



Disruption by design

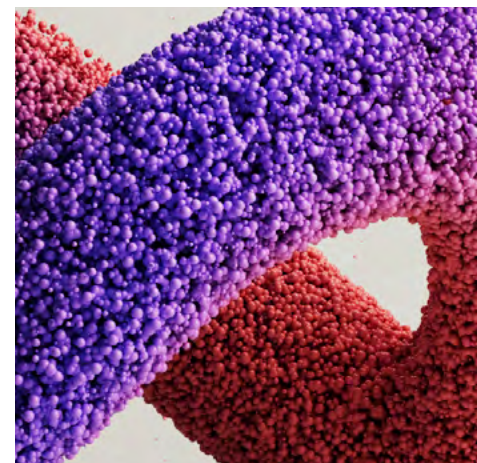
*Evolving experiences
in the age of generative AI*

How IBM can help

IBM iX® is your global experience design partner within IBM Consulting. Working at the intersection of strategy, design and technology, we help the world's most influential companies create better experiences, products and services that reinvent their relationships with customers and employees. With experience capabilities and partnerships spanning strategy, design, development and managed services across a global network of 60 studios, our human-centered approach to business design helps accelerate innovation and transformation at scale. For more information, visit <https://www.ibm.com/consulting/ibmix>

The images in this report were developed using generative AI.


As part of our traditional concepting phase, IBM IBV designers arrived at the idea of using particles to communicate the relationship between data and the design of experiences. The designers used Adobe Firefly to generate images of the particle shapes, and then translated those images into 3D art. The time saved using this approach was substantial. What typically would have taken four weeks to produce was completed in just one.



Generative AI is revolutionizing experience design—but it comes with risks. To avoid high legal, financial, and brand costs, it must be adopted with the proper vision, strategy, and guardrails.

Key takeaways

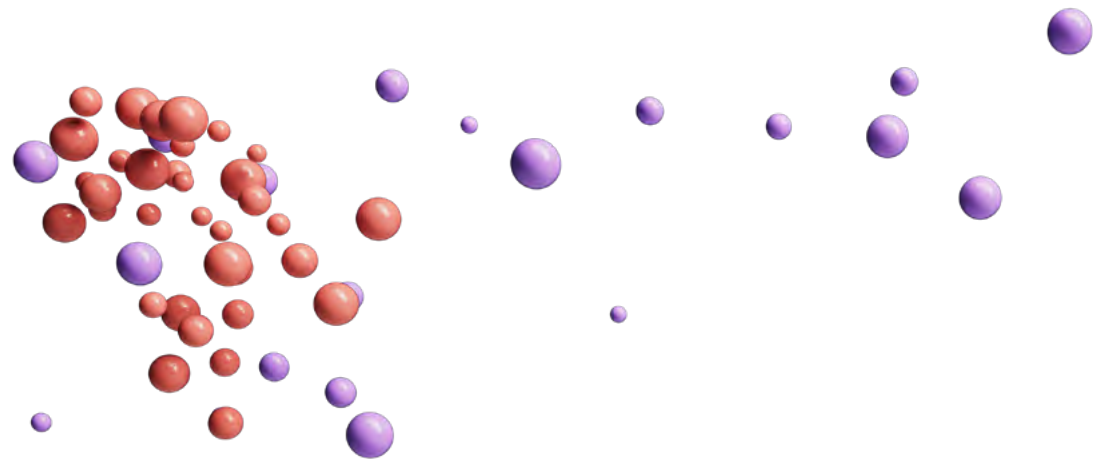
- AI is happening for designers, not to designers.
Designers creating human-centric experiences need to help train the next generation of AI models, and pressure will be intense to develop concepts that break the mold of homogenous generative AI outputs.
- Personalizing experiences at scale is finally within reach, but risks must be addressed.
Comprehensive change management is needed to champion generative AI experimentation through controlled pilots. Diverse design teams must be included to maintain authenticity, personalize high-quality experiences, and uphold brand standards.
- Expanding DesignOps will be critical for responsible generative AI adoption.
DesignOps will be essential to develop guidelines for ethics, bias mitigation, design standards, prompting guardrails, secure tools, quality standards, AI-enhanced methods, and measurement.

The background of the entire page is an abstract composition of thousands of small, semi-transparent spheres. These spheres are primarily purple and red, with some pink and orange tones. They are arranged to form a thick, winding path that starts from the bottom left, curves upwards and to the right, and then curves back towards the top right. The path is composed of many small spheres packed closely together, with many more individual spheres scattered throughout the light gray background, creating a sense of depth and movement.

Promise, purpose, and pitfalls

Experience design
meets generative AI

With unprecedented speed, generative AI has morphed from a media buzzword into a boardroom imperative. More than one-third of organizations have moved past experimentation and are piloting and implementing generative AI across the functions responsible for creating experiences, including marketing, sales, commerce, and product and service design. Customer support has adopted generative AI most aggressively, with nearly two-thirds of organizations well on their way to operationalizing it for a variety of purposes, including agent assistance as well as direct customer engagement.



The impact on the design community is profound.

57% of survey respondents—chief marketing officers (CMOs), chief creative officers, chief customer officers, creative directors, and designers—believe generative AI is the most disruptive force impacting how they will design experiences going forward. This outpaces other considerations—even those as serious as cybersecurity threats, changing regulations, and sustainability issues.

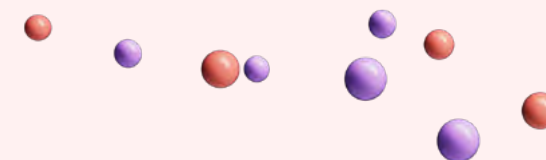
Because organizations see so much potential in generative AI to boost customer satisfaction and scale productivity, they are moving forward rapidly, even as designers wrestle with numerous new challenges raised by this technology. For example, while executives are rightly concerned about biases seeping into foundation model training and the accuracy of generative AI outputs, very few organizations have instituted overarching AI governance or ethics councils. In a troubling revelation, ethics and empathy came in dead last when respondents were asked which design strengths will be most in demand a year from now.

Another misalignment merits attention: eight out of ten executives predict the risks associated with generative AI outputs will require more designer involvement. And yet, at the same time, 70% of executives expect generative AI will enable them to do more with fewer designers. Designers may be in denial—only 57% think this outcome is likely.

Responding to intense pressure to adopt generative AI, and recognizing the compelling benefits this technology offers, executives and design teams need to work together on a way forward. This means focusing on where generative AI offers the most value, building guardrails to protect the brand, and gaining customer trust.

To better understand how generative AI is impacting experience design, the IBM Institute for Business Value (IBM IBV) partnered with Oxford Economics to conduct a global survey of 2,000 C-suite leaders, creative executives, creative managers, and designers (see “Study approach and methodology” on page 41).

These research insights will show what leaders can expect from generative AI and where barriers continue to inhibit adoption. This report also provides guidance to optimize the value of generative AI and empower designers to deliver on the promise of this technology to create the personalized experiences customers want and expect.



Eight out of ten executives predict the risks associated with generative AI outputs will require more designer involvement.

Generative AI and experiences

The business case for acceleration

Good experience design drives business success. Survey respondents who have been recognized for superior product or service design report a 42% higher rate of revenue growth than other organizations.



