Google Cloud

AI Business Trends 2025

Real-world challenges
Reimagined solutions

About this report

This report provides executive leaders with key insights to shape their organization's AI strategy for 2025 and beyond. Within each trend, you will find recommended technical resources that you can share with your teams for deeper understanding.

The five strategic trends in this report were identified based on data insights from an analysis of several notable sources, including: The ROI of Gen AI, a research study by Google Cloud and National Research Group based on our survey of 2,500 global enterprise decision makers; the fastest-growing AI topics in Google Trends around the globe; third-party research and insights; and Google AI thought leaders' insights on current events. We used NotebookLM, one of *TIME Magazine's* Best Inventions of 2024, to collate these sources and identify the top five trends that will reshape business in 2025.

Thought leaders

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Technology behind the research:

NotebookLM

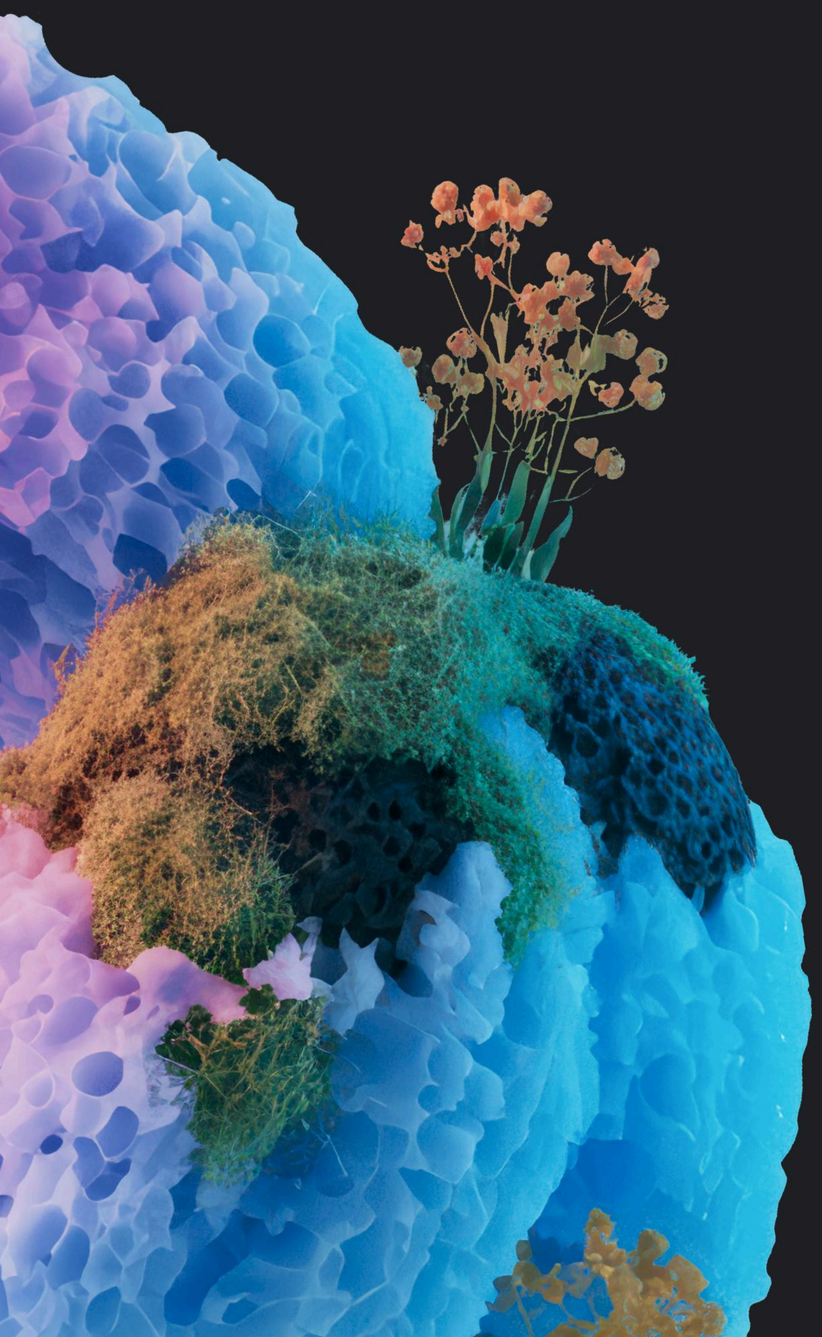
Gemini

Introduction

AI has shifted global market dynamics

AI has catalyzed a wave of rapid innovation—and the pace shows no sign of slowing. Its evolving capabilities will continue to drive a radical transformation in how organizations operate, compete, and innovate in 2025.

Before diving into the five AI trends shaping business in 2025, it is important to first understand how AI has impacted today's global market dynamics—and set us on a trajectory for business transformation in the years ahead.

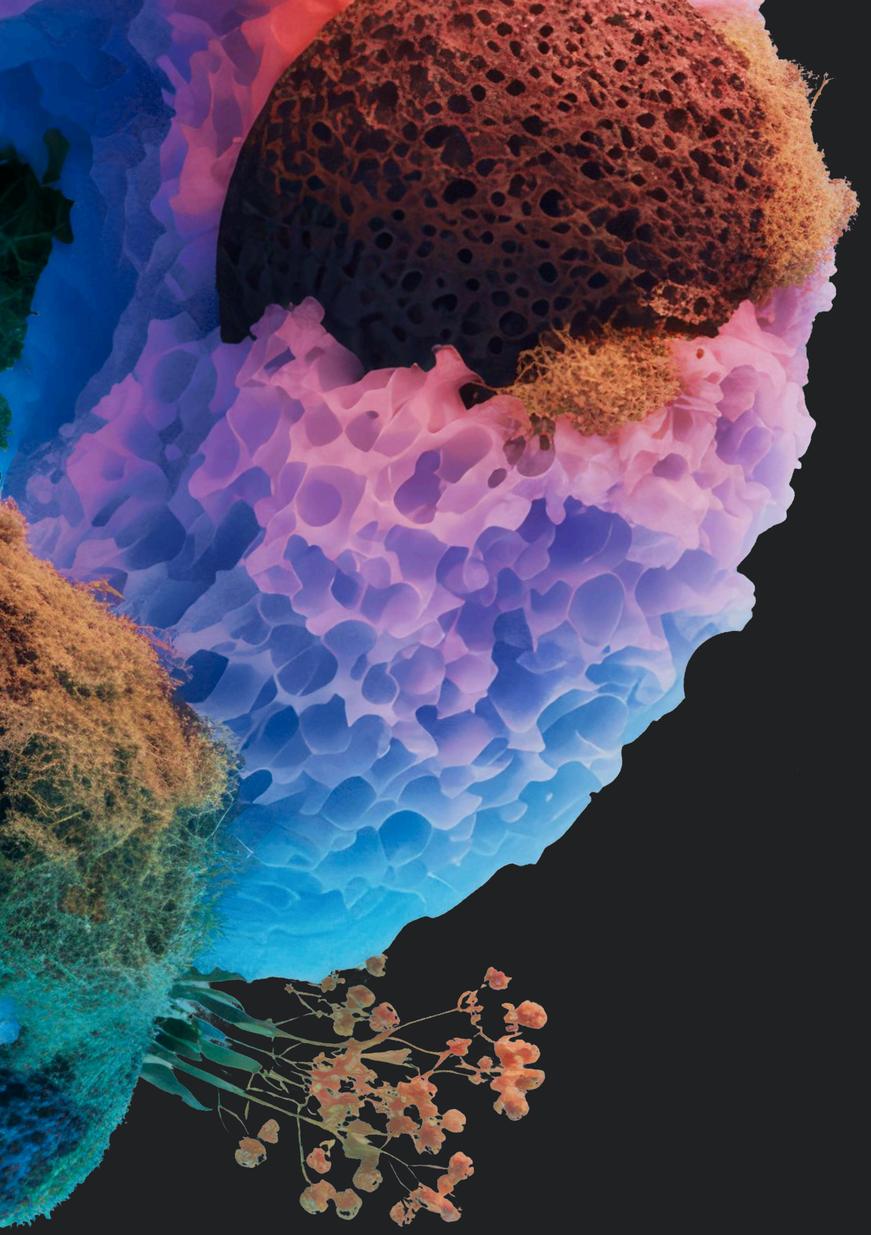


AI early adopters dominate the market

AI has profoundly shifted the competitive landscape. Companies that capitalized on it early, particularly those purpose-built for AI, will continue to lead the wave of innovative customer experience offerings this year, gaining market share and getting further out in front of their more traditional competitors.

Capital investment in AI has taken off

Driven by rapid improvements in AI models and corporate adoption, AI maturity is becoming a key indicator of economic health, prompting governments to rethink policies, regulations, and even education to support AI-driven growth. Leadership strategies will extend beyond humans, targeting AI agents as both customers and collaborators.

