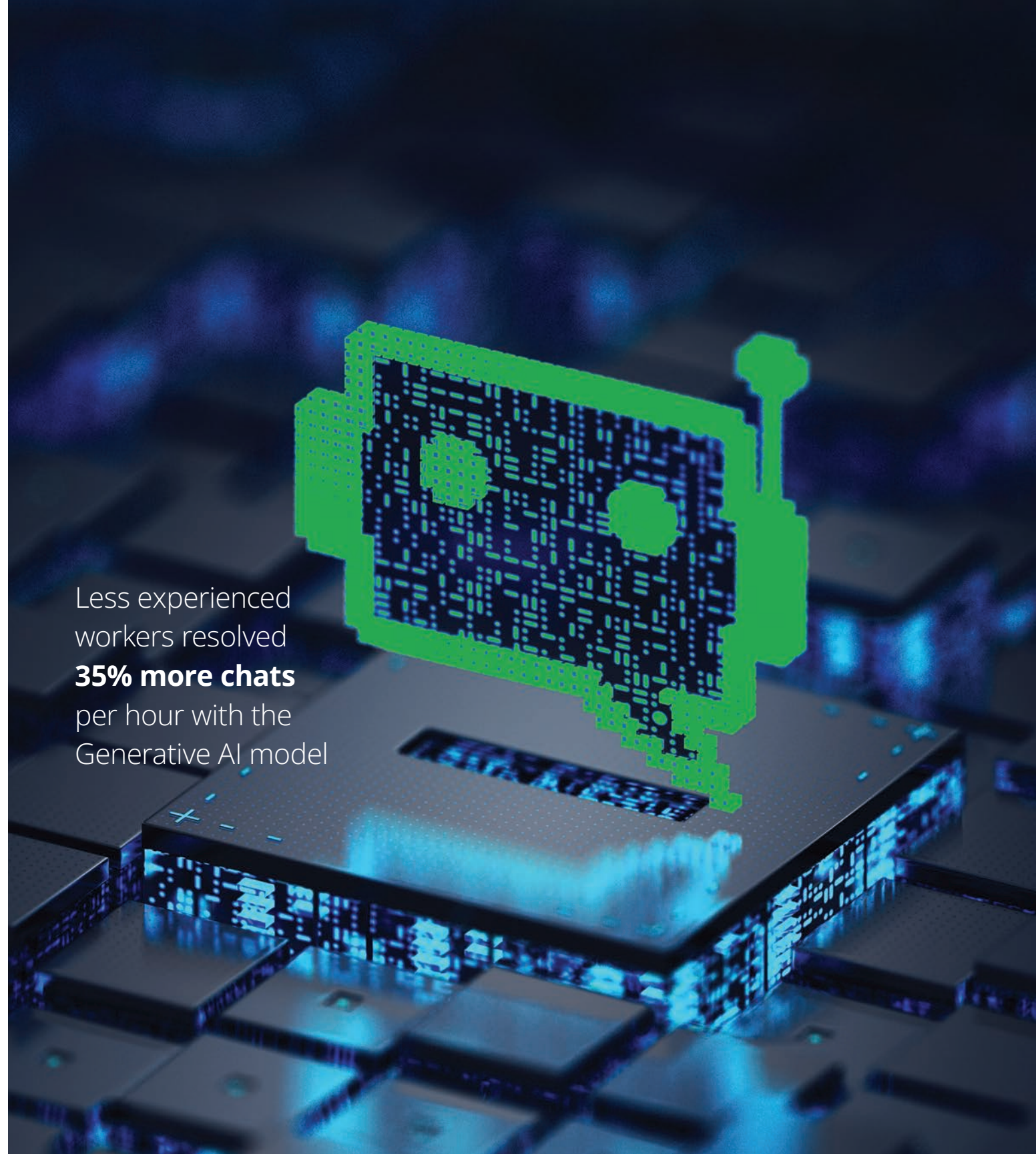
Less experienced workers resolved **35% more chats** per hour with the Generative AI model

Given the rapid pace of change and the varying perspectives on the potential impacts of Generative AI, it is clear that any attempt to pinpoint precisely what the future will be is likely to be overtaken by the pace of innovation, but there is a growing sense that **Generative AI will augment the human workforce rather than replace it.**

What we can confidently assert is that the Generative AI revolution holds enormous opportunities for those organizations that are prepared to adapt and evolve.

Workers should be able to co-create with leaders on how it might be used and how to inevitably reinvent their work with it. And the organizations that communicate early and often with sound lifelong learning strategies and support for employees can find themselves ahead, maximizing productivity and taking advantage of all this new era will have to offer.

The value behind re-architecting work

With the advent of AI, organizations are reimagining and optimizing nearly all aspects of their business, each providing a unique opportunity to evaluate the activities that can be automated, and the innately human skills required to deliver better or new value to clients and employees. This change requires a careful reevaluation of current job roles, skills, and workflows, followed by a comprehensive re-design that integrates Generative AI effectively. Organizational leaders and workers should play a collaborative role in the initiative.

While these efforts may sound like mechanics, **re-architecting the work opens the door to improved individual and team performance and employee experience, satisfaction, and retention.** Breaking down and redistributing activities can create new opportunities for employees and make them even more valuable to the organization. Evaluating short and long-term ways Generative AI could benefit the organization, the speed of those changes, and how it impacts work is an important next step.

So, what is "work?"

It's also important to carefully re-evaluate what we mean by "work," in addition to "jobs, tasks, and skills," before we can talk about a comprehensive re-design of work that integrates Generative AI effectively. We know that **Generative AI will re-shape the architecture of work**[31] because it will cause disruption across many jobs and skills. We don't know yet with certainty how these disruptions will evolve and at what pace. Whether Generative AI augments human capabilities, automates some tasks, fills in labor gaps, or dramatically transforms jobs, the objective is the same: to equip organizations with the knowledge and strategies to capitalize on this technological shift and ensure that humans are central to the solution.

Work
vs jobs
vs tasks
vs skills:

Understanding the difference

Work, in the broadest sense, **is the outcome created** (e.g., achieving sales targets, enhancing user experience, increasing customer satisfaction) by leveraging both human capabilities and the tools they have invented to help accomplish that goal. The desired outcomes, in alignment with organizational strategies or customer needs, have always been defined by humans, and this continues to be the case.