It is not surprising that C-suite executives have set improving customer experience as their top business priority for the next two years.¹

While this aspiration is not new, generative AI—more than any other recent technology—means organizations may finally achieve their goal of hyper-personalization and accelerated production workflows at scale. Respondents say that the transformational benefits coming from generative AI will relieve the pressures that most impact how experiences are designed today.

Early applications of generative AI into the design process are already radically accelerating the time needed to complete projects. For example, by using generative AI in Design Thinking sessions conducted by an IBM iX team in Europe, the team was able to deliver results in two days instead of a normal turnaround of two weeks.²

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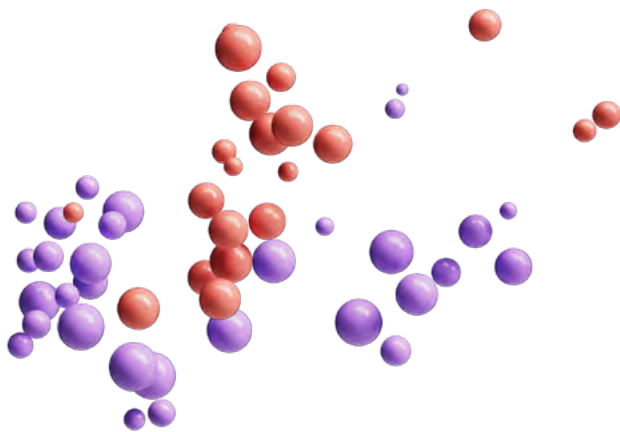
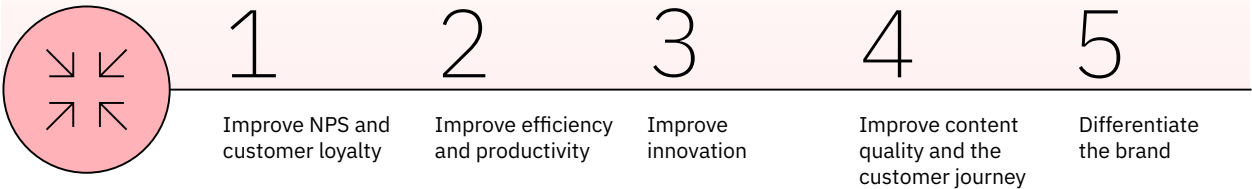
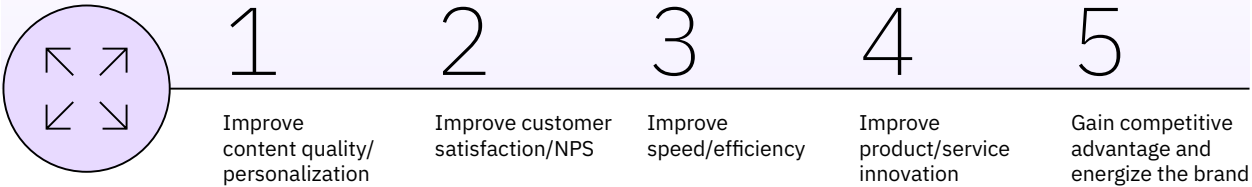


FIGURE 1
Reducing the stress
Generative AI addresses the top pressures placed on experience design

Top 5 pressures impacting experience design



Top 5 benefits of generative AI



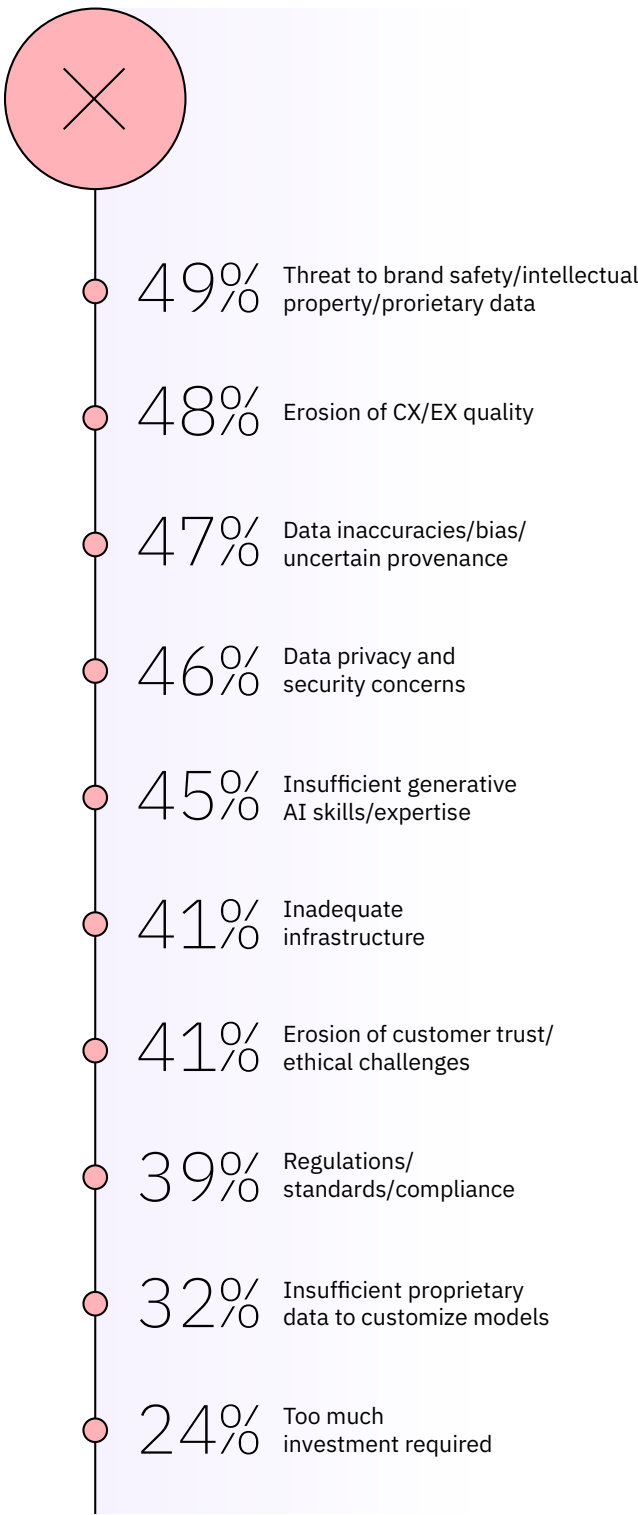
Where the generative AI bandwagon hits roadblocks

While the embrace of generative AI is enthusiastic, practitioners may encounter implementation barriers down the road. Threats to brand safety, intellectual property, and proprietary data top the list.

FIGURE 2

Many potential roadblocks

Organizations are concerned about the barriers they could face when using generative AI to help design and deliver experiences



Respondents also worry about data inaccuracies, biases, and uncertain provenance. All these apprehensions contribute to the troubling possibility that, instead of improving experiences, generative AI could have unintended and deleterious effects, leading to an erosion of quality.