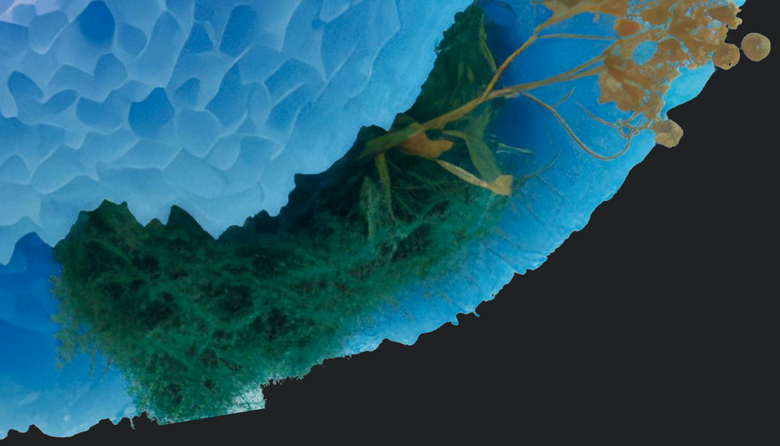


Demand for data center capacity surges

AI adoption in enterprise infrastructure is expected to increase by over 30% by 2026.[2] This rapid adoption rate has created global demand for “AI-ready” data center capacity—in other words, data center space capable of handling the high computational power and power density required for AI workloads. Demand for AI-ready data center capacity is expected to rise at an average rate of 33% per year through 2030,[3] and spending on data centers is expected to double in the next five years.[4]

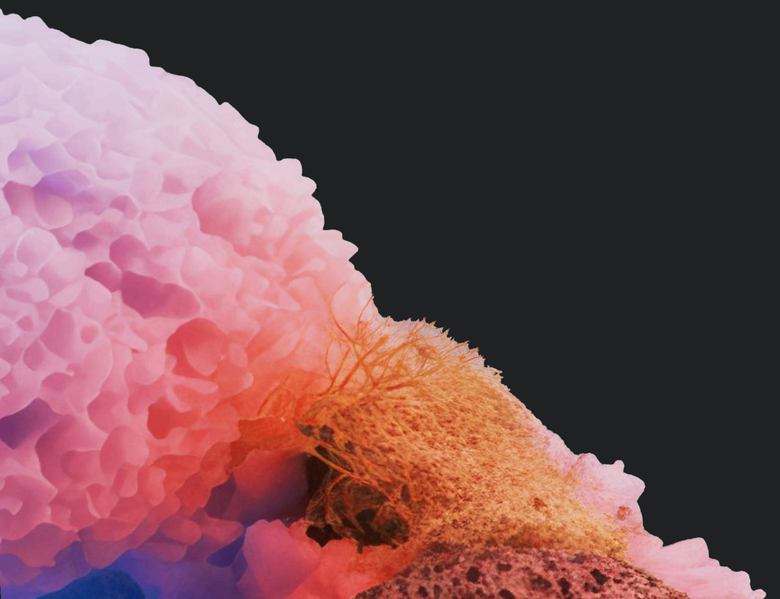
Hyperscalers help organizations remove barriers to enterprise AI adoption

“Hyperscalers” or cloud service providers will help remove barriers to AI innovation by investing in new data centers with AI-optimized infrastructure—including Google’s custom-designed TPUs, NVIDIA GPUs, networking, and storage, with specialized elements like optical switching and liquid cooling that improve efficiency for AI workloads.



AI agents go mainstream

AI agents are driving enormous improvements across every part of the value chain. These software systems, which use AI to pursue goals and complete tasks on behalf of users, are rapidly becoming more sophisticated and precise. The race is on to deliver the highest-quality, lowest-latency features across a myriad of use cases, such as AI agent builders that help developers build and deploy AI faster than ever. Already, technology leaders are laying the foundation for the next phase of AI agent evolution: multi-agent systems (read more about AI agents in Chapter 2).

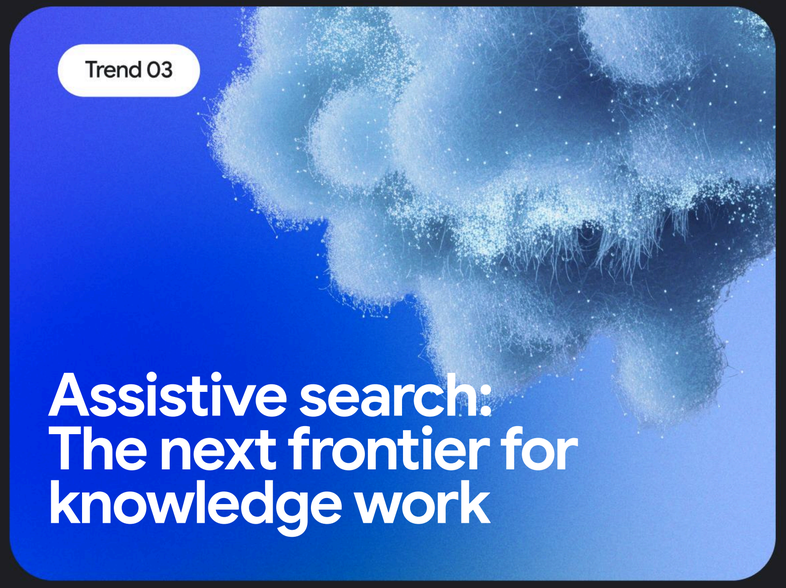


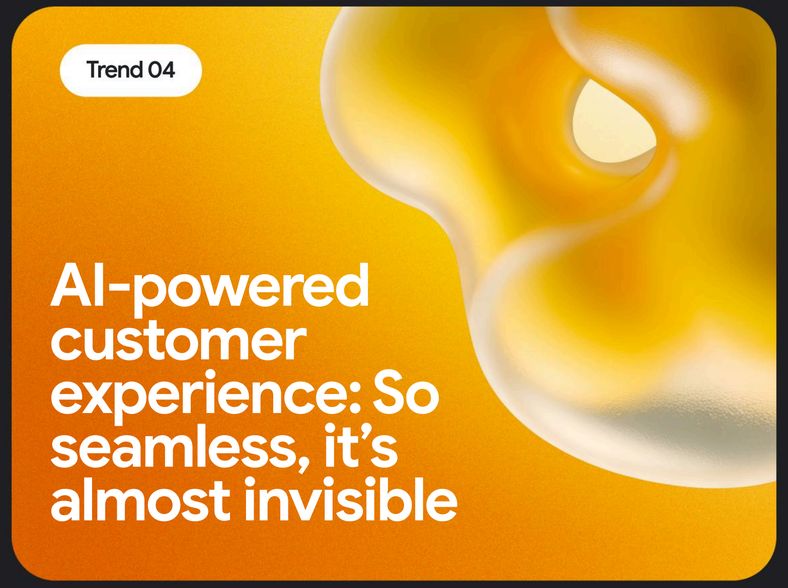
Businesses have embraced multimodal LLMs to automate core operations

Over the course of 2025, organizations will shift from experimentation to scaling AI across operations, focusing on measurable outcomes. According to Andreessen Horowitz, the $250 billion business process outsourcing (BPO) market is ripe for specialized AI automation. They identify two key areas of opportunity: horizontal AI enablers that execute a specific function for a broad range of industries, and vertical automation solutions that build end-to-end workflows tailored to specific industries, such as retail operations or healthcare assistance.[1]

During this phase, organizations have started to establish risk management, security, cost control, and overall governance that are foundational to successful AI adoption at scale.

Top 5 trends at a glance





Trend 01

Multimodal AI: Unleash the power of context

3 minute read

2025 is a pivotal year for enterprise AI adoption, driven largely by multimodal learning and the contextual awareness it enables.

Multimodal AI mirrors human learning by integrating diverse data sources like images, video, and audio in addition to text-based commands.[5] This unlocks AI's ability to decipher and learn from a much broader range of contextual sources with unprecedented accuracy, producing outputs that are more precise, customized, and tailored, creating an experience that feels natural and intuitive.[6]

The technology enables businesses to improve complex data analysis, streamline workflows, and enhance the accessibility of AI-driven insights, making it a crucial tool for future business operations.[7]

Learn more about multimodal AI →

Multimodal AI is on a rapid growth trajectory

USD

$2.4B

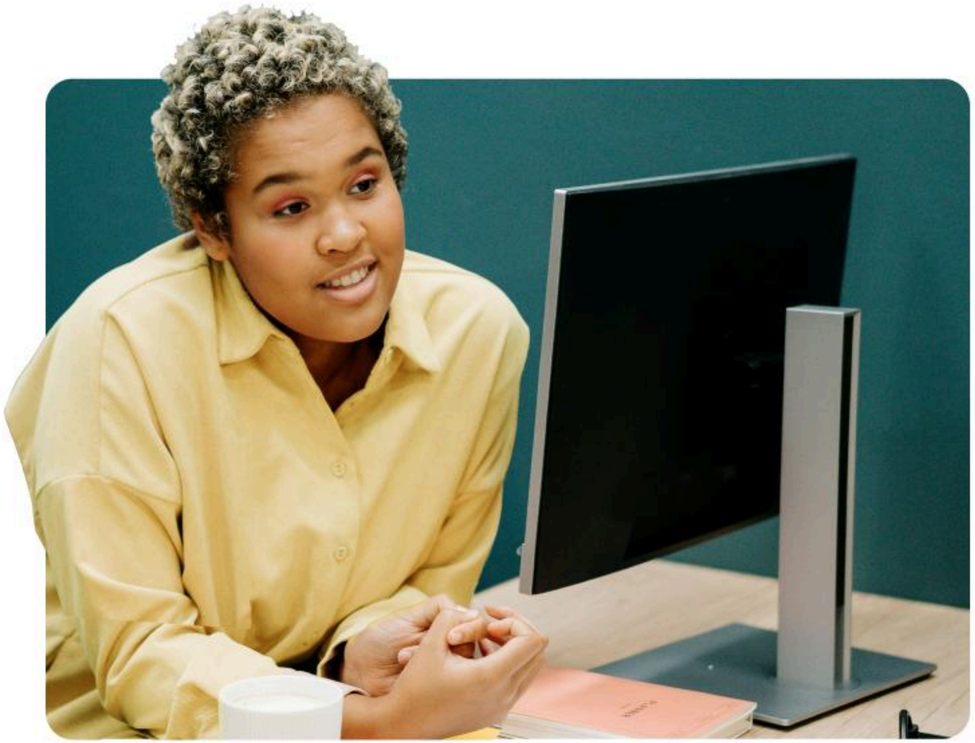
Global multimodal AI market size in 2025

USD

$98.9B

Global multimodal AI market size by end of 2037[8]

The benefits of multimodal AI



Greater grounding

One of the key advantages of multimodal LLMs is the ability to manage and process diverse forms of data—combining speech, text, images, audio, and video—to improve understanding and response to human commands. It can merge these inputs simultaneously to generate a wide-range of high-quality outputs that are grounded in enterprise truth and updated in real-time as information is exchanged and updated.