Jobs (sales representative, front-end developer, account manager) have been the traditional construct to describe **the work humans do to achieve these outcomes.** There's significant concern in the workforce about jobs disappearing due to Generative AI's ability to automate tasks, but that's not the complete picture—first, tasks aren't jobs, and second, we need to look at skills to understand how jobs will be redefined given the adoption of Generative AI.

Tasks are **specific activities that are performed to achieve work outcomes.** We have historically thought of tasks as being part of the work performed by people in jobs and that's still the case. Tasks require skills and tools to achieve a certain outcome (e.g., identifying new potential sales channels, testing code across web browsers, creating targeted product offerings). Generative AI may automate those tasks altogether, freeing up a worker's ability to focus on new tasks, or they make those tasks easier for people and create time for the individuals.

Skills **enable us to carry out the tasks** necessary to achieve work outcomes (e.g., problem solving, proficiency in HTML, data analysis). Both humans and Generative AI have skills that can perform tasks to create the outcomes of work. Understanding the skill sets within your organization and the various job roles that use them can shape the future of work with Generative AI.

Before you begin adjusting workers' roles or changing workflow, it's important to take a deeper dive into what exactly is changing in the *work*.

The workforce lightbulb moment: Generative AI isn't replacing jobs; it's affecting the tasks and skills we use to get the job done.

Here's the premise:
If humans can use Generative AI to complete tasks faster, easier, or better than they could before because the technology has certain skills, we can start to assign tasks differently.

This is a key to success—technology is not directly replacing jobs; rather it's changing the tasks and skills we use to get the work done. This evolution of skills has always been part of our history. Think about past inventions like electricity, cell phones, and personal computers. Today, it's more important than ever for organizations to pay attention to this evolution and prepare their workforce for the future.

Generative AI will have varied impacts on different jobs and the workflows and processes that touch them. However, Generative AI will impact initially in reallocating routine tasks (whether physical or cognitive) from humans to machines. As you consider the impact on certain jobs, remember that one of the most important differences between Generative AI and "traditional" AI systems is the creation of digital artifacts. AI outputs include labels, numbers, and yes/no responses. Now with Generative AI, new outputs can be created (audio, video, text, code, 3D models). Humans will still need to decide what outputs they want, but their workflows for creating, iterating, designing, writing, summarizing, "drawing", etc. could significantly change.
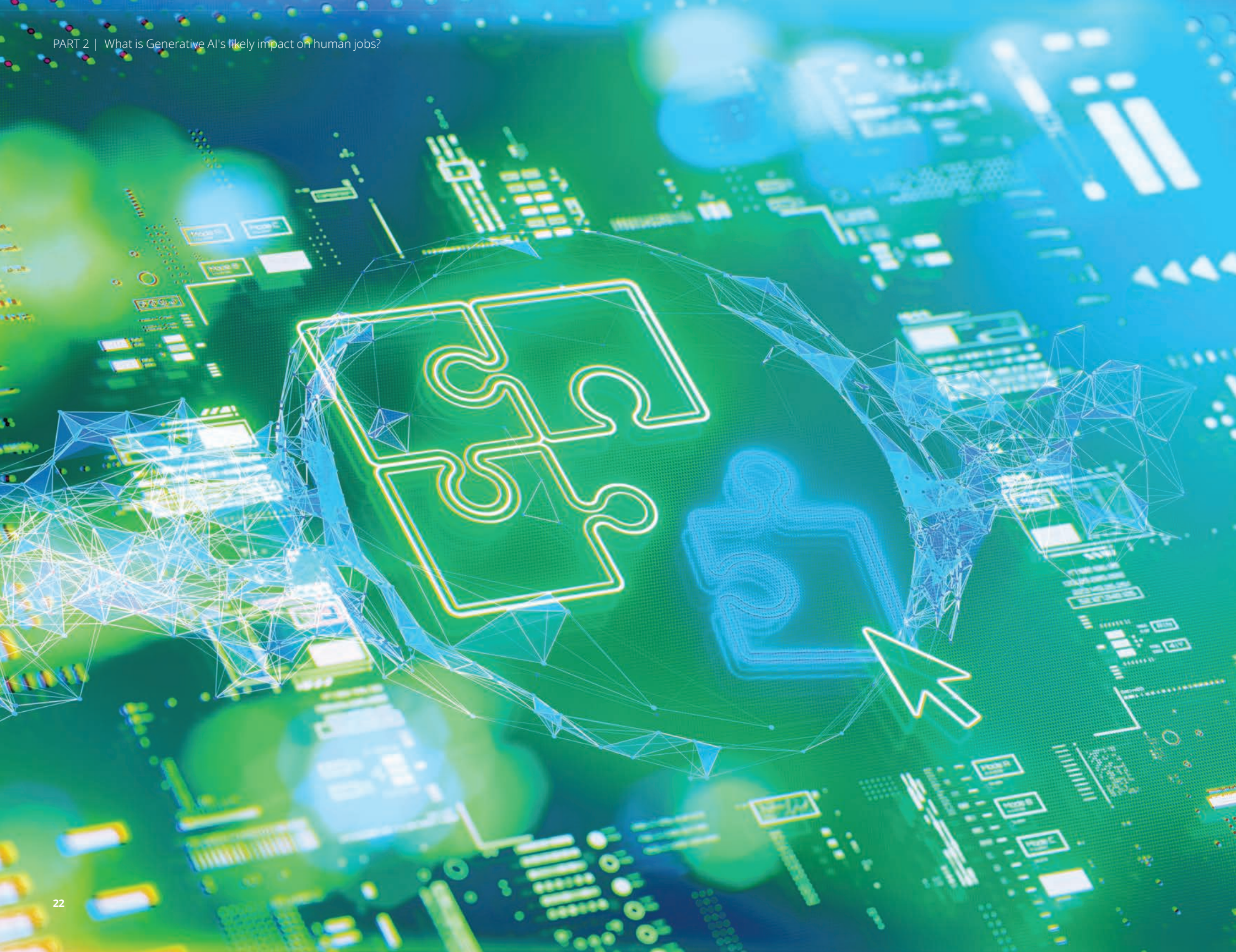
Understanding the dynamic interaction between Generative AI and the workforce's skills and tasks is crucial for executives.
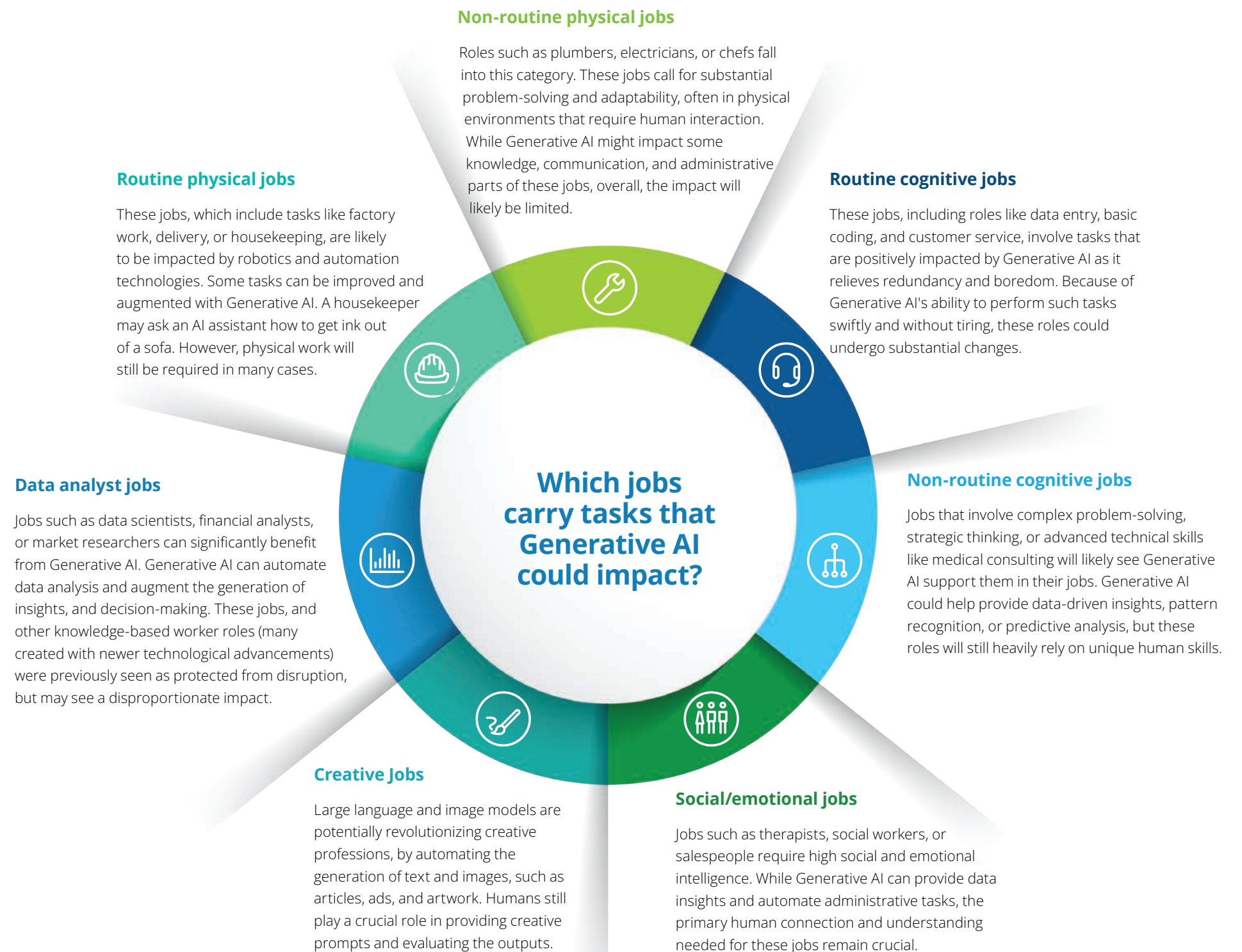
By recognizing which tasks can be automated, which can be augmented, which will have limited impact, and which new tasks might emerge, organizational leaders can devise strategies to navigate the challenges and opportunities posed by Generative AI and determine what kind of upskilling curricula will be necessary for workers down the road. **Such insights will help executives prepare for a Generative AI future—readying their workforce for automation, strategizing for augmentation, appreciating human-centric skills, and even pioneering new roles.**