What is notable about this list is how no single barrier stands out. Rather, organizations are struggling with a wide range of issues carrying similar weight, which could overwhelm executives. However, there is one set of concerns that might make organizations apply the brakes—ethics, bias, trust, and lack of governance. In a recent IBV survey of CEOs, 72% acknowledged they would step back from AI efforts if they thought the benefits could come at an ethical cost.³

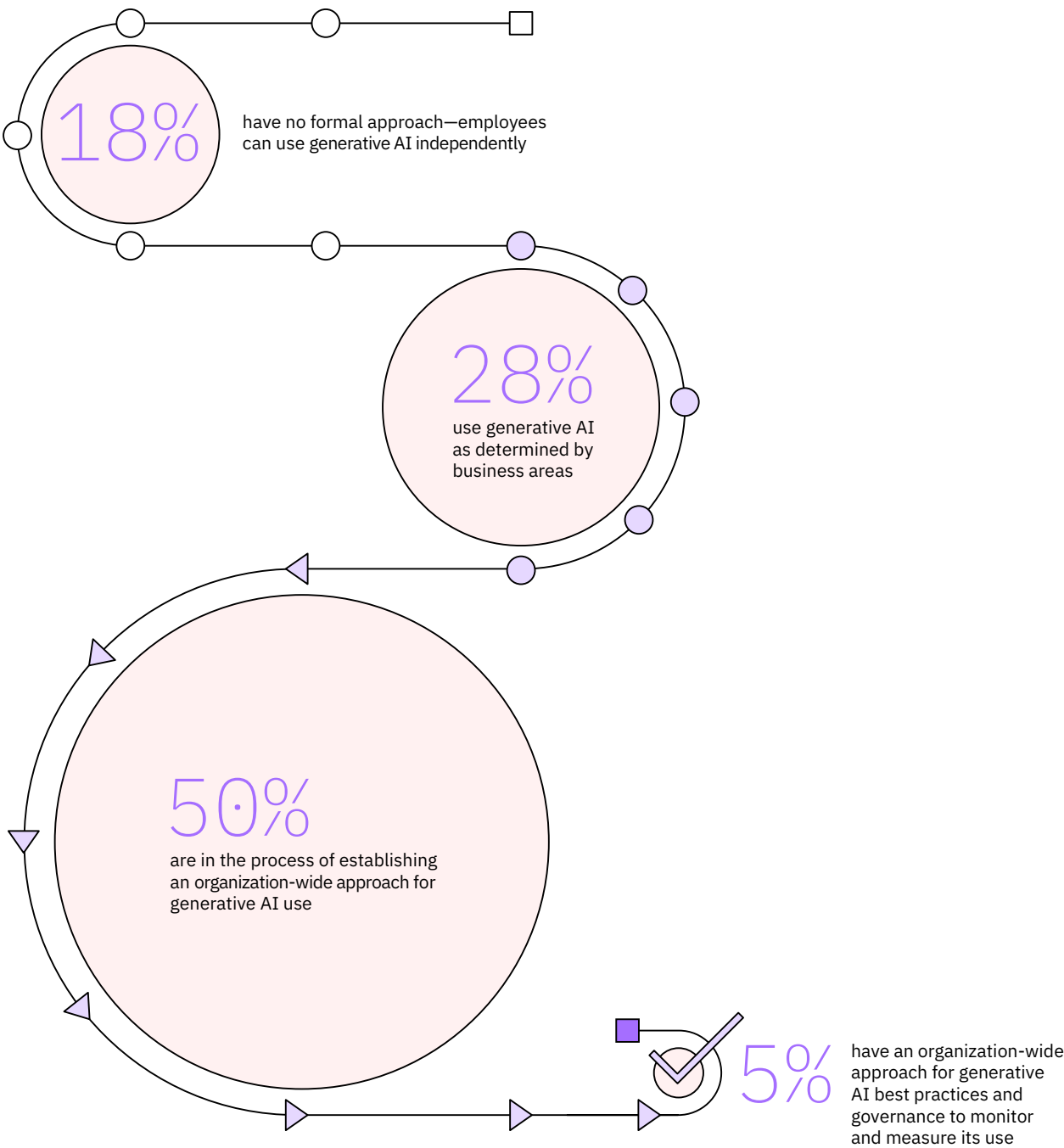
However, today, these assurances seem mostly hypothetical. Despite the barriers—or perhaps because there are so many—the generative AI horse is leaving the barn before it is saddled up.

Organizations are struggling with a wide range of issues carrying similar weight.

FIGURE 3

Across the adoption spectrum

How organizations are managing the use of generative AI

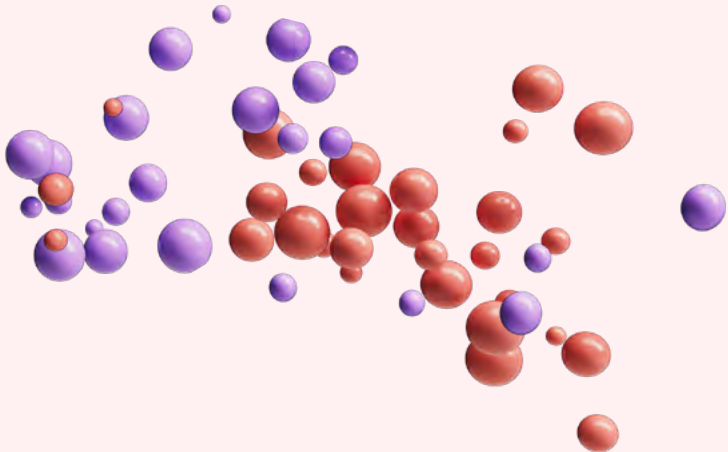


Half of organizations say they are in the process of establishing an organization-wide approach for governance to manage and monitor generative AI use, but only 5% have put this approach into practice. 28% have delegated oversight to individual business units, which could spell trouble down the road with fractured policies, siloed data, and conflicting agendas.

Meanwhile, almost one in five (18%) prefer giving employees free rein to use generative AI without direction. This approach could speed AI adoption and encourage innovation, but carries significant risk if missteps damage the brand.

With so many organizations sidestepping efforts to integrate generative AI strategically and holistically, these findings are alarming, but not surprising:

- **More than a third (34%)** admit they don't have an effective process for reviewing generative AI outputs and resolving issues.
- **43%** have yet to establish a generative AI ethics council to address the thorny new challenges that are guaranteed to arise.
- And, shockingly, **only 26% are confident** they have a comprehensive plan for responding to and resolving privacy and security breaches related to generative AI.



Transforming experience workflows

Despite the risks, many organizational functions responsible for designing experiences across the customer journey are starting to embed generative AI into their workflows. While the numbers using it today may seem relatively modest, adoption is expected to explode by 2025.



Customer support, which has a long track record deploying traditional AI and natural language processing to engage customers, is the earliest and most aggressive adopter. 48% of organizations report they are already using generative AI to generate dialogue for their human agents. By the end of 2024, more than two-thirds (69%) expect they will be doing this.⁴

Marketers are also jumping in with both feet. 28% are currently using generative AI to help with customer segmentation. Almost as many—23%—are adopting it for workflow automation and 22% are using it for customer and marketplace research. These percentages are expected to swell to 70% or more within a year.

Sales activities focused on driving engagement and conversion are using generative AI today to create and manage social interactions (21%), and support sales strategy and forecasting (20%). By 2025, our respondents expect the number of organizations deploying generative AI for these tasks to more than triple.

Adoption is coming even faster for those creating customer-facing, text-based chatbots. Not surprisingly, at 36%, this is one of the most familiar and popular generative AI use cases today. That number soars to 81% less than a year from now. Having an easy, natural language voice conversation with a bot is typically portrayed as the future for generative AI-driven experiences. Today, 25% say they are using it to engage customers. By 2025, nearly 70% plan to do so. And this is not just for customers. Employee-facing chatbots for text and voice are also in play.