Enhanced decision-making

Multimodal AI enables organizations to unlock deeper insights and enhanced data analytics by combining unstructured and structured data. These insights can be used to improve backend efficiency and front-end user experience, especially in sectors like retail, healthcare, and customer service.

More personalized customer interactions

Multimodal AI's capability to generate personalized customer interactions is another core business benefit. By combining visual, audio, and text-based inputs, virtual assistants become more responsive and accurate—boosting customer satisfaction.

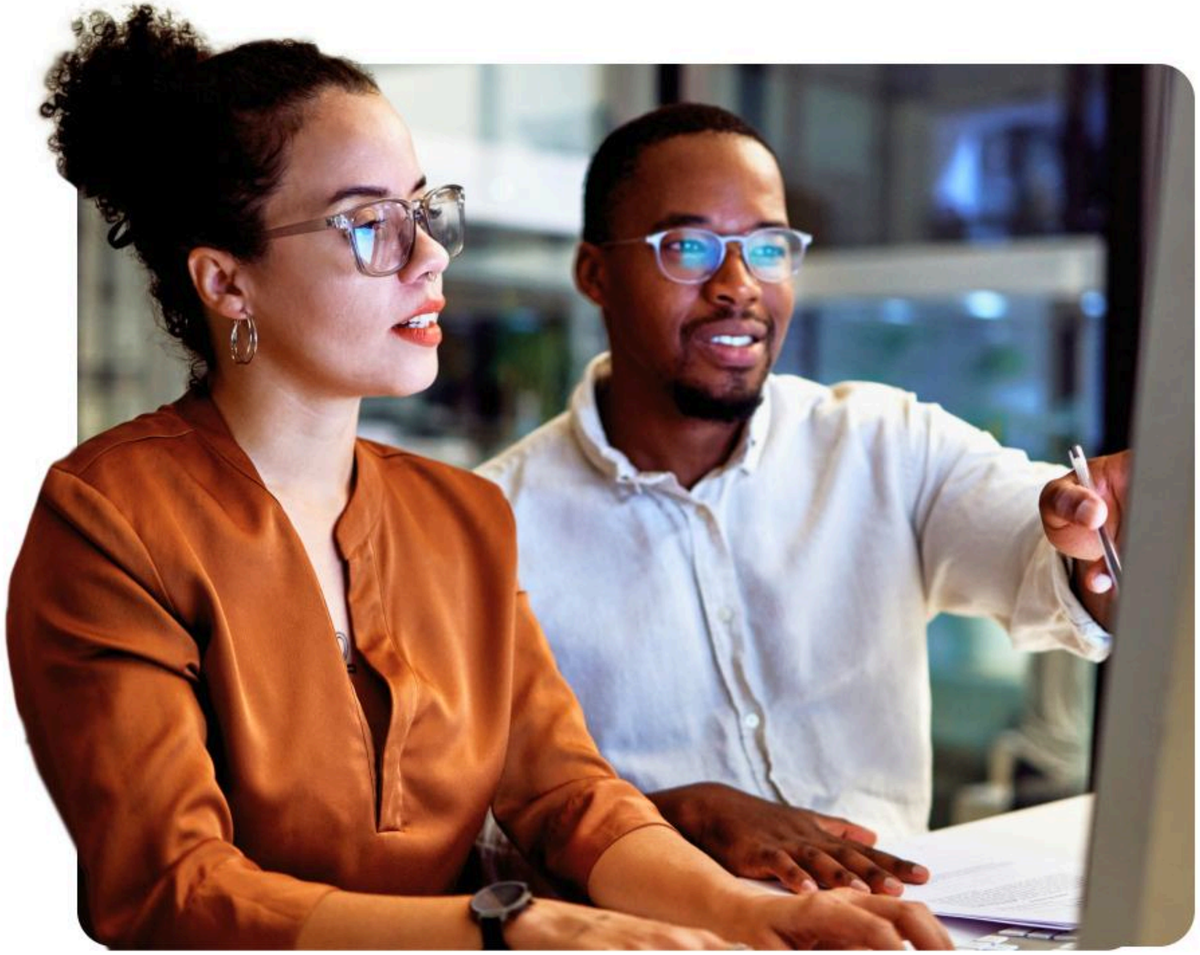
Trailblazers prove the transformative power of multimodal AI

Bayer is working to make it easier for organizations to use AI with medical imaging to transform the growing amounts of data into valuable and impactful insights, saving radiologists time and helping them optimize their important work for the benefit of patients.

Read more →

Prudential is using Google's MedLM family of language models to simplify and summarize medical claim-related documents, including medical reports and invoices, for quicker approvals and pay-outs.

Read more →



The shift towards multimodal AI is not without its challenges

Multimodal AI models require substantial amounts of data for effective training. However, businesses can navigate this challenge by prioritizing AI models known for their high quality and long context capabilities, and those explicitly designed for large-scale production deployments.

Ensuring fairness and eliminating unfair bias in AI models remain paramount, requiring a rigorous focus on responsible AI principles. As demand for responsible AI solutions grows, so do the resources and frameworks available to support organizations on this journey.

Multimodal AI in 2025

Industry predictions

Financial services

> We'll continue to see how AI models are used for analyzing multimodal data, such as market commentary videos or central bank livestreams, by considering nonverbal cues like tone of voice, facial expressions, and body language alongside text, to provide a more nuanced understanding of sentiment."

Zac Maufe, Managing Director, Regulated Industries, Google Cloud

Manufacturing

“We expect that manufacturers will focus on using gen AI to proactively address operational efficiency and maintenance needs. By analyzing multimodal sensor data such as text, videos, noise, and vibrations, potential anomalies leading to equipment failures can be identified before they occur, minimizing downtime and maximizing productivity.”

Praveen Rao, Global Director, Head of Manufacturing Industry, Google Cloud

Healthcare and life sciences

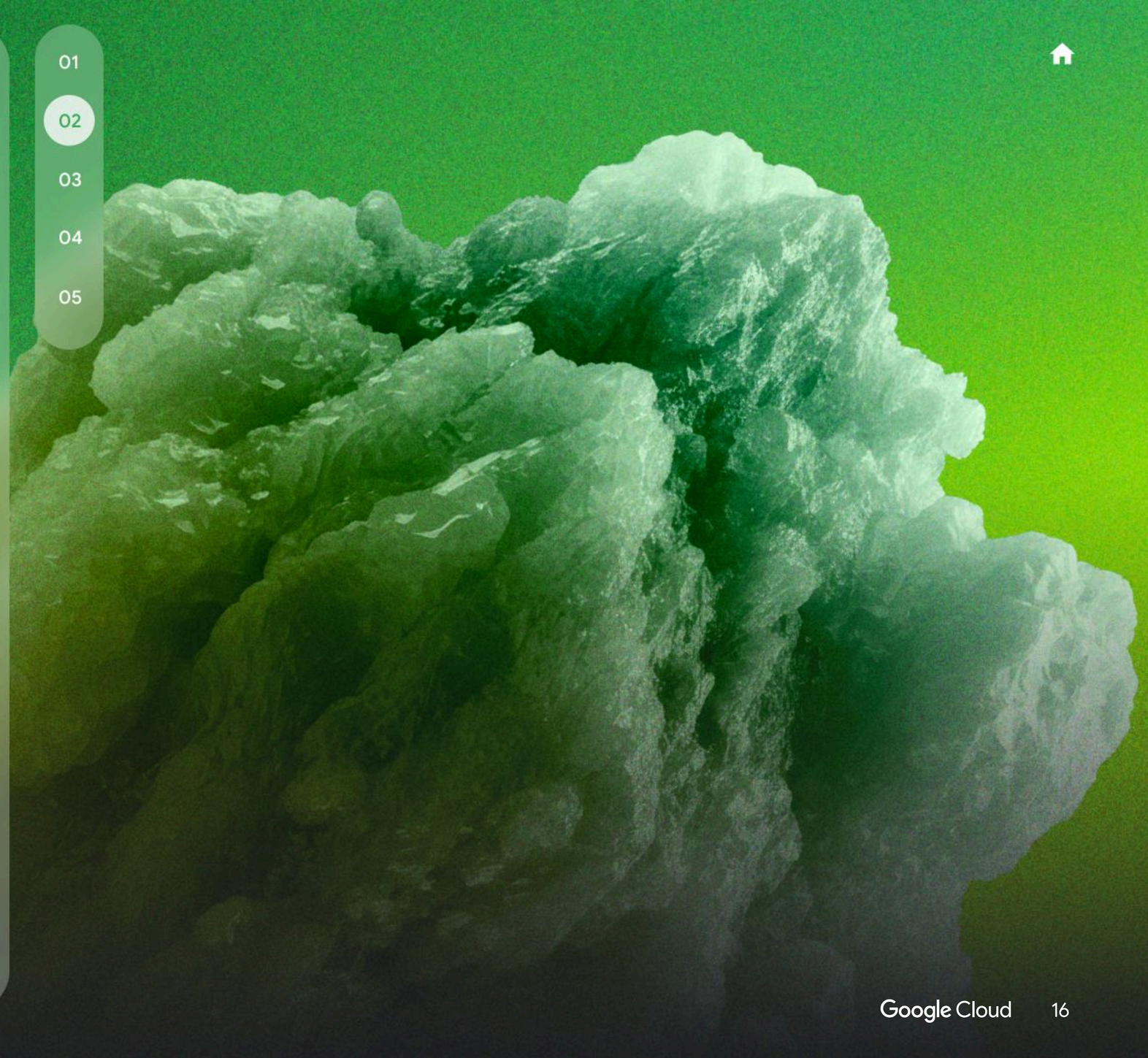
“We’ll see a rise in the adoption of multimodal AI models to analyze data such as medical records, imaging data, and genomic information to draw insightful summaries, moving closer to the vision of personalized medicine.”