There's quite a bit of work to do.

How to break down a job in the Generative AI era

Start by breaking down the types of jobs in your organization. Here you can see what could benefit from the technology and in what way. Jobs such as these will have varying degrees of impact.

Non-routine physical jobs

Roles such as plumbers, electricians, or chefs fall into this category. These jobs call for substantial problem-solving and adaptability, often in physical environments that require human interaction. While Generative AI might impact some knowledge, communication, and administrative parts of these jobs, overall, the impact will likely be limited.

Routine physical jobs

These jobs, which include tasks like factory work, delivery, or housekeeping, are likely to be impacted by robotics and automation technologies. Some tasks can be improved and augmented with Generative AI. A housekeeper may ask an AI assistant how to get ink out of a sofa. However, physical work will still be required in many cases.

Routine cognitive jobs

These jobs, including roles like data entry, basic coding, and customer service, involve tasks that are positively impacted by Generative AI as it relieves redundancy and boredom. Because of Generative AI's ability to perform such tasks swiftly and without tiring, these roles could undergo substantial changes.

Data analyst jobs

Jobs such as data scientists, financial analysts, or market researchers can significantly benefit from Generative AI. Generative AI can automate data analysis and augment the generation of insights, and decision-making. These jobs, and other knowledge-based worker roles (many created with newer technological advancements) were previously seen as protected from disruption, but may see a disproportionate impact.

Non-routine cognitive jobs

Jobs that involve complex problem-solving, strategic thinking, or advanced technical skills like medical consulting will likely see Generative AI support them in their jobs. Generative AI could help provide data-driven insights, pattern recognition, or predictive analysis, but these roles will still heavily rely on unique human skills.

Which jobs carry tasks that Generative AI could impact?

Creative Jobs

Large language and image models are potentially revolutionizing creative professions, by automating the generation of text and images, such as articles, ads, and artwork. Humans still play a crucial role in providing creative prompts and evaluating the outputs.