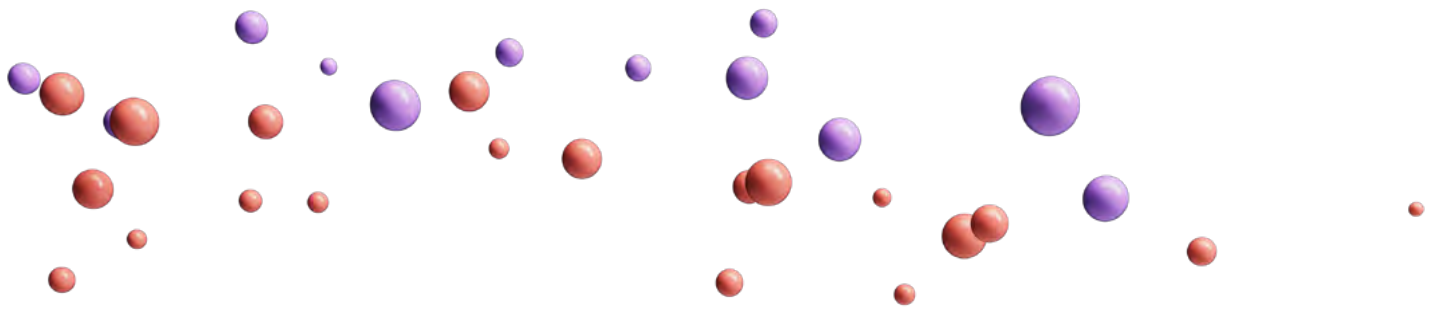
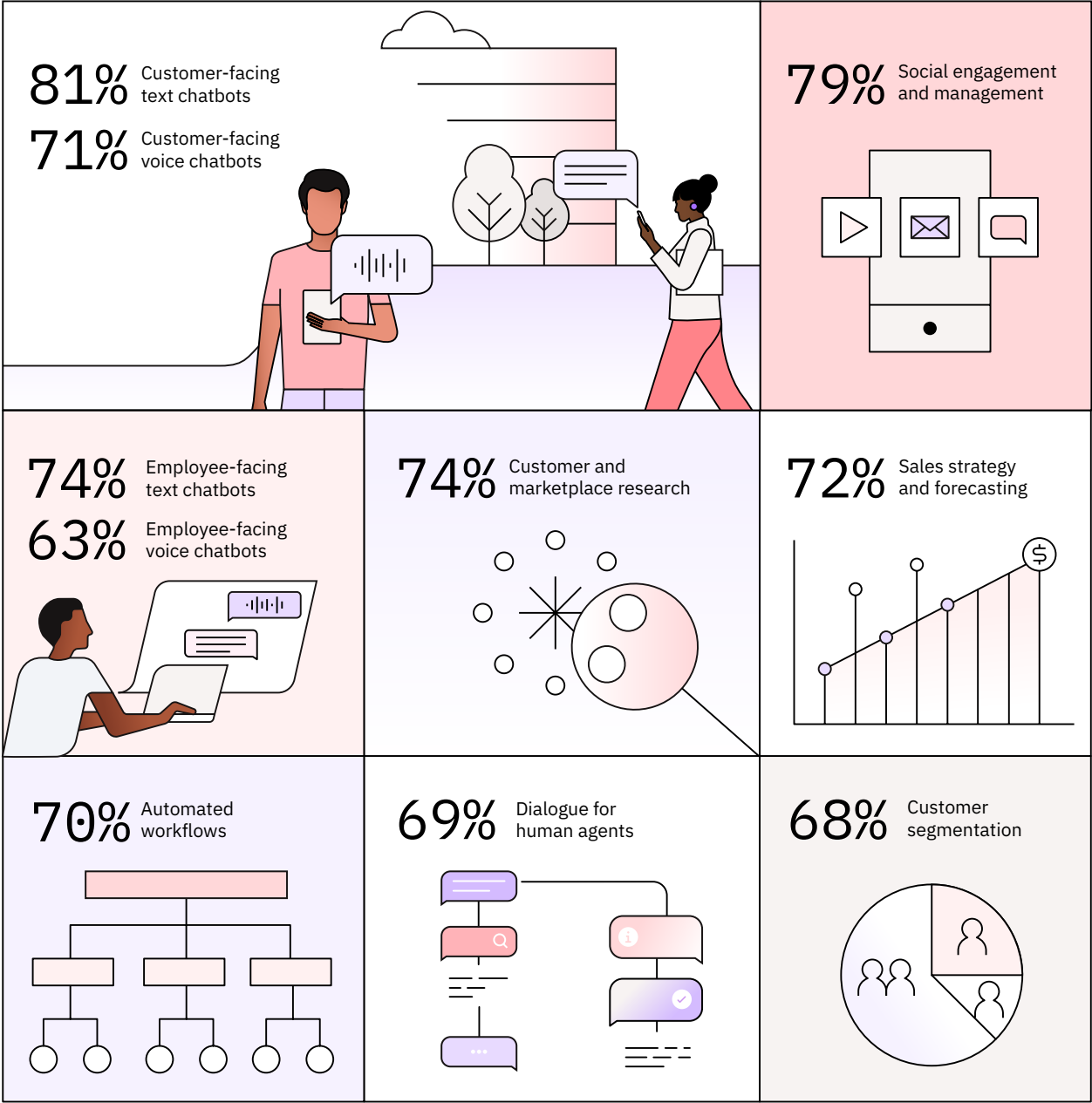


FIGURE 4

Generative AI use cases

By 2025, the majority of organizations predict they will use generative AI to enhance experiences



Percentages represent a combination of organizations already using generative AI for these use cases and those who report they will use them by 2025.

When ChatGPT and other open generative AI systems went mainstream in 2023, content creation in all formats—text, imagery, video, audio—were magnets for generative AI buzz. This is Ground Zero for content designers. Given all the attention—and the relatively low barrier to entry—we expected at this point to see more aggressive adoption of generative AI for these use cases.

Yet, this appears to be one of the few areas where organizations have been somewhat more cautious. And rightly so. Concerns over quality and trust, as well as legal and financial considerations, have caused these applications to lag behind others. Nevertheless, all these experience-related use cases impact customer engagement, either directly or tangentially, and carry risks that need to be mitigated.

FIGURE 5

Content creation—a more tempered approach

Organizations are a bit more wary about using generative AI to produce and manage content and code



Case study

Transforming marketing by streamlining operations and personalizing experiences

IBM Marketing andAdobe⁵

To deliver more personalized, user-friendly experiences, IBM wanted to improve cross-channel marketing through a consolidated approach. But the numbers were daunting: 2,000 marketers, 100 products, 175 geographies, 70 platforms, and 10 million data sets.