Shweta Maniar, Global Director, Life Sciences Strategy & Solutions, Google Cloud

Trend 02

AI agents: The evolution from chatbots to multi-agent systems

6 minute read



AI applications have evolved from chatbots into sophisticated AI agents capable of handling complex workflows. Multi-agent systems are the next phase of evolution.

With its deep intelligence, agentic AI marks a significant departure from traditional software programs. AI agents show reasoning, planning, and memory with a level of autonomy to make decisions, learn, and adapt. Equipped with these capabilities, they can seamlessly manage complex workflows, automate business processes, and support human employees.

Today, many AI applications include multiple agents with human-in-the-loop (HITL) to address complex workflows. Workers are cultivating new skills to collaborate effectively with these AI agents, combining human creativity with AI's analytical power. A study by Stanford, MIT, and NBER found that access to AI assistance increases worker productivity, as measured by issues resolved per hour, by 15% on average.

The study also found that workers with less experience and skills improved both the speed and quality of their output when assisted by AI agents, while the most experienced and highest-skilled workers saw few gains in speed and a surprising decline in quality.[9]

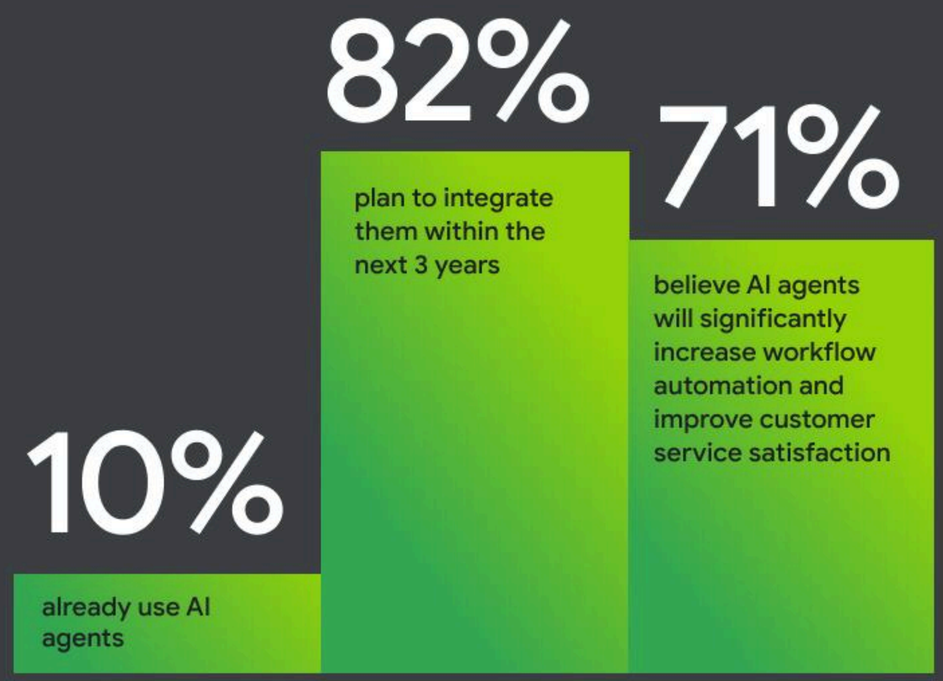
The next phase of AI agent technology takes things one step further. Multi-agent systems (MAS) are composed of multiple independent agents that collaborate to achieve a goal or complex workflow beyond the ability of an individual agent. The multiple tasks are coordinated between the agents, as opposed to individual agents that often require human coordination and intervention between tasks. Autonomous ride-hailing service Waymo One is one example in use today.

Learn how Google Cloud's AI agent ecosystem is transforming industries →

Share this paper on agents with your team →

Adoption of AI agents is growing

According to a Capgemini survey of 1,100 executives at large enterprises:[10]



Six AI agents that drive value for our customers

Across our customers, we see a common focus on six types of agents as the first places to realize AI transformation:

01 Customer agents

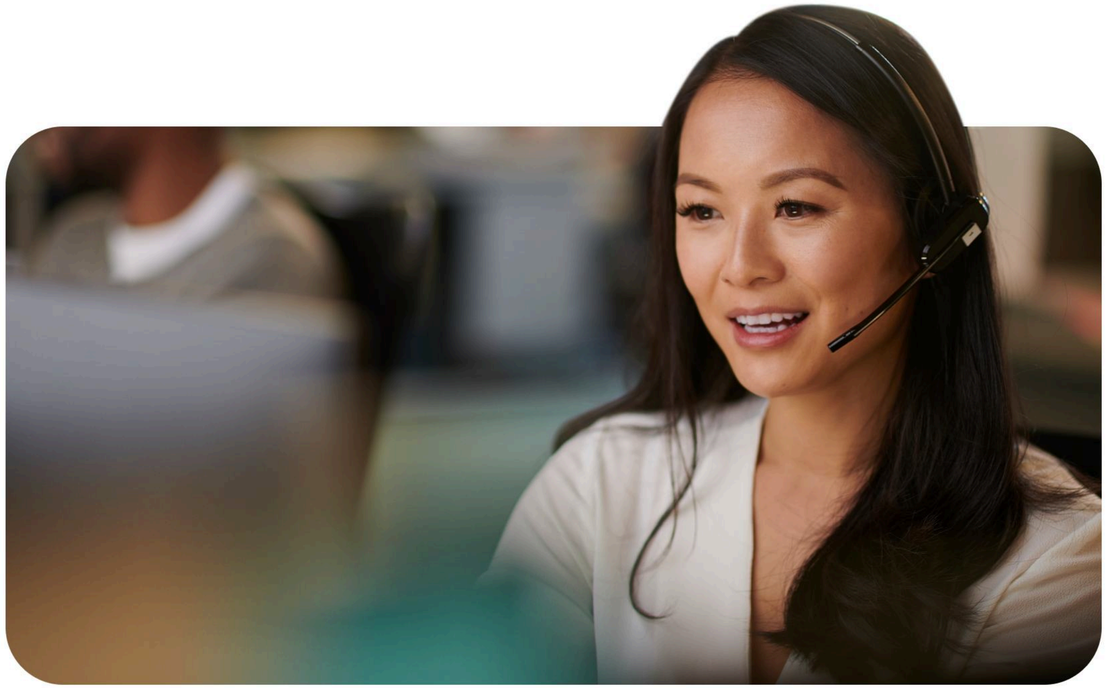
Customer agents deliver personalized customer experiences by understanding customer needs, answering questions, resolving customer issues, or recommending the right products and services. They work seamlessly across channels and can be integrated into product experiences with voice and video to deliver 24/7 customer service and support.

Check out Trend 4 to learn how Google Cloud's Customer Engagement Suite puts multiple agents to work, together with human-in-the-loop, to create AI-powered customer experiences.

PARTNER HIGHLIGHT

Read more →

BrainLogic builds gen AI products specifically designed for Latin America, using Claude by **Anthropic** on Vertex AI to power its personal AI assistant (Zapia) used by millions.



Best Buy is resolving issues up to 90 seconds faster with its gen AI-powered virtual assistants that can help troubleshoot product issues, reschedule order deliveries, and manage subscriptions.

Watch video →

Six types of AI agents

02 Employee agents

Employee agents boost productivity by streamlining processes, managing repetitive tasks, answering employee questions, and editing and translating critical communications. Designed to drive efficiency and collaboration, these agents give workers more time back to focus on the human aspect of their work.

PARTNER HIGHLIGHT

box Watch more →

Box is leveraging Gemini to build the next generation of intelligent content management solutions through summary, analysis and extraction of enterprise content metadata allowing companies to securely and efficiently manage their content.

Woolworths, the leading retailer in Australia, boosts employees' confidence in communications with "Help me write" across Google Workspace products for more than 10,000 administrative employees.

Read more →

Elanco, a world leader in animal health, has implemented a gen AI framework, powered by Vertex AI and Gemini, to support critical business processes, such as Pharmacovigilance, Customer Orders, and Clinical Insights. This has resulted in an estimated ROI of $1.9 million since launching last year.

Read more →

Six types of AI agents

03 Creative agents

Built to augment existing design, artistic, and production skills, creative agents can generate content, images, and ideas. They can assist with design, writing, personalization, and campaigns—helping marketing and creative teams to explore and build better creative concepts.