Social/emotional jobs

Jobs such as therapists, social workers, or salespeople require high social and emotional intelligence. While Generative AI can provide data insights and automate administrative tasks, the primary human connection and understanding needed for these jobs remain crucial.

Examine the four types of impacts

Organizations need to carefully examine their workforce and understand the impact of Generative AI in each job, as well as the impact it will have on future upskilling. Understand what humans do best and how AI can support their efforts. While we'll likely see all four types of impact on the workforce, augmentation of skills is the most likely scenario in the era of Generative AI and work. And if that is indeed the case, then almost all workers are going to need some type of continuous learning support on how to effectively use AI and Generative AI in their jobs. For example, most workers will likely need to learn how to:

1 **Use the right prompts**

2 **Verify the results** for accuracy

3 **Know when to apply** Generative AI to a problem and when not to

4 **Edit** Generative AI-produced content

MACHINE SKILLS IMPACTS

HUMAN SKILLS IMPACT

	AUTOMATED TASKS: MACHINES DO BEST	AUGMENTED SKILLS: HUMANS WITH MACHINES DO BEST	NEW SKILLS: HUMANS NEED	LIMITED IMPACT TASKS: HUMANS DO BEST
Description	Core functionalities and processes are entirely managed by Generative AI, making human intervention minimal or unnecessary.	Fundamentally human, but their efficiency, scale, or depth is enhanced when paired with Generative AI tools.	With the emergence and integration of Generative AI in various sectors, there are entirely new skill sets that professionals need to acquire to stay relevant and efficient.	Predominantly human-centric, with Generative AI having minimal to no influence on their execution. They rely on uniquely human traits or complex judgments that Generative AI can't replicate (yet).
Examples	**AI can generate standardized, repetitive content** like answers to routinely asked customer care questions without human assistance. AI can also **personalize or customize content** to individual user preferences by analyzing data patterns without human direction.	**Creativity** is inherently human, but when combined with AI, creatives can be inspired by AI-generated ideas, leading to innovative outputs. Similarly, analytical thinking is augmented as AI can **process vast datasets** quickly, providing humans with insights to make better decisions.	**Continuous learning** is pivotal in the age of AI; professionals must perpetually upskill and adapt to the ever-evolving AI landscape. **AI-tool management** is another emergent skill, as effective operation and oversight of AI tools become integral in many professions.	**Emotional intelligence** is vital for understanding and responding to human emotions, something Generative AI lacks. **Critical decision making** in uncertain, complex environments also remains a mostly human skill, as it often demands nuanced understanding and wisdom.
Sample skills in the category	**Machine-only** • Creation of images • Creation of written content • Data sorting and categorization • Routine forecasting • Language translation • Simple graphic design • Simple trend spotting	**Humans with machines** • Creativity • Analytical thinking • Problem solving • Research • Data visualization • Strategic planning • Predictive analytics • Rapid prototyping	**Human-only** • AI ethics and regulation • AI-human task management • Generative AI output customization	**Human-only** • Persuasion and negotiation • Motivational leadership • Ethical judgment and integrity • Compassion • Building human relationships • Physical dexterity

Then break down those jobs by tasks and skills

Organizations need to carefully examine their workforce and understand the impact of skills in each job, breaking them down into four groups:

- **Automated tasks** that machines do best

- **Limited impact tasks** that humans do best

- **Augmented skills** that humans do best with the support of machines

- **New skills** that humans may need

More and more organizations are putting a renewed emphasis on skills as they look to retool their workforce in a Generative AI era and for good reason.

ESTIMATED GENERATIVE AI IMPACT

FUTURE SKILL IMPACT

Mining & Geological Engineers

Automated tasks

Generative AI could potentially automate tasks related to data evaluation, mine design modeling, and equipment optimization.

Limited impact tasks

Parts of the role, particularly in supervising personnel, ensuring safety, and addressing complex environmental issues, is likely to remain human-dependent.

Augmented skills

Engineers will leverage Generative AI for tasks such as mine mapping, air quality monitoring, and equipment design, allowing them to focus more on innovative solutions for safety and environmental concerns.

New skills

Upskilling in AI integration, data analytics, and ethical considerations, especially concerning environmental sustainability and worker safety, will become increasingly important for Mining and Geological Engineers.
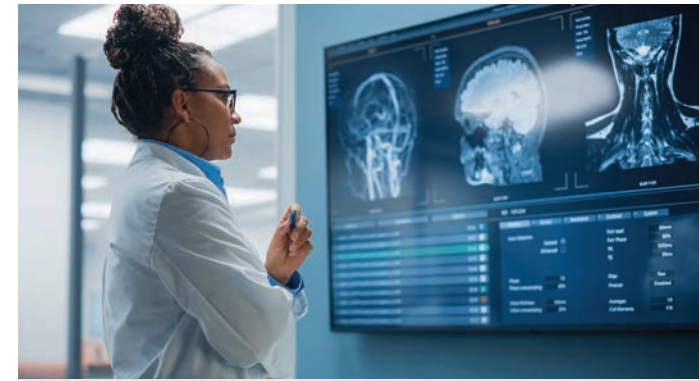
Radiologists

Automated tasks

Generative AI could potentially automate a vast majority of tasks, particularly those involving image interpretation like MRI, CT, and PET scans, as well as quality control of images.

Limited impact tasks

A lesser percentage of the role, including tasks like early-stage intervention procedures, patient counseling, and risk assessment, will likely remain human-centric.

Augmented skills

Radiologists will likely use Generative AI to assist in image interpretation, thus freeing up time for complex cases, procedures, and patient consultations.

New skills

Radiologists will need to become proficient in interpreting AI-analyzed results, understanding the limitations of AI-based diagnostics and communicating them to patients and medical staff.

Marketing Managers

Automated tasks

Generative AI can automate tasks like market research analysis, sales forecasting, financial evaluation of product development, and the assessment of marketing strategies, providing instant insights and recommendations.

Limited impact tasks

Human expertise remains crucial for tasks like staff hiring, performance evaluations, resolving legal issues, advising on market factors, and coordinating promotional activities, as they require nuanced judgment and interactive skills.

Augmented skills

Marketing managers will need to adapt to AI tools for analysis and strategic planning.

New skills

Marketing managers will need to monitor data privacy and ethical considerations concerning AI as well as strengthen relationship building and creative strategy skills to create differentiation in their campaigns.