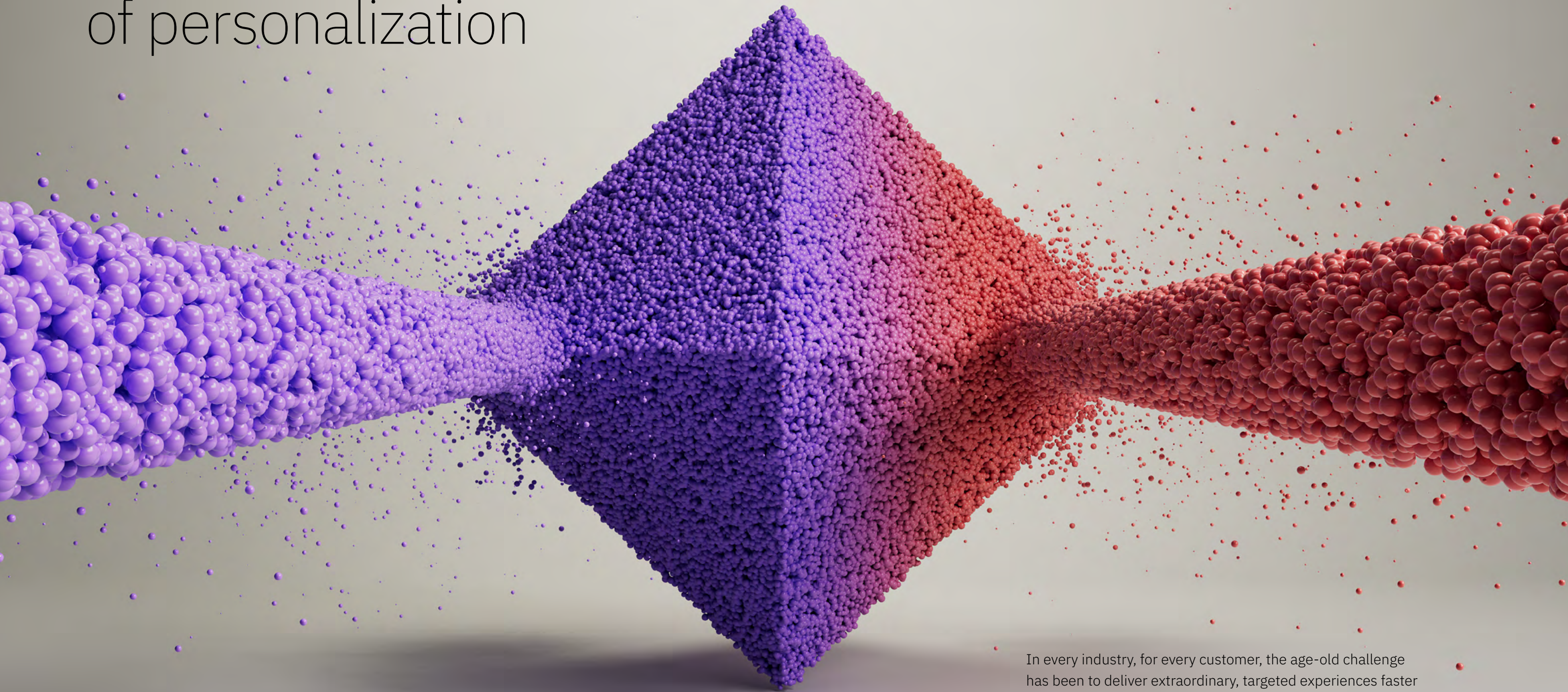
Starting in 2021, the first phase of the project focused on streamlining complex data structures and fixing disjointed marketing technology stacks. Partnering with Adobe, IBM simplified the operating model and enabled the implementation of industry-leading platforms. Results included \$300 million in cost savings, a 50% reduction in labor costs, and a 75% faster time to market.

The following year, the second phase integrated people, processes, and technology with Adobe Workfront, a work management application that helps knowledge workers manage the entire lifecycle of work in one place. This integration led to a 700% increase in product-led growth, translation coverage from 20% to 100%, and significant reductions in assets and web pages.

In 2023, the third phase explored AI and automation and launched a content creation pilot with Adobe Firefly, an AWS-powered tool that offers new ways to ideate, create, and communicate using generative AI. This resulted in 26 times higher engagement for Firefly-generated assets, an 80% reduction in content creation spend, and a 77% decrease in email creation time.

Other AI and automation use cases included automated channel delivery, robotic machine translation, and performance-based recommendations. By focusing on delivering personalized experiences, Adobe has helped jump-start IBM’s ongoing marketing transformation.

Using hybrid AI models to deliver the promise of personalization

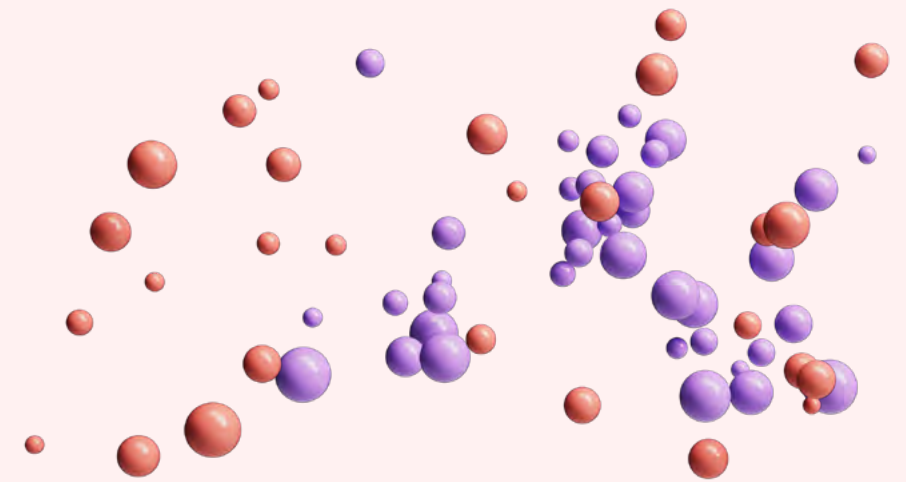


In every industry, for every customer, the age-old challenge has been to deliver extraordinary, targeted experiences faster and more cost-effectively—affordable personalization at scale. Generative AI may finally make this possible, and it is the top reason why most organizations—63%—want to invest in it.

What is missing from public models is the rocket fuel of personalization

Currently, half the organizations that use generative AI access publicly available foundation models such as ChatGPT and DALL-E. At 51%, nearly the same percentage are working with open-source models such as Midjourney. Almost one-third—31%—are taking advantage of models embedded in popular platforms, such as Adobe Firefly. Easy access, relatively low cost, and fast start-up times make these solutions very attractive for organizations that want to move quickly.⁶

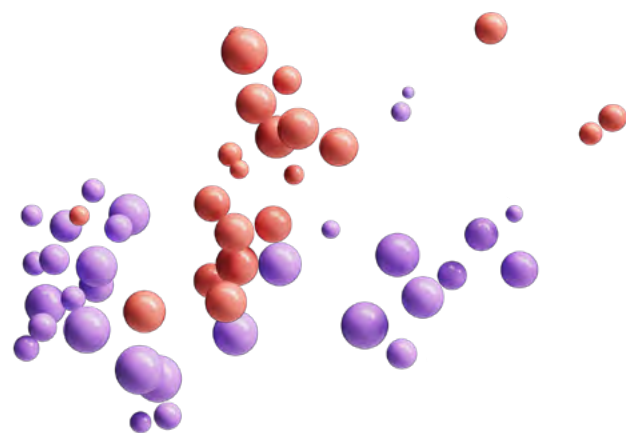
However, what is missing from public models is the rocket fuel of personalization—the hard-won, granular data that companies glean from every customer and employee interaction. This is the data that can enable the development of on-brand, hyper-personalized experiences with speed, scale, and specificity.



Because of the time and effort required to build proprietary models, fewer organizations are doing this today—only 24%. But this is changing quickly—72% say they will use proprietary models by the end of the year, and practically all—99%—expect to build their own models after 2024.⁷ This is where personalization hits paydirt. Without well-tuned and secure proprietary models, efforts to deliver individualized experiences at scale will fall short of expectations.