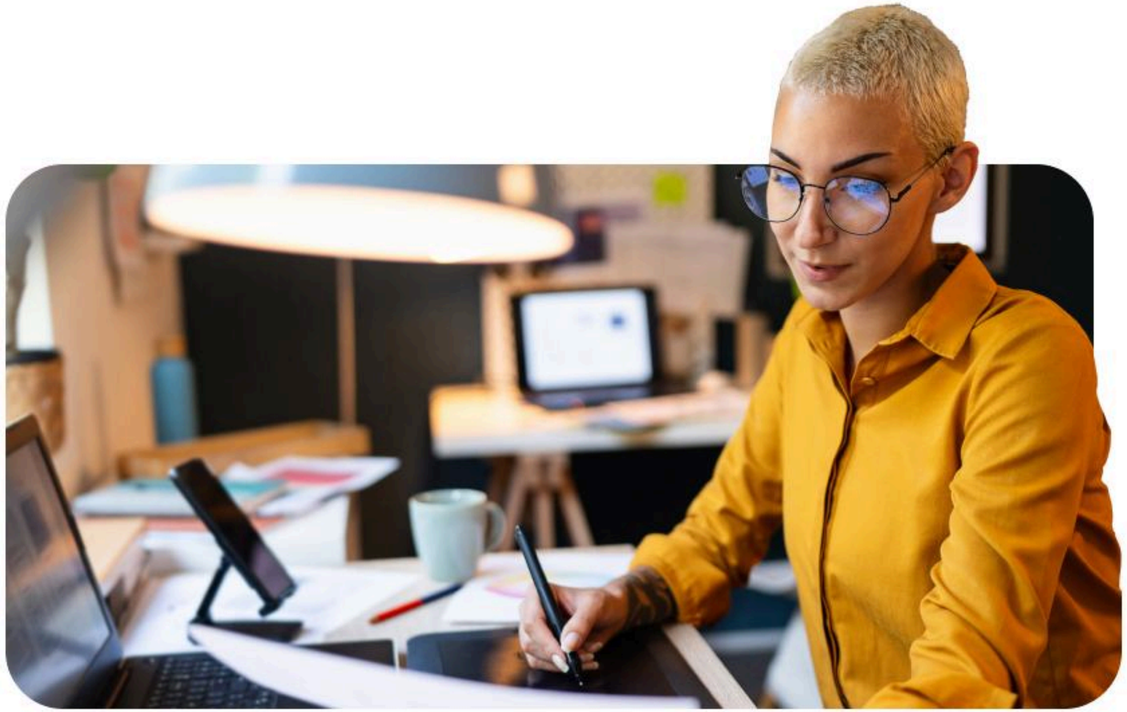
Gen AI models that produce lifelike video and images from simple text or image prompts enable companies to streamline workflows and unlock new possibilities for visual storytelling.

PARTNER HIGHLIGHT

Typeface

Watch video →

Typeface, the generative AI platform for enterprise content creation, empowers Fortune 500 brands and enterprise marketers to create multimodal branded content using Gemini and Imagen3.



PODS, working with advertising agency Tombras, used Gemini to create the "World's Smartest Billboard," a campaign on their trucks that could adapt to each neighborhood in New York City. The ads used live feeds of data so they updated in real-time hitting all 299 neighborhoods in just 29 hours creating more than 6,000 headlines.

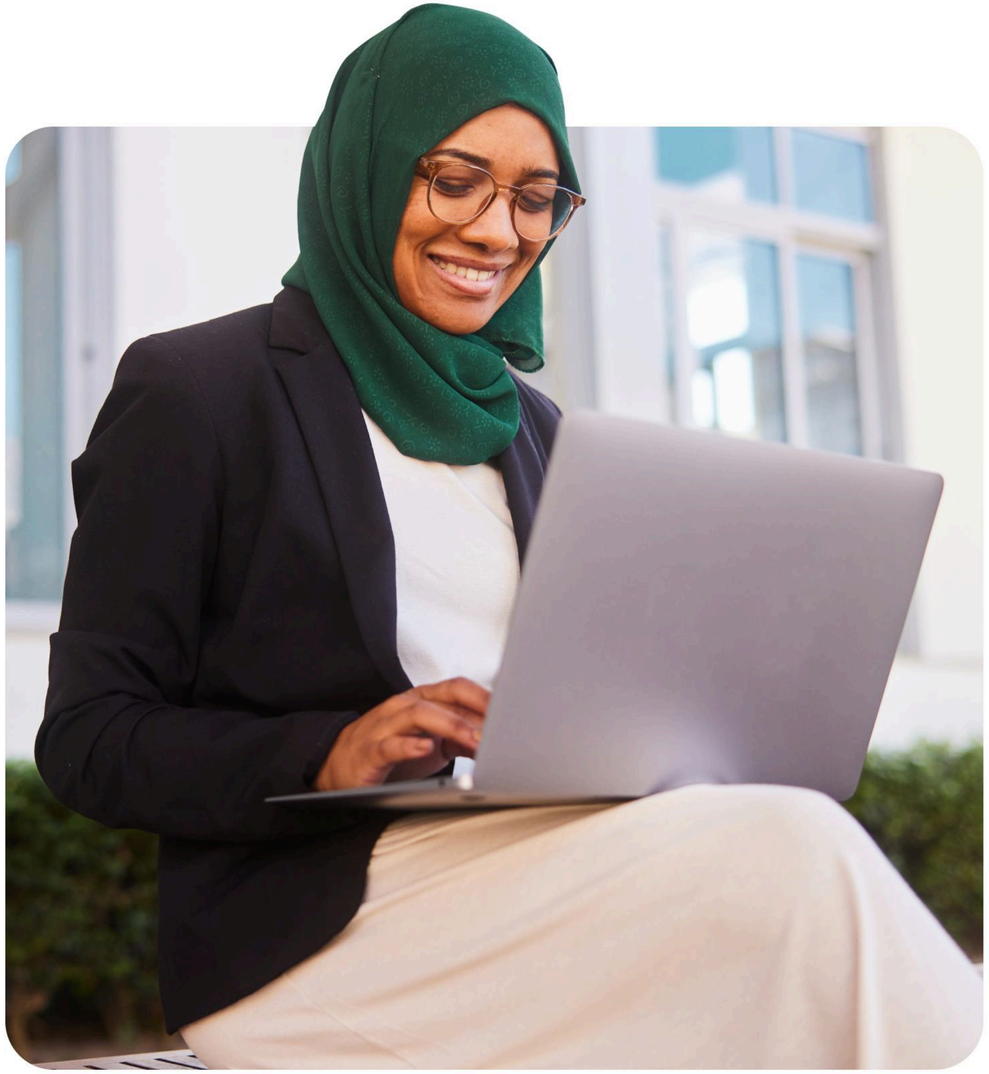
Watch video →

04 Data agents

Designed to support research and data analysis, data agents can find and act on meaningful insights from data, all while ensuring the factual integrity of their results. They can even help ask the questions we haven't thought of yet, and then find the answers. It all adds up to deeper insights and more impactful decision-making across the business.

Warner Bros. Discovery built an AI captioning tool with Vertex AI and saw a 50% reduction in overall costs, and an 80% reduction in the time it takes to manually caption a file without the use of machine learning.

Watch video →



Six types of AI agents

05 Code agents

Code agents help developers and product teams accelerate software development with AI-enabled code generation and coding assistance, and to ramp up on new languages and code bases. A study of 4,867 software developers revealed a 26% increase in the number of weekly tasks completed among developers using an AI-based coding assistant.[11] Specifically, the study highlights a 13.55% increase in the number of code updates and a 38.38% increase in the number of times code was compiled.

There is still work to do to advance AI agents. The study found that while AI assistants improved productivity among less experienced and lowered-skill members of the workforce, it actually hindered productivity for advanced and highly experienced developers. Bridging this gap will require software developers to play an active role in designing intuitive user experiences.

Share this innovators skills challenge with your technical team →

PARTNER HIGHLIGHT

DATADOG

Read more →

Datadog LLM Observability offers native integration with Gemini, allowing developers to monitor and improve the performance, accuracy, and security of their applications.

Regnology built its Ticket-to-Code Writer tool with Gemini 1.5 Pro to automate the conversion of bug tickets into actionable code, significantly streamlining the software development process.