See how IKEA is capitalizing on skills: This is humans and machines at their best

Going deeper into the skills required to complete a task will allow executives to get a clearer picture of the skills they lack today, the skills needed for the future, and the upskilling needed to ensure that people can harness the potential of Generative AI.

Swedish furniture retailer IKEA is doing just that. After the company launched an AI-bot called Billie, which has handled 47% of customer inquiries over the past two years, it began retraining almost 10,000 call center workers as interior design advisors.[32] The workers now provide design consultations, a suggested product list, a floor plan and 3D visuals. By reskilling employees and adopting Generative AI, IKEA was able to create a new revenue stream and broaden its offerings to customers. **IKEA's goal is to now provide lifelong learning opportunities to employees, knowing that technological change will be a constant in the future.**[33]

For a more in-depth look at a skills-based organization, Deloitte's Skill-based Organization Survey offers some insights.[34]

Skills-based organizations see results

Organizations that embed a skills-based approach[35] are

63%
More likely to **achieve results**[36] **than those that have not adopted skills-based practices**

Skills-based organizations are...

107%
More likely to **place talent effectively**

98%
More likely to have **a reputation as a great place to grow and develop**

98%
More likely to **retain high performers**

The great skills shift

Don't overlook the significance of human skills in an AI era.

The interplay between Generative AI and jobs is multifaceted. **By breaking down jobs into the requisite skills needed to achieve work outcomes, we can gain a clearer understanding of current skill gaps, future skill requirements, and the varying effects of Generative AI across different organizational sectors.** As Generative AI becomes increasingly embedded in the workplace, the landscape of skills will evolve—some will be augmented, others will be automated, and new skills will emerge. While there is obvious demand for roles that support the development, management, and governance of Generative AI, we see promising opportunities for Generative AI fluency as a family of skills that will be woven into work across functions and industries. These fluency skills include AI prompting (which should get easier as AI systems get better) and validating AI weaknesses that will be required in every department of an organization. More technical skills in LLMs, Generative AI, and image processing will also surge in demand.[37]

When we talk about Generative AI affecting jobs and skills, we can't overlook the significance of *human skills*. Emotional intelligence, critical thinking, leadership, and complex problem-solving are innately human attributes—all are challenging for machines to emulate.

In addition, we are also seeing the growing importance of inherently human capabilities such as empathy, curiosity, imagination, context awareness, and teaming. Our experience has shown that not only are people inherently better than machines at connecting with and understanding the variable needs of other people, and adapting to changing contexts, but also that investing in these human traits creates strategic advantage in the form of a more adaptive, growth-minded workforce that is critical to thriving in an environment of constant disruption.[38]

People remain at the core of a business's success.

Generative AI can help unleash the power of a combined human with machine workforce. As we've long seen, it is humans and machines, not humans or machines. This concept is in line with the "Age of With™," Deloitte's philosophy that *human-machine partnerships* will not only help automate and coordinate our lives, but also transform how organizations find talent, manage teams, deliver products and services, and support professional development.[39] **We've long since said, it's "humans *with* machines" and not humans or machines that will transcend leading organizations.**[40]

PART 3

Executive strategies to prepare organizations for change

Leading in a Generative AI era

In the world of Generative AI disruption, the role of leadership transcends traditional management. Leaders must seize the reins, steering their organizations with clear vision and strategic wisdom. It isn't necessary for executives to be Generative AI experts—what is important is to create and manage by a framework that focuses on and supports leadership's vital role in guiding Generative AI-induced changes. In this framework, leadership must consider the following:

Visibly commit to Generative AI strategy	Champion the benefits of Generative AI	Openly address concerns & resistance	Foster a safe environment for experimentation & learning	Implement guidelines & governance for Generative AI usage	Promote responsible use of Generative AI
Visible commitment to Generative AI's strategy is not just a signal of approval; it's a beacon of direction. Leaders must not only acknowledge the power of Generative AI, but also actively promote and integrate it into the organizational fabric. They must show that Generative AI is not a fleeting trend but a fundamental part of the future strategy.	It's up to executives to take the lead in illustrating the transformative impact of Generative AI on the organization. This includes highlighting success stories, real-world applications, and the tangible benefits that Generative AI brings. Their advocacy will create enthusiasm and drive engagement at all levels.	Resistance to change is natural, and Generative AI is no exception. Leaders need to address concerns head-on, engage in open dialogues, and break down barriers of fear or misunderstanding. Their openness not only builds trust but aligns the entire organization with the Generative AI mission.	Leaders must lead by example in creating an environment where innovation and experimentation with Generative AI are encouraged. They must recognize that mistakes are not failures but valuable learning experiences. A culture that celebrates exploration and learning accelerates Generative AI adoption and mastery.	The responsible use of Generative AI requires clear guidelines and governance. Leaders must define when and how Generative AI should be used within the organization and establish protocols, ensuring that Generative AI is not being used ad hoc, but with organizational support. Leadership in this area protects both the integrity of the organization and the ethical use of Generative AI.	Ethical considerations must be at the forefront of Generative AI deployment. Executives must lead initiatives to educate and enforce responsible use of Generative AI, ensuring compliance with laws and alignment with the organization's values and societal norms.

Barriers to readiness

Many organizations, from senior leadership to frontline workers, haven't yet embraced Generative AI's potential capabilities, let alone AI, leading to a noticeable "readiness gap." The lack of understanding and effective use of Generative AI also poses a challenge. And so does a lack of Generative AI-related skills in the workforce.

Deloitte's State of AI report (5th Edition) sheds light on the difficulties organizations face when integrating AI.[41] Among the challenges is the uncertainty around the skills needed for the future, making it challenging for organizations to plan. Legacy operational structures don't always support the dynamic needs of AI, hindering effective collaboration.

Furthermore, these barriers present hurdles to merging human skills with AI capabilities. The roots of this gap are complex, ranging from complacency, difficulty accepting change, ethical and governance concerns, and a reluctance to experiment with novel technologies too soon. These challenges could stem from the inherent fear of the unknown (regulations, etc.), an inclination to maintain the status quo, or simply a misunderstanding about the potential of AI. In the report, 50% of surveyed leaders cite the top challenges as: managing AI-related risk, lack of executive commitment, and lack of maintenance and post-launch support.[42] On the positive side, there is cultural optimism: 82% say AI increases job satisfaction and enhances performance.[43]

Organizations can fuel this optimism by promoting cross-organizational collaboration and establishing an AI center of excellence.