2024 could be the year when hybrid models hit their stride. By combining the speed and convenience of open or public foundation models with the differentiation and security of private models, hybrid could be the answer for many organizations. This would be an investment well spent if organizations want to avoid the homogenization of their experiences or the risk of misinformation that could derail brand trust.

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Generative AI's impact on design talent



Executives and designers alike predict that the core design skills essential for creating experiences today will be just as necessary in 2025, with even more demand for research skills, UX skills, and coding. This is despite the fact that generative AI can put these skills in the hands of anyone.

FIGURE 6

Prioritizing experience design skills

Nearly all the design skills organizations say are most important today will be needed in the near future

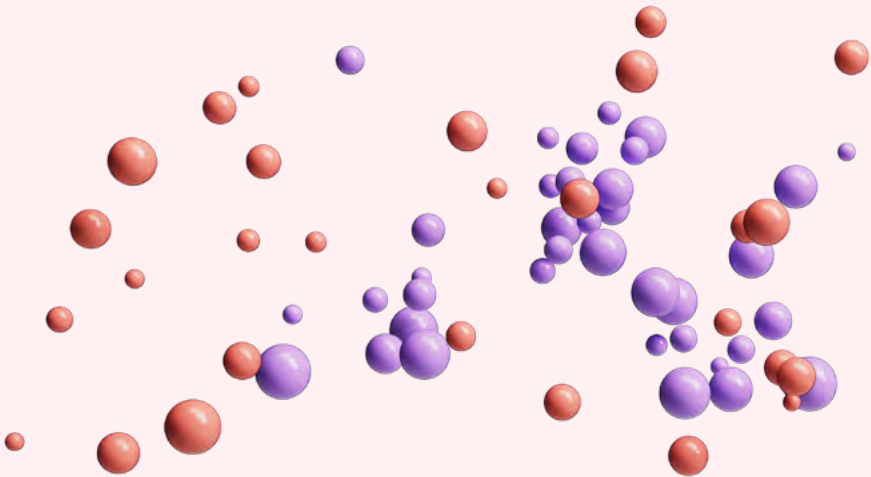


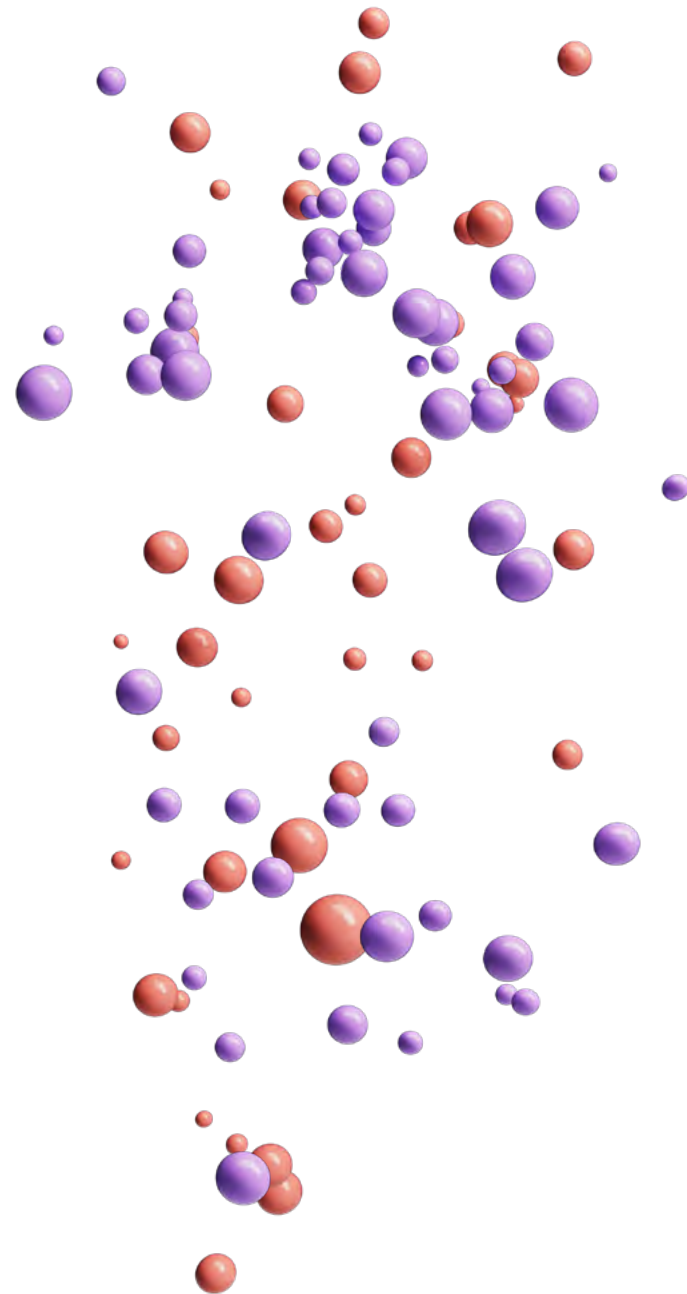
While easy access to generative AI will likely democratize many design activities, the need for top talent to ensure quality outputs will still be paramount. In fact, 82% of executives agree that the risks posed by generative AI means designers’ project involvement will increase. And almost as many—80%—expect designers will need to play a central role in the creation of generative AI foundation models.

But there’s a caveat.
A big one.

Even though the demand for good designers looks rosy, 70%—the vast majority of executives—also expect that the productivity gains made possible by generative AI will enable them to do more with fewer designers. Creative managers and designers are less inclined to agree—just 57% think this is likely.

Copywriting is the only skill that respondents predict will decline in importance over the next year, but copywriting may just be the “canary in the coal mine,” with creatives not yet fully grasping how generative AI will upend other skills such as visual design, video production, and creative direction. Tellingly, 75% of all respondents foresee a fundamental shift in the designer’s role: from content creator to content curator.





In this scenario, generative AI becomes the digital assistant that enables designers to work faster and more effectively than they could on their own. And the scope of their role will expand. What this means is, strong creative talent will still be essential, but projects may only need one AI-enabled generalist versus four specialized designers.

The bottom line: generative AI will not replace people, but the people who use it will replace those who don't.

In addition to “hard” design skills, it's the human-centric sensibilities that accomplished designers apply that make them especially valuable in the move to more machine-driven experiences. The strengths that the majority of businesses predict will be most coveted a year from now are creativity and decision-making, at 63% and 62%, respectively.

However, it is disheartening to see how few respondents emphasized the need for ethics (29%) and empathy (21%). This is a serious blind spot. Human empathy for end users, whether they are customers or employees, is a hallmark of winning experience design. Keeping a human-centric lens focused on the design of generative AI applications is mission-critical if organizations want to engage people with a human touch that inspires trust.

The bottom line: generative AI will not replace people, but the people who use it will replace those who don't.

Case study

Deepening fan engagement with generative AI-powered content creation

US Open Tennis Championships⁸

Every summer, the world's top tennis players compete at the US Open Tennis Championships in Flushing, New York. The event attracts over 15 million global tennis fans and has built a reputation for delivering innovative, cutting-edge digital experiences for fan engagement.