Read more →

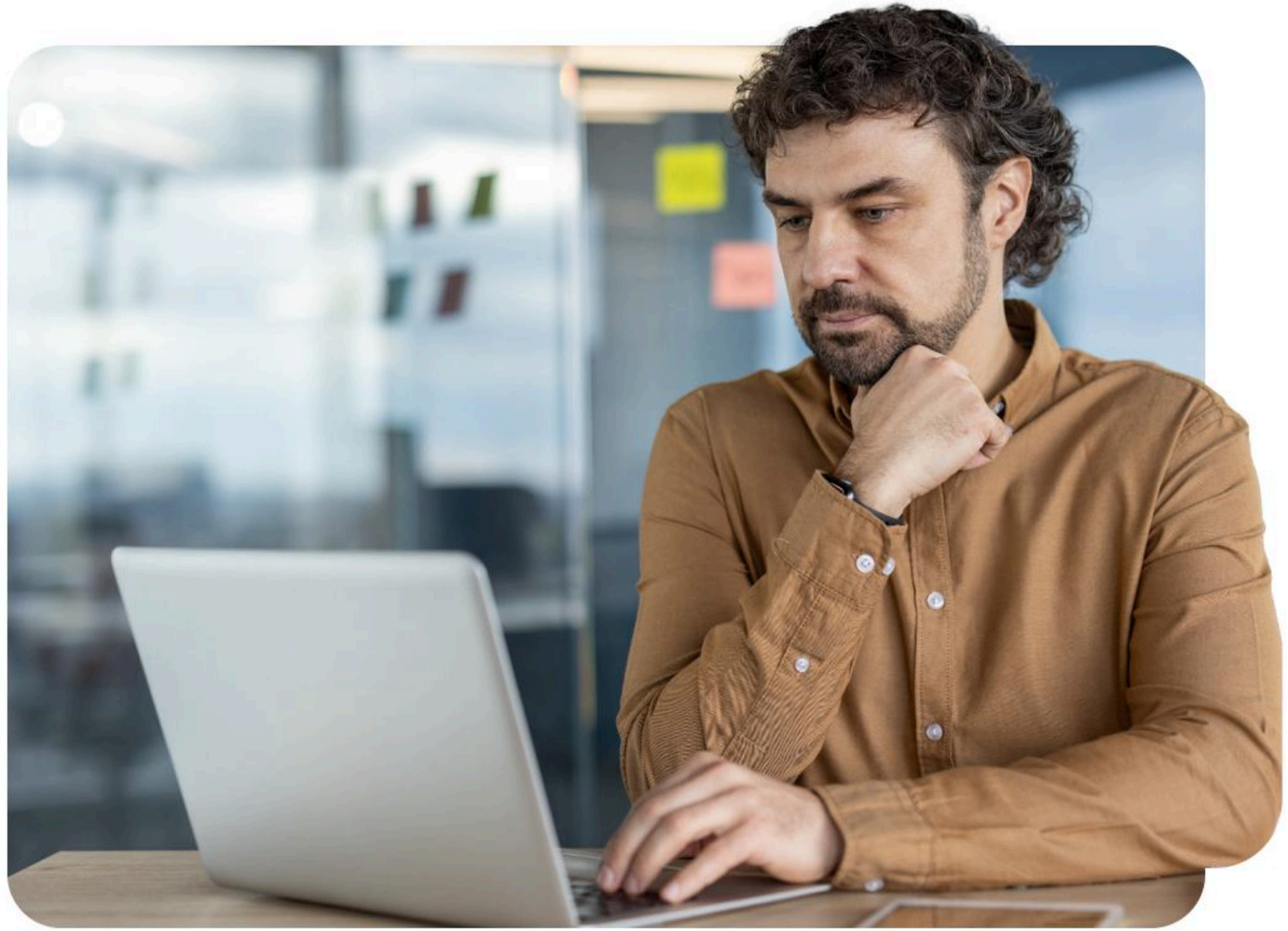
Turing, an AGI infrastructure company, saw a 33% developer productivity gain while using Gemini Code Assist in their development teams.

Watch video →

Six types of AI agents

06 Security agents

Security agents can strengthen an organization's security posture by mitigating attacks or increasing the speed of investigations. They can also detect new threats and search Mandiant's vast frontline research to understand threat actor behaviors in seconds.



AI agents in 2025

Industry predictions

Retail

> We expect retailers will focus on implementing creative agents that can provide assistance to marketing teams, such as generating customer-centric marketing campaigns, copy, and product descriptions, and curating bespoke images and creative content for campaigns and editorial placements.”

Paul Tepfenhart, Director, Global Retail Strategy & Solutions, Google Cloud

Media and entertainment

> Content agents have the potential to become the new superpower that media and entertainment companies leverage across the entire media supply chain to streamline the creation of content, to reduce cost and time, to understand and extract insights from content for search and monetization, and to distribute personalized content to global audiences.”

Albert Lai, Global Director, Media & Entertainment, Google Cloud

Telecommunications

> The same way as CSPs embraced customer agents, we expect they will extend their use of network agents to help with activities like root cause analysis of outages, capacity planning scenarios, developing and executing test cases for new lab equipment, and training of new field technicians.”

Matt Anderson, Head of Telecoms Industry, Google Cloud

Trend 03

01
02
03
04
05

Assistive search: The next frontier for knowledge work

3 minute read

AI has changed the way the world discovers information, creating a shift from retrieving to creating knowledge.

No longer limited to typing keywords into a search bar, users will engage with AI-powered search tools that can comprehend and respond to images, audio, video, and conversational prompts. This profound shift is driven by the growing accessibility of gen AI and the rapid evolution of multimodal search capabilities, which enable users to seek information in a way that mirrors how they naturally experience the world.

Advanced AI-powered search technology includes site search, product search, and customer support self-service search. It is helping organizations enrich and optimize product data catalogs, save significant manual work, and improve conversion and cross-selling efficiency.

As these advances in search capabilities pick up pace, businesses across industries are reimagining how their users access and interact with information.

Learn more about enterprise search →

Search takes on a new dimension

The benefits of AI-powered enterprise search

For enterprises, advanced search tools will drive significant value across the business. Benefits include:

Faster access to data

Employees can quickly and efficiently find and utilize internal data, boosting productivity and leading to more informed decision-making.

More advanced and intuitive searches

These intelligent knowledgebases can understand complex queries, processing various data formats (including documents, spreadsheets, and multimedia) to deliver highly relevant information—which in turn helps foster innovation and growth.

Deeper, AI-powered insights

Integrating AI agents with enterprise search will take knowledge retrieval to the next level. Agents can access and analyze company data, performing complex tasks and providing insightful recommendations.

There are flow-on benefits for consumers, too. Brands that adopt AI-powered search tools are delivering new levels of service and support to customers.

For example, just beyond AI-powered enterprise search lies the potential for assistive employee experiences. Users can not only discover precise information through AI search, but can also receive helpful assistance. AI can help the user by refining complex queries, offering contextualized insights, and even triggering actions.

Leading companies embrace powerful new search capabilities

Snap deployed the multimodal capability of Gemini within their “My AI” chatbot and has since seen over 2.5x as much engagement within Snapping to My AI in the United States.

Watch video →

Moody’s Corporation is providing its employees with LLMs from Google Cloud that will quickly sift through both public documents and the firm’s own database of information to help them write analysis.

Read more →

Mayo Clinic has given thousands of its scientific researchers access to 50 petabytes worth of clinical data through Vertex AI search, accelerating information retrieval across multiple languages.

Read more →

Suzano, the world's largest pulp manufacturer and a leader in sustainable bioeconomics, sought to enhance data access through gen AI. To achieve this, they partnered with Google Cloud to develop Vagalúmen, a solution that enables users to find information within Suzano's cloud-based data sources using natural language.

Read more →

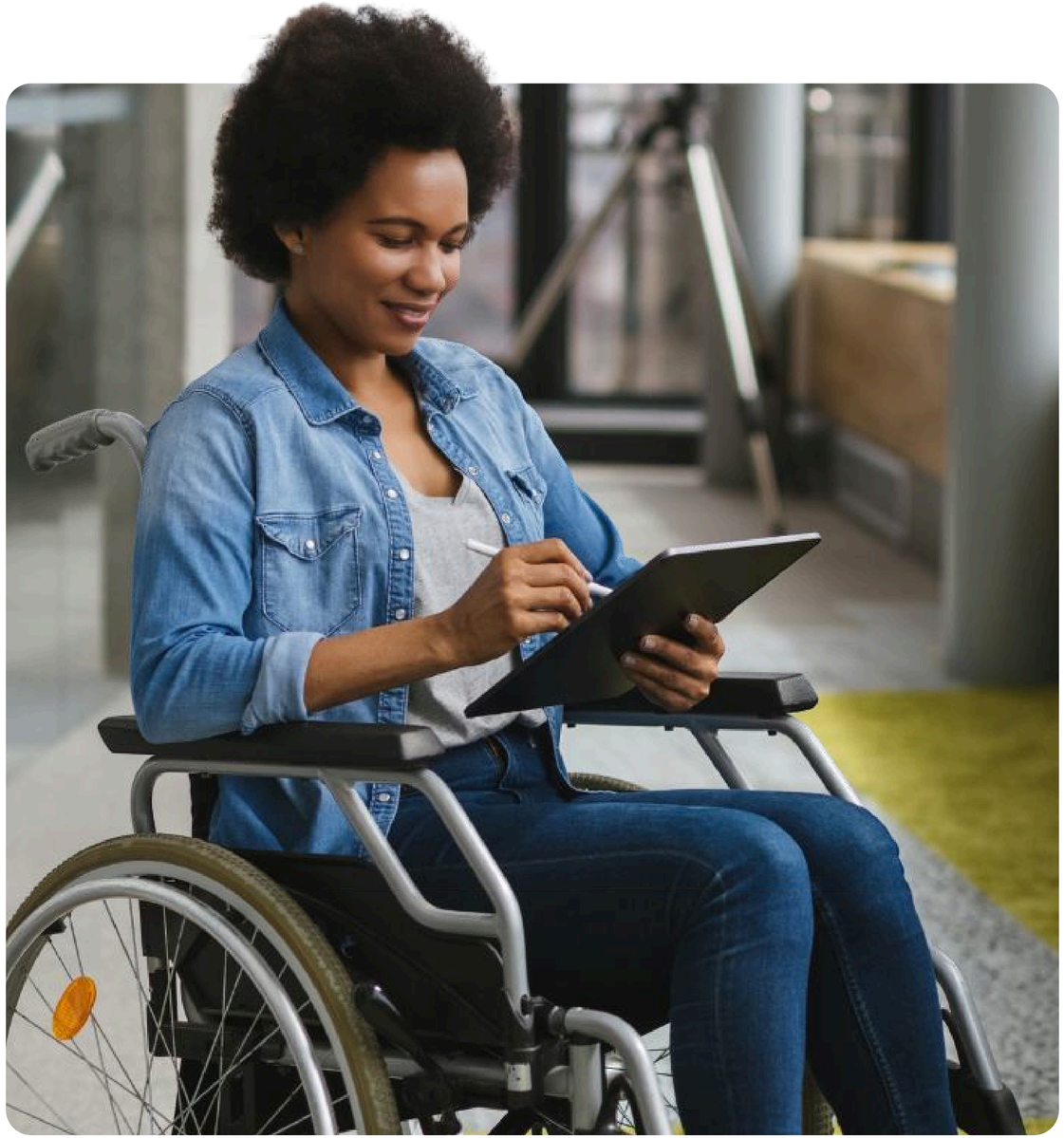
A new path forward in building enterprise search

Building a good search system is hard. Before the advent of gen AI, state-of-the-art enterprise search systems were keyword-based. They couldn't understand the meaning of the indexed content, user's intent, or search context—causing irrelevant results and frustrating user experiences.