Compared to the slower adoptions of technologies like PCs or mobile devices in the past, Generative AI's rapid rise is distinct. Remember, one AI chatbot had a faster adoption rate than either Instagram or TikTok in the early days of its launch.[44] Now, there are several AI chatbots alternatives available to the public. **Generative AI's rapid rise means that organizations need to act now and prepare so they can fully benefit from the technology.** Leaders must shift from being mere observers to active participants, recognizing Generative AI's potential and ensuring their organizations are well-equipped for this new phase. It's critically important for leaders to fully understand how to prepare their employees for this new world. Ultimately, Generative AI could create a more profound, and rewarding, relationship between humans and technology, even more than the cloud, the smartphone, and the internet have done.

Technology change is not new, however, this transformation is particularly demanding because of its far-reaching impact on the workforce at large. The challenge becomes how to embrace the benefits this technology brings while preserving and enhancing our human potential.

Challenges are:
managing AI-related risk, lack of executive commitment, and lack of maintenance and post-launch support

50%

82%

Interviewed leaders say:
AI increases job satisfaction and enhances performance.

The path forward: Embrace new fundamentals in an AI-enabled world

As we stand on the precipice of a new era, defined by the augmentation of human intelligence with Generative AI, **the role of leadership has never been more crucial**. The transformative wave of such an invention is not just about technological prowess but about reshaping the very nature of how we work, think, and innovate.

To navigate this uncharted territory, executives must recalibrate their approach. This guide lays out three fundamental pillars for the journey:

Adopt a researcher's mindset to deeply understand and experiment with Generative AI

Co-create to redefine roles and harness the collective potential of humans and AI

Prioritize human outcomes to ensure that our AI-driven future is not just efficient, but also human-centered

The onus is on leaders to steer their organizations with vision, adaptability, and a deep commitment to human-centric progress.

Adopt a researcher's mindset for human-Generative AI integration

In the rapidly evolving landscape of Generative AI, traditional paradigms of work are being challenged. Leaders, now more than ever, must adopt a researcher's mindset, treating the integration of Generative AI not as a mere technological upgrade, but as an organization-wide experiment. This scientific method approach is pivotal to understanding and harnessing Generative AI's transformative potential. The sheer scale of these transformations makes this experimental approach a crucial beginning.

The introduction of such advanced AI can profoundly alter work dynamics, reshaping the cultural fabric of an organization. It's not merely about communication and training, but about nurturing the right cultural conditions and behaviors. The increasing accessibility and affordability of Generative AI tools mean that organizations of all sizes can leverage its power, leading to a broader spectrum of adoption.

By adopting the researcher's mindset, leaders can help ensure that the integration of Generative AI is strategic, human-centric, and adaptable. It's not just about automating tasks; it's about reimagining the very essence of work.

Five steps to Generative AI integration

1. Hypothesis formation
2. Data collection and analysis
3. Broad organizational experimentation
4. Iterative testing and feedback
5. Strategy refinement
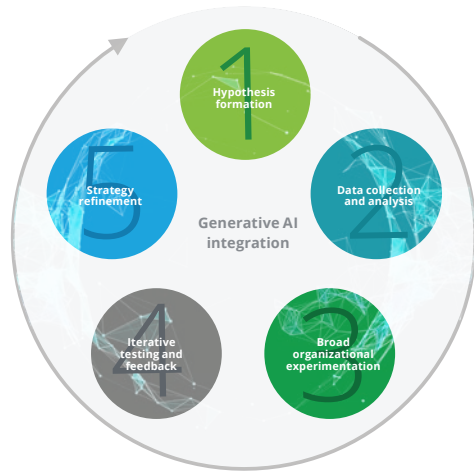
1 Hypothesis formation

Today's decisions about Generative AI investments are not mere technological choices; they are determinants of an organization's human capital strategy, and they carry societal impacts. Individual careers, and indeed the future of work itself, are contingent upon these strategic choices. They can catalyze a spectrum of futures, varying dramatically from one organization to another. **Just as a researcher begins with a hypothesis, leaders must start by asking critical questions about how their companies might make the transition. What roles will humans play once Generative AI is enabled?** How can we ensure that our workers understand that AI is here to complement, not replace them? How does our Generative AI strategy align with our overarching organizational purpose? And how can it positively impact performance? These questions form the foundation of experiments, guiding the direction of the integration process.

2 Data collection and analysis

Researchers rely on data to validate or refute their hypothesis. Such data collection involves a deep dive into every department, understanding the nuances of each role, and discerning the potential impacts of Generative AI. **A robust skills framework** can support this process by identifying current skills gaps, forecasting future needs, and monitoring the progress of reskilling efforts. Data can be utilized to understand which skills will be automated, which will be augmented, and which new skills will emerge. This data can inform targeted reskilling and upskilling initiatives, ensuring the workforce is prepared for the Generative AI transition.

However, many organizations lack visibility into the skills they have, and the skills they will need to achieve business outcomes. Conducting **skills assessments** improves visibility and can inform diagnostic conversations around where the organization should take its next steps on the skills journey.

3 Broad organizational experimentation

Training and reskilling will play a pivotal role in preparing the workforce for Generative AI. Organizations should strive for a balance between technical training, which equips employees to work effectively with Generative AI, and development of inherently human skills, such as emotional intelligence, leadership, and strategic thinking. The goal is to leverage a mix of internal and external training resources, mentorship programs, and hands-on Generative AI projects to ensure the workforce is well-equipped for the future. Giving employees safe spaces to practice with Generative AI can also help them learn.

A skills-based learning and development approach can address skill gaps and opportunities most relevant to specific domains of work. Workers who are trained in the concepts and applications of Generative AI, as well as supported to drive adaptive approaches to work, will be well positioned to identify and implement opportunities to augment their work with Generative AI.

4 Iterative testing and feedback

In the research world, experiments are rarely perfect the first time around. The process usually goes: Fail. Learn fast. Examine the shortfall via constructive feedback mechanisms and iterate. **The integration of Generative AI will involve trial and error and require an environment where innovation and experimentation are encouraged.** Mistakes are not failures, but valuable learning opportunities. Safe spaces are needed where employees can play and experiment with Generative AI. Organizations must create channels where employees can voice their experiences, concerns, and suggestions regarding Generative AI integration.