With so much lightning-fast action happening on the tennis court, the challenge has always been to keep pace, while capturing and analyzing more than seven million data points throughout the tournament. It's a lot to ask from a relatively small editorial team, which is why the US Open uses a suite of generative AI tools to transform tennis data into insights and deliver original content on its mobile app and website.

For AI commentary, the US Open built a large language model trained on player, match, and unstructured media content—a model that can process the unique language of tennis. In addition to enhancing the digital experience, AI models scale the productivity of the editorial team by automating key workflows. The time required to produce highlight videos has been reduced from hours to less than 15 minutes. Over the course of the 2023 tournament, match highlights with AI commentary were viewed more than 3.8 million times.

Additional AI models were built to power other popular features. For example, fans can see which players have the most momentum by checking out the “Power Index” that shows players with the highest likelihood to win. They can even uncover anomalies and potential surprises with an “AI Draw Analysis” feature.

Making progress with DesignOps and managing change



Just as DevOps benefits software developers, DesignOps orchestrates and optimizes people, processes, and craft to amplify the impact and value of design at scale.

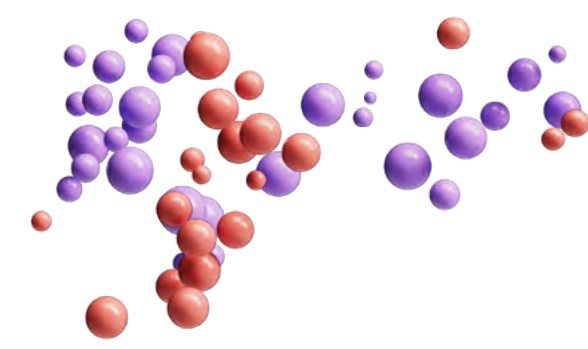
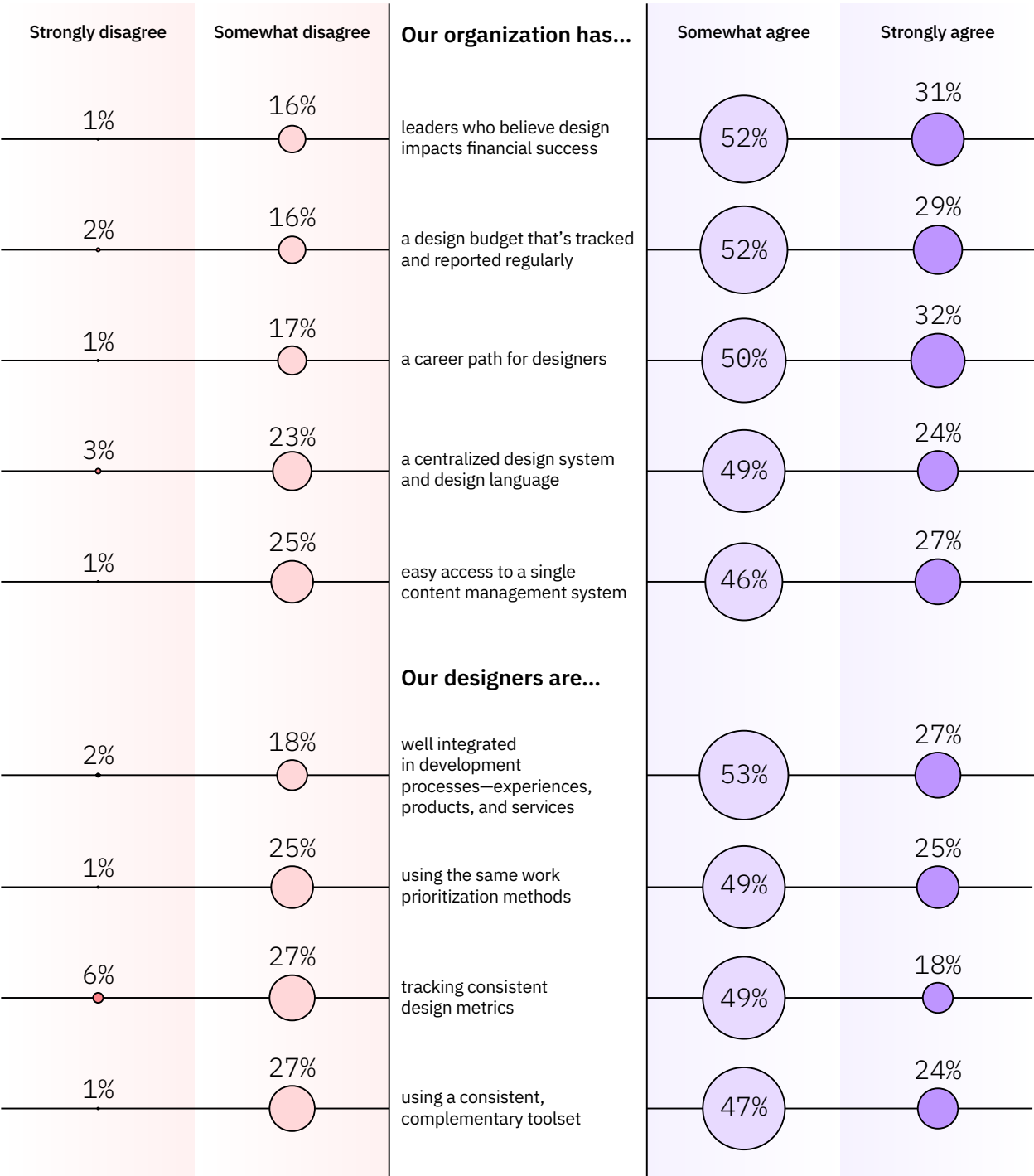


FIGURE 7

DesignOps practices

Few organizations are fully embracing the rigor, consistency, and support that DesignOps practices can offer



DesignOps provides the structure, consistency, rigor, and support for an organization’s multi-disciplinary design community and is especially critical during transformations with the scope and impact of generative AI.

However, most organizations are missing the DesignOps moment. Only about a quarter of respondents confidently assert they are following some of the leading design practices that typify what DesignOps oversees. Most organizations agree they do these things to a certain extent, but clearly there is much room for improvement.

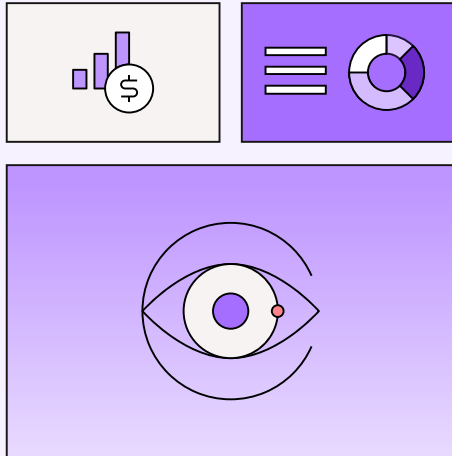
DesignOps will help organizations better manage the changes ushered in by generative AI. They will also have the means to help reduce the potential risks associated with AI-driven experiences. Consistent methods and standards can be set for generative AI tools and prompts, and principles can be established for bias mitigation, accessibility, data hygiene, and sustainability.

DesignOps-enabled organizations can create procedures for quality control and develop design systems and guidelines for AI outputs for differentiation and brand safety. They can help ensure designers are properly trained to incorporate generative AI in their workflows. And they can define a clear, comprehensive strategy for scaling generative AI into the design of customer and employee experiences—something only a third of organizations have fully implemented.