Today, owners of legacy search systems have an opportunity to improve search offerings by integrating LLMs. This can be done by generating embeddings for words and phrases, which can then be used to find relevant results in a vector database through a matching service. It all leads to more accurate and relevant search results, and the ability to handle complex queries that traditional search engines cannot.

But, again, this is hard—and many organizations get stuck in pilot phases. Packaged Google-quality search can solve this challenge for enterprise users by removing the complexity from search systems.

Learn more about RAGs powered by Google Search →



AI-powered search in 2025

Industry predictions

Financial services

> We expect to see more financial institutions prioritizing robust internal knowledge search for their employees, tailored to their specific roles. For example, a loan officer would receive different results than a risk analyst when searching for information about a particular loan application."

Zac Maufe, Managing Director, Regulated Industries, Google Cloud

Retail

We expect gen AI will continue to transform search in retail, allowing customers to find products using natural language, images, or voice commands to deliver higher quality search results.”

Paul Tepfenhart, Director, Global Retail Strategy & Solutions, Google Cloud

Healthcare & life sciences

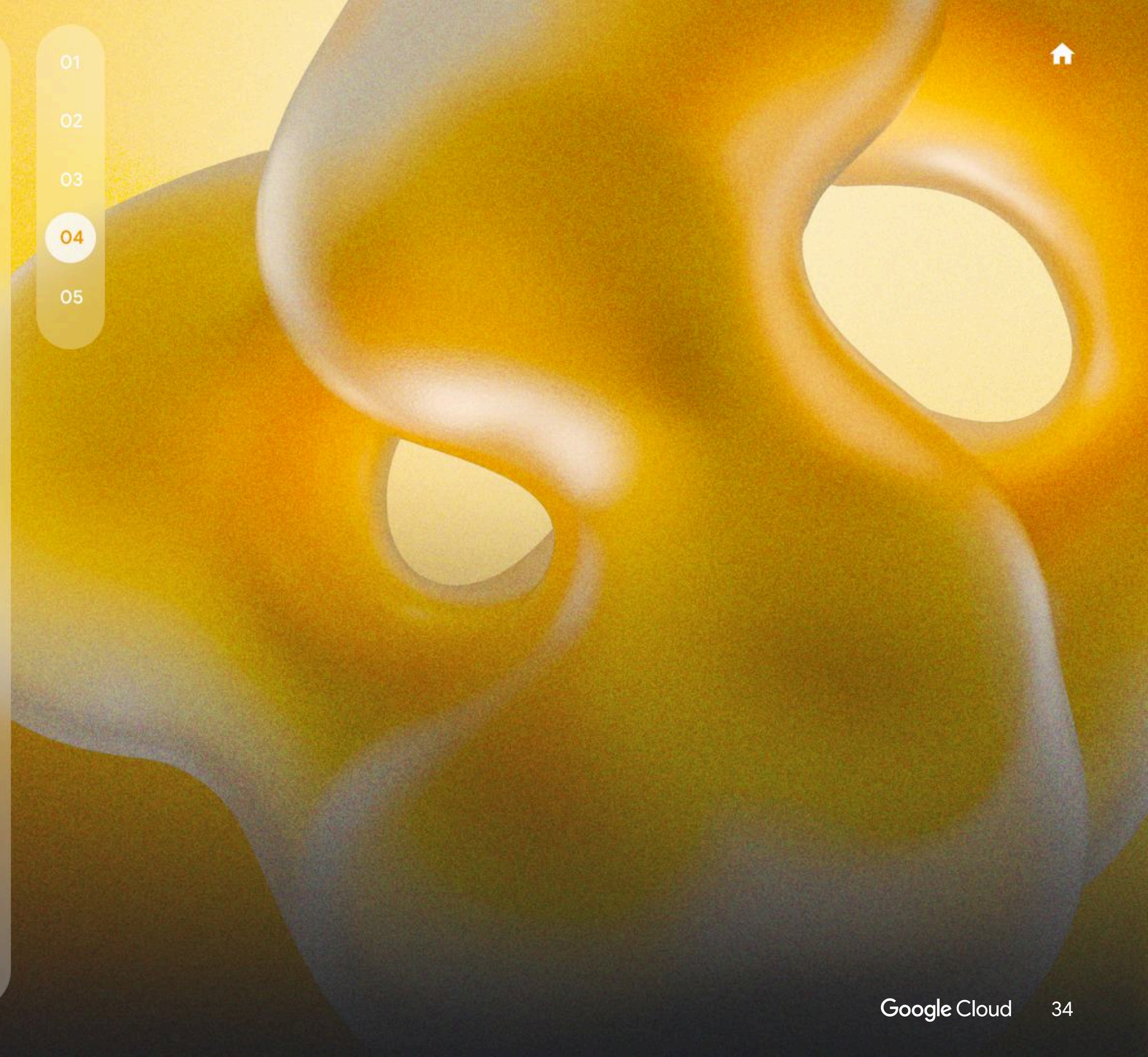
“We expect to see greater adoption of intuitive, contextual search that understands medical terminology, complex vocabulary, and abbreviations—helping relieve administrative burdens for medical professionals, while improving patient education and research.”

Aashima Gupta, Global Director, Healthcare Strategy & Solutions, Google Cloud

Trend 04

AI-powered customer experience: So seamless, it’s almost invisible

3 minute read



Customer engagement applications and enterprise search combine to make customer experience (CX) so seamless, the technology feels invisible.

Just as text-based customer service chatbots were not the final frontier, today's real-time conversational insights and speech-based customer support features that exist today are a stepping stone, not the final destination of AI-powered CX. This will be reached when companies can provide customers with precisely what they want: experiences so seamless, personalized, and efficient that issues are resolved without a customer even noticing they have interacted with a company's customer service or support technology.

CX skyrockets with AI

#1

Customer service and support is the top priority area for new gen AI initiatives, with 55% of organizations rating it important in the next 12 months[13]

70.7%

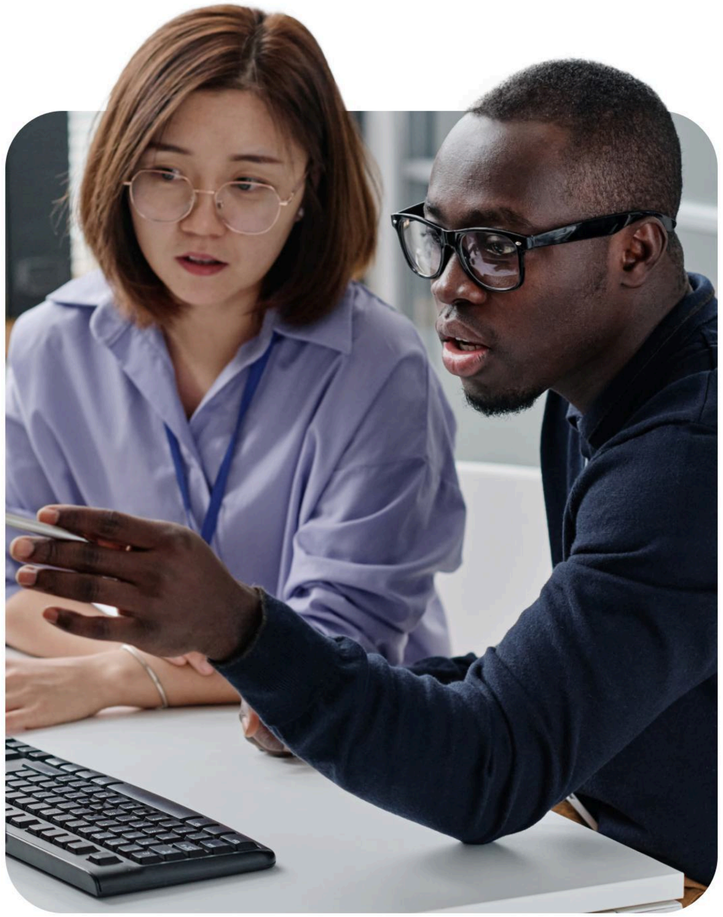
of executives rate providing internal assistance to employees within their top 3 CX use cases[14]

AI solves common CX challenges

	Customer support	Customer sentiment	Personalization
Common CX challenges	75% of customers use multiple channels in their ongoing experience.[15]	Companies with higher customer loyalty scores record 282% (vs 81%) cumulative 10 year shareholder returns.[16] Positive customer sentiment leads to higher customer loyalty.	71% of consumers expect companies to deliver personalized interactions.[17]
Improvements with AI	AI-powered virtual customer service agents enable consistent omnichannel experiences at every entry point.	AI-powered sentiment analysis helps brands gauge customers' opinions by analyzing a range of touchpoints, such as emails, social media posts, and chat interactions, in real-time. Brands can then use the insights to better respond to customer needs.	AI-powered insights analyze and learn from user behavior to generate more personalized marketing content and product recommendations. They analyze everything from purchase history and browsing behavior, to social media activity, and are proving to be powerful predictors of customer needs and preferences.