Such feedback is invaluable, providing real-time insights that can shape the organization's AI strategy. A culture that celebrates exploration and learning will accelerate the adoption and mastery of Generative AI.

5 Strategy refinement

After collecting data and feedback, researchers will draw conclusions and refine their hypothesis. The experimental Generative AI approach is no different. Generative AI strategies must adapt to an ever-evolving AI landscape, ensuring they remain aligned with the organization's purpose.

Adjusting skillsets and re-designing processes to accommodate the best machines have to offer is no small feat for any organization. **Unlike traditional tools, AI continually adapts and evolves,** often transcending set scopes and timelines. This dynamic evolution means that while there's significant bottom-up demand for Generative AI, and the tools might seem intuitive, it still requires mastery. Achieving fluency is crucial for maximizing their potential.

Co-create to redefine roles and harness human potential

In this transformative era, every member of the organization plays a crucial role, each contributing unique insights, expertise, and creativity.

The goal is to shape a future where humans and AI don't just coexist but actively collaborate and co-create. Organizations must set a solid foundation for innovation and share in defining how Generative AI impacts workers' roles, using the best humans and machines have to offer.

Address fears and uncertainties: Work should get better, not worse!

The introduction of Generative AI has understandably sparked concerns about job displacement. However, the narrative needs to shift from replacement to enhancement. Generative AI should be viewed as a tool that enhances human capabilities rather than replacing them. While AI can handle data-heavy tasks or repetitive processes, human skills like creativity, empathy, and complex problem-solving remain irreplaceable. By involving employees in the AI integration process, leaders can demystify AI, dispelling fears and highlighting its potential to augment human capabilities. By designing workflows where AI handles specific tasks, organizations can free up humans to focus on areas where they excel, leading to better outcomes and innovations.

The integration of AI into the workforce is not a unilateral decision made in boardrooms but a collaborative endeavor that involves every stakeholder. The term "co-create" encapsulates this spirit of collective innovation, emphasizing the need to work alongside employees to harness the potential of AI. This democratization around introducing Generative AI into the workforce dovetails with broad organizational engagement, leading to better experimentation and adaptation.

The bottom line? It's important to examine how Generative AI could impact the tasks within every department within the organization. It's even more important to **focus on what humans want and like to do to maximize job fulfillment and performance. Employees should be part of the process.**

Design an imperative for collaboration and experimentation

To begin, organizations must involve a broad swath of people from a variety of jobs in a collaboration-centric approach that draws people in and makes them part of the process. Such broad organizational engagement not only provides insights into real-world applications and potential challenges, but also fosters a culture of inclusivity and innovation. By democratizing the conversation around Generative AI, leaders can ensure that the entire organization is on board, ready to experiment, innovate, and adapt.

In Singapore, that's exactly what's happening. In late July 2023, a coalition of digital government agencies launched a joint initiative in partnership with Google Cloud to drive Generative AI capabilities in both the public and private sectors.[45] It's a whole-of-society approach to increasing Generative AI's capabilities and includes "innovation sandboxes" and mandatory workshops to rapidly train people in AI and bring Generative AI prototypes to production. The Singapore initiative goes far beyond consumer-facing chatbots—it will be deployed as a transformative "point solution" to raise productivity that will ultimately deliver new value to citizens.[46] They are trying to create an innovative AI-first culture that fosters innovation.

Organizations should engage employees in broad conversations about what the possibilities are and how it could help support their jobs. Once use cases are established, they should be prioritized from high- to low-level value and from quick and easy to implement, to longer, more complicated efforts.

Educate to empower

A significant knowledge gap exists among employees in understanding what AI truly is and what it can achieve. Organizations should invest in AI literacy programs, ensuring that all employees, irrespective of their role, have a foundational understanding of AI's capabilities and implications. This step isn't about creating technical AI experts but about fostering an AI-fluent workforce that can identify opportunities and challenges brought about by AI and can effectively use it across their work. Because of the fast-changing pace of AI, it won't be a one-and-done training scenario. Organizations must foster a culture of **continuous learning,** ensuring that employees are equipped to adapt to the changing dynamics of their roles and the broader industry. This involves regular training updates, mentorship programs, and a commitment to staying abreast of the latest in AI.

The journey of integrating Generative AI is not a solitary path but a collaborative expedition. It's about co-creating the future of work, where AI complements human efforts for better outcomes. By involving the workforce in this journey, organizations can help ensure a smoother transition, greater buy-in, and a future where the sum of human and AI potential is greater than its individual parts.

Prioritize human outcomes: Beyond metrics and efficiency

As AI automates routine tasks, there's an opportunity to elevate the human role in the workplace. Employees can transition from repeatable tasks and engage in more meaningful, value-driven work.

Which would contact center customer service agents rather be doing: administrative tasks such as inputting customer data into databases, responding to basic customer inquiries, and generating reports, or spending more time in one-to-one customer interactions? Generative AI can effectively liberate humans from the rote drudgery of administrative tasks. Fewer call center employees may be needed, and organizations may be able to shift people in those roles to other high-impact positions that can provide them with better opportunities and result in more value to the organization. It's not just about automating tasks but about reimagining roles to align with future requirements.

While operational efficiency is crucial, the true success of Generative AI integration lies in its impact on human outcomes. This shift is not just about enhancing organizational efficiency, but also about ensuring that the workforce finds meaning, value, and growth in their roles. There's a growing acknowledgment of the importance of human-centricity at work: 79% of business executives agree that the purpose of the organization should be to create value for workers as human beings, as well as for shareholders and society at large, and 66% are facing increased pressure to show their commitment to doing so, moving from rhetoric to results.[47]

Build a resilient and adaptive workforce

The integration of Generative AI will inevitably reshape traditional roles. Careful consideration of potential job displacement as required skillsets shift is important when redefining work. Workers will need to adapt. Take a software developer as an example. While Generative AI holds promise for automating aspects such as basic code development, real-time customer updates, system architecture planning, and even routine tasks within software lifecycle management, it won't automate everything that developers do. Tasks that involve a high degree of human judgment, such as supervision and team management, or complex decision-making such as data-strategy consultations, remain outside Generative AI's current purview. These elements not only require emotional intelligence, but also ethical discernment, making them less suited to automation.