DesignOps is uniquely equipped to orchestrate an actionable change management strategy that can enable the design community to lead an organization’s generative AI transformation, while providing the safeguards that can keep adoption across the enterprise on track.

Most organizations are missing the DesignOps moment.

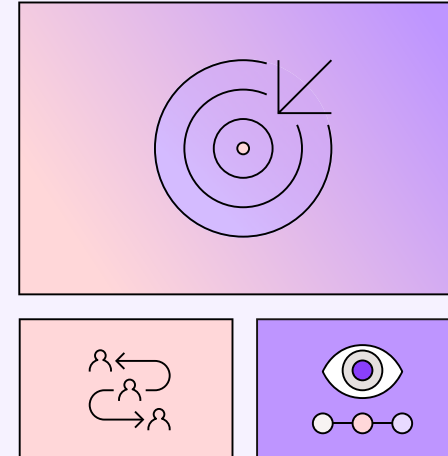
Action guide



For executives:

Establish a DesignOps program that serves the design discipline and elevates design to become the “connective tissue” for your organization’s generative AI transformation.

- *Set the North Star for the infusion of generative AI across the business.* Inspire corporate confidence and serve as an example for the enterprise by building a DesignOps program that focuses on experience design quality control, optimized via AI workflows in a responsible, measurable way. Governance and procedures related to generative AI prompting standards, model training, and fine-tuning are part of DesignOps, as well as crisis management if experiences go awry. Education and career path guidance also help designers successfully incorporate generative AI into workflows.
- *Expand designers’ role from “voice-of-the-user” to “voice-of-the-planet.”* Form an AI ethics design council and establish design principles and guidelines for bias mitigation, accessibility, data hygiene, and sustainability.
- *Combat creative homogeneity by training designers to become mixologists of generative AI models.* Commission designers to champion proprietary models that incorporate brand style guidelines to create differentiation and brand safety.

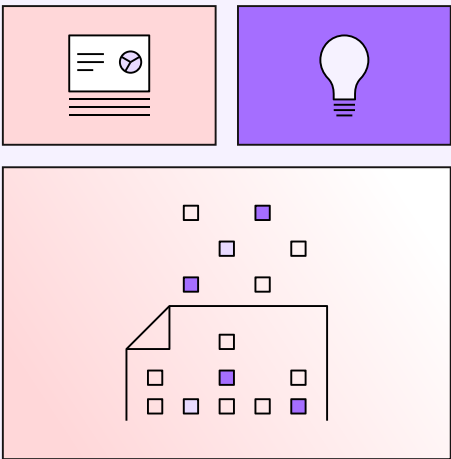


For creative managers:

Build a culture that values curiosity, transparency, and empathy.

- *Make people, not technology, central to generative AI strategy.* A work environment rooted in empathy for colleagues and end users is a superpower for designers that increases psychological safety and stimulates innovation.
- *Change the narrative that generative AI happens for designers, not to designers.* Transitions are rarely easy. We are on the threshold of a technology revolution, with significant blind spots about impacts on the future of content creation. Think strategically about downstream implications for teams, end users, and other business functions.
- *Build coalitions across disciplines to proactively devise solutions together.* Be intentional about definitions and common terms so everyone understands and can share what AI is and what it can do for your company.
- *Infuse purposeful friction points in your creative process to reflect and recover.* There likely will be unreasonable expectations placed on creative team members because of the instant gratification made possible by generative AI. Set boundaries so design teams have the time and space to reflect on creative choices and recharge creative inspiration.

Action guide



For designers:

Become catalysts for change

- *Identify more as a generalist than as a specialist.* Thanks to generative AI, there will be a convergence of skill sets and a consolidation of creative teams. Add value in this new environment by evolving from being “T shaped”—deep knowledge in one area, shallow knowledge in a broad range of other areas—to being “V shaped”—the same deep expertise, supported by meaningful and useful adjacent knowledge.
- *Build a reputation for fast and decisive content curation rooted in ethics and empathy.* Quickly delivering quality work that also looks out for people, profit, and the planet will be the sweet spot in the future.
- *Create new forms of business value by reinventing workflows with AI.* Improve how you work with generative AI and measure the impact. Articulating the business value of design with AI will help leaders make investment decisions that support design initiatives.

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Study approach and methodology

In collaboration with our research partner, Oxford Economics, IBM IBV conducted a double-blind quantitative survey in late 2023 with 2,000 C-suite leaders, creative executives, creative managers, and designers. All are responsible for—or very familiar with—the design and execution of experiences for their organizations’ customers and/or employees. Respondents report to functions across the experience value chain, including marketing, sales, product and service design, commerce, operations, IT, and customer support. Respondents are also very knowledgeable about their organizations’ adoption of generative AI and plans for using it to enhance experiences and improve workflows and productivity.

This is a global study, covering 13 countries including Australia/New Zealand, Brazil, Canada, China, Egypt, Germany, India, Japan, Saudi Arabia, South Africa, United Arab Emirates, the UK and the US. It is also multi-industry; survey respondents come from banking and financial markets, consumer products, energy and utilities, government, healthcare and life sciences, insurance, manufacturing (non-industrial), retail, telecommunications, and travel and transportation.

Our analysis focused on generative AI use cases that are most commonly employed today to improve the quality, speed, and scale of experience design, and organizations’ expectations for future deployment of generative AI applications. We mapped these assessments to respondents’ perceptions and attitudes about the impact of this technology, leading us to offer a set of suggested actions for executives, creative managers, and designers who are navigating this transformation.

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The revolutionary content supply chain: How generative AI supercharges creativity and productivity. IBM Institute for Business Value. March 2024. <https://ibm.co/content-supply-chain>

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Customer service and the generative AI advantage: Power up conversational AI to gain a competitive edge. IBM Institute for Business Value. May 2024. <https://ibm.co/generative-ai-customer-service>

The CEO’s guide to generative AI: Marketing

The CEO’s guide to generative AI: Marketing. IBM Institute for Business Value. December 2023. <https://www.ibm.com/thought-leadership/institute-business-value/en-us/report/ceo-generative-ai/ceo-ai-marketing>

Notes and sources

- 1 *The CEO’s guide to generative AI.* IBM Institute for Business Value. January 2024. <https://www.ibm.com/thought-leadership/institute-business-value/en-us/report/ceo-generative-ai>
- 2 Nellis, Stephen. “IBM says use of AI tools in marketing boosted productivity.” Reuters. March 6, 2024. <https://www.reuters.com/technology/ibm-says-use-adobe-ai-tools-marketing-boosted-productivity-2024-03-06/>
- 3 *The CEO’s guide to generative AI.* IBM Institute for Business Value. January 2024. <https://www.ibm.com/thought-leadership/institute-business-value/en-us/report/ceo-generative-ai>
- 4 Goyal, Manish, Eniko Rozsa, Carolyn Baird, Gillian Orrell, and Talal Mahfooz. *Customer service and the generative AI advantage: Power up conversational AI to gain a competitive edge.* IBM Institute for Business Value. May 2024. <https://ibm.co/generative-ai-customer-service>
- 5 Based on internal IBM information.
- 6 Ablett, Justin et al. *The revolutionary content supply chain: How generative AI supercharges creativity and productivity.* IBM Institute for Business Value. March 2024. <https://ibm.co/content-supply-chain>
- 7 Ibid.
- 8 *Acing the US Open digital experience.* IBM case study. September 2023. <https://www.ibm.com/case-studies/us-open>

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