As the developmental landscape shifts, so will the focus of developers—from routine coding to more strategic oversight roles such as system design and architecture. The realignment won't be just vertical, it will also be lateral, encouraging more interdisciplinary collaboration with Quality Assurance, Product Management, and DevOps as AI takes on more mundane tasks. This opportunity leaves developers free to engage in complex problem-solving and high-level decision-making. As for career development, the automation of more elementary tasks makes upskilling imperative,

potentially diversifying career paths into AI ethics, data science, and management roles.

The transition to re-defined roles is not without its pitfalls. While automation may improve job satisfaction by eliminating repetitive tasks, the incessant need for upskilling and adaptability can exert a toll on human resources personnel and employees alike. Social skills and collaborative aptitude will become premium attributes in this new work culture, balancing the scales between technological efficiency and human resilience.

As with any technological revolution, work will change and organizations that focus on upskilling and reskilling to create new value will have a more effective long-term strategy. Organizations must prioritize building a workforce that's not just technically skilled but also resilient, adaptive, and ready for continuous learning.

A resilient workforce is one that has clear expectations, understands its role in the bigger picture, and is empowered with the autonomy to manage their tasks.

The Generative AI-driven world demands flexibility and scalability. Sixty-one percent of business executives say new technologies such as automation and artificial intelligence (AI) that require new skills will be a primary driver of their organization adopting a skills-based approach.[48] Forward-thinking organizations are now eschewing rigid job titles in favor of assembling teams based on skills, capabilities,

and the desired outcomes. Why? New technologies and automation often take over tasks. **Instead of reassembling remaining tasks into newly reshaped jobs, top organizations would prefer to organize work to enable people to continuously flex as needed.**[49] Such an approach not only leverages the inherent strengths of a diverse workforce but also helps ensure the organization is primed for future changes. In this new paradigm, the organization's design is centered around dynamic capabilities and targeted outcomes rather than static roles, ensuring sustained relevance and agility.

In a recent survey by Deloitte, organizations that are skills-based pioneers are achieving better business results than those with jobs-based practices.[50] This finding indicates that those who've adopted skills-based approaches to significant extents are building organizational models that better align to their organizations' needs—and workers' expectations. The importance of worker satisfaction in this process cannot be undermined.

After all, when asked what makes a great company, most leaders respond that it's the people. Rarely do they mention it was the invention or the machine. There's always human prowess behind it.

Measure sustainable performance

Recognizing technology's potential to enhance productivity, it's vital to reassess what "productivity" means. Traditional metrics like hours worked and revenue per employee, born from the Industrial Revolution, suited an era of mass production. As we transition into a Generative AI era, there's an anomaly: humans can work smarter instead of harder.[51]

As organizations begin to embed Generative AI technology into human workflows, they need to reconsider productivity and instead measure human performance, emphasizing both business and human outcomes. But business outcomes alone are not enough to create measurable impact. Human outcomes should be part of the equation. We call this human sustainability;[52] the goals and objectives that help an organization's people thrive physically, emotionally, financially, and professionally.

In a Generative AI era where people are anxious about job elimination, it's essential to prioritize human outcomes like well-being, job satisfaction, personal growth, and skills development. Organizations should consider shifting from short-term productivity metrics to sustainable performance indicators. Such evaluation indicators involve examining both tangible outputs and intangible contributions, such as innovative solutions, interpersonal relationships, and organizational culture impact.

The future of work of Generative AI requires a shift from merely quantifying the employee to quantifying activity across the organization, unlocking new value for all stakeholders. This human-centric approach, underpinned by responsible data use and shared value creation, promises a more meaningful and prosperous work environment for individuals, teams, and society at large.

Creating a human-centered AI-augmented organization: A checklist for getting started

Hypotheses
- Define clear questions about AI's role.
- Align AI strategy with organizational goals.

Data analysis
- Identify tasks best suited for humans.
- Determine tasks for Generative AI optimization.

Iterative testing
- Foster a culture of experimentation.
- Learn and adapt from trial and error.

Feedback mechanisms
- Establish channels for employee feedback.
- Continuously refine AI integration based on feedback.

Clear communication
- Reduce concerns.
- Promote AI's role in enhancing, not replacing, jobs.

AI literacy
- Promote Generative AI as a tool to augment human capabilities.
- Roll out foundational AI training for all staff.

Innovation sandboxes
- Create environments for hands-on AI experimentation.

Broad conversations
- Engage diverse teams in AI strategy discussions.
- Brainstorm transformative AI solutions.

Human metrics
- Prioritize well-being and job satisfaction metrics.
- Move beyond traditional output-focused metrics.

Symbiotic workflows
- Design workflows where AI and humans work in tandem.

Resilient workforce
- Champion continuous learning and adaptability.
- Prepare teams for the evolving AI landscape.

Generative AI is a human capital story every bit as much as a technical advancement story. Humans create technical advancement to do things in a better way. Generative AI is no different, but it's not perfect. Deliberate, thoughtful, and ethical steps should be taken to ensure that business, employee, and societal impacts are carefully considered. While we don't know exactly where the technology is poised to take us, we do know that Generative AI will reshape work as we understand it today. **Human capital is an organization's most important capital.**
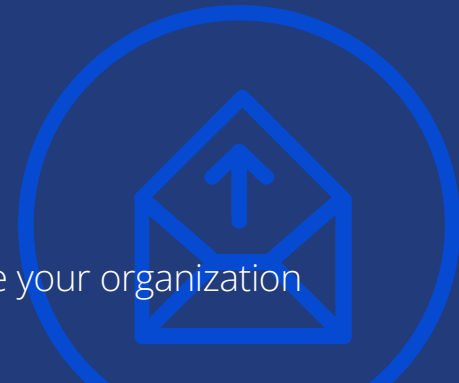
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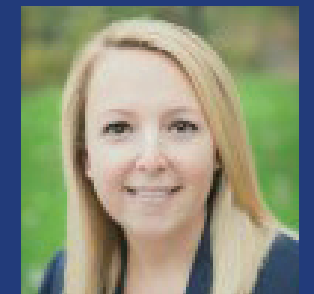
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