AI solves common CX challenges

	Self-service search results	Support content
Common CX challenges	Only 28% of U.S. online adults trust information provided by AI.[18] The issue is compounded by AI-powered chatbots that provide inaccurate responses.	About 30% of B2C marketing decision-makers globally see data quality management as a major challenge in implementing successful marketing strategies.[19]
Improvements with AI	AI-enhanced search can understand complex queries, process various data formats, and deliver highly relevant information. As organizations embed these capabilities into self-service search tools, results will become more accurate and relevant—and trust in these tools will grow.	Generating and optimizing support content that directly answers the queries of real customers enables teams to turn customer search data into personalized content at scale.



Across industries, AI-powered CX is on the rise

Alaska Airlines is using gen AI to make planning trips a delightful experience for travelers. Alaska built a gen AI destination search experience —Careline— that helps guests plan their vacations and land the best flight deals with a single prompt.

Watch the video →

NotCo, a Chilean food technology company known for its plant-based alternatives to animal products, created an AI chatbot available 24/7, so users can simply ask the chatbot questions about sales, inventory, or any other data, and generate reports. This allows NotCo's teams to gain valuable insights in real time, enabling them to make data-driven decisions faster and with more confidence.

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Discover Financial uses Google Cloud's gen AI to empower its 10,000 contact center agents with AI-driven capabilities, leading to faster resolution times and better customer experience.

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Klook, Asia's leading platform for experiences and travel services, is building organization-wide AI capabilities that will personalize and optimize experiences for customers, partners, and employees, including developers who are using Gemini Code Assist to support testing and generating code for the Klook platform.

Read more →

KDDI Corporation has developed an advertisement planning tool using a Gemini model that improves marketing accuracy through a seamless matching of persona data from KDDI and its group company, resulting in significant CTR improvements.

Read more →

AI-powered CX in 2025

Industry predictions

Retail

“We expect retailers will expand their gen AI experiments to create more personalized interactions and omnichannel support, such as personal AI stylists, visual representations of the suggested looks, and using gen AI to generate images or videos.”

Paul Tepfenhart, Director, Global Retail Strategy & Solutions, Google Cloud

Manufacturing

> We anticipate a shift from the traditional stock-and-sell sales model to a complex make-to-order sales model. To fuel this shift, manufacturers need to have a robust, real-time view of their operations, unify their IT and OT data, and optimize product design, production, marketing, and customer service."

Praveen Rao, Global Director, Head of Manufacturing Industry, Google Cloud

Telecommunications

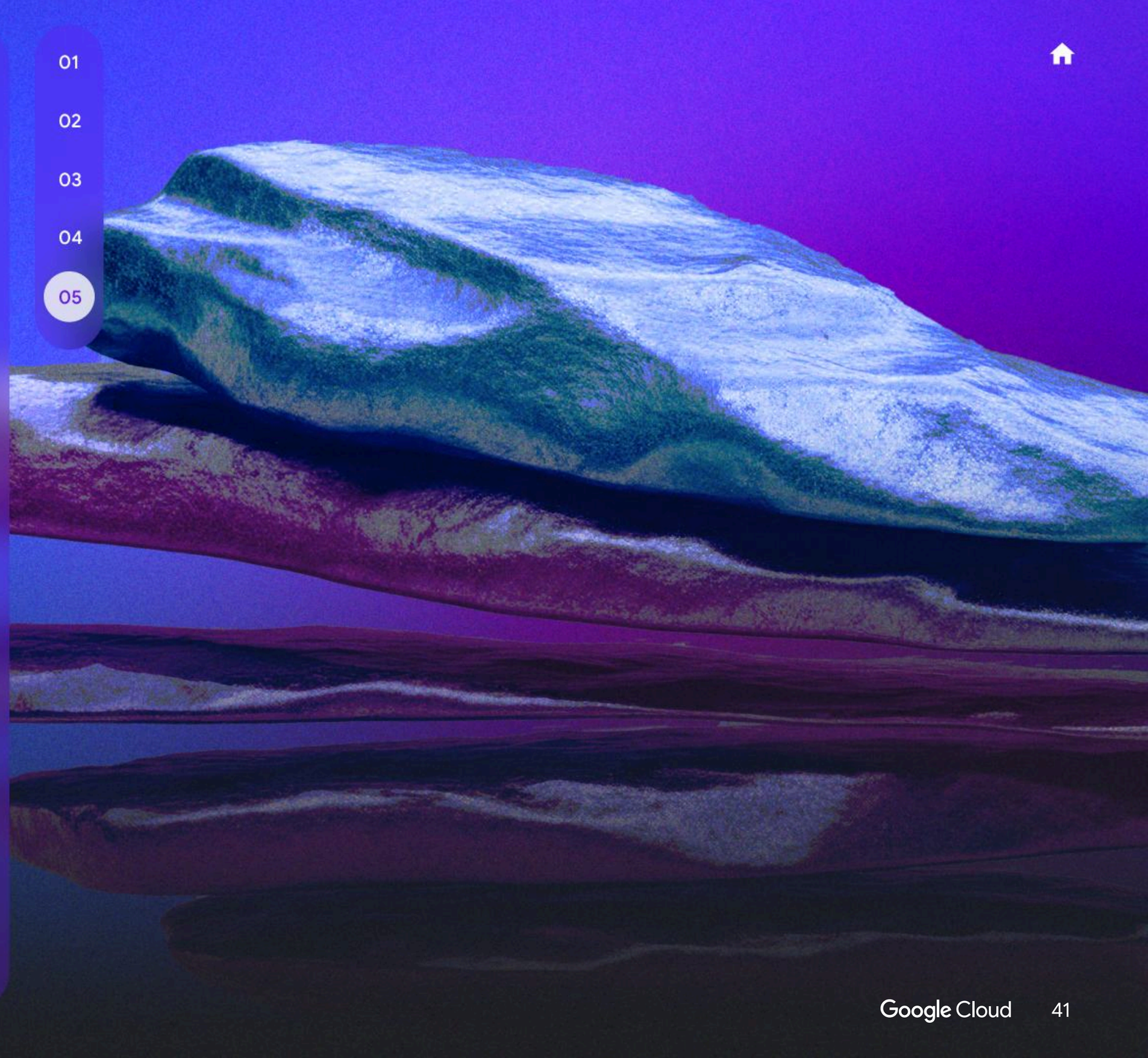
> We expect that gen AI will continue to drive more personalized journeys for each unique customer regardless of the channel of engagement. For example, an SMB looking to launch a new branch office could utilize a product and service recommendation agent to define a service bundle for all their connectivity, communication, and point of sale needs."

Matt Anderson, Head of Telecoms Industry, Google Cloud

Trend 05

Security gets tighter—and tougher—with AI

3 minute read



2025 is a revolutionary year for AI's adoption into security and privacy best practices.

AI has the potential to become a powerful tool in every security professional's toolkit—helping to bolster security defenses, identify and combat threats, relieve manual work, and speed up responses. No wonder so many organizations are exploring ways to use it. For example, demand for security solutions that fight disinformation is expected to take off this year—with Gartner predicting that by 2028, 50% of enterprises will adopt products, services, or features specifically to address disinformation security use cases, up from less than 5% in 2024.[20]

Send this to your technical teams
Take a deeper dive into what Google Cloud Security experts expect with our 2025 Cybersecurity Forecast report.

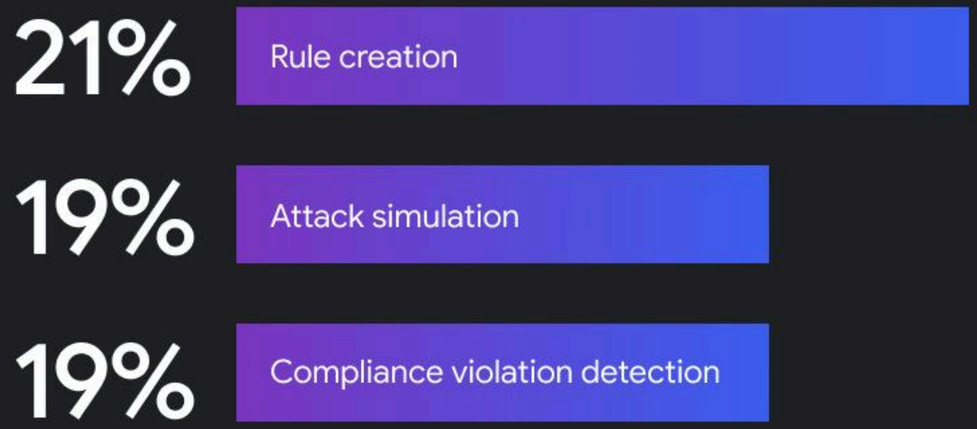
Organizations can't afford complacency in the security space. Failing to secure against emerging threats is more costly than ever before—with the global average cost of a data breach in 2024 increasing 10% over the previous year to reach USD $4.88 million.[21] Add to this the fact that attackers are using AI to increase the volume and impact of attacks, and it's clear organizations urgently need to put AI-powered security tools to work.

Get Mandiant's special M-Trends report on the latest AI-powered threat intelligence insights.

Ready to get started?
Learn how to deploy a security software agent.

AI is used in novel ways to bolster security

The top use cases for AI in security include:[22]



And it's paying off

USD
$2.2m

Average reduction in breach costs when organizations apply security AI and automation[23]

The battle between defense and attackers is heating up

Integrating AI into cybersecurity is not without challenges. The biggest one? The predicted 'arms race' between defense mechanisms and AI-driven threats, as adversaries use AI for more sophisticated attacks, including automated phishing and vulnerability exploitation.[24] There has also been an increase in the number of attacks targeting edge devices and platforms that traditionally lack endpoint detection and response solutions, and an increase in 'living off the land' attacks, where adversaries use legitimate processes and protocols to carry out malicious actions.[25]

Another challenge is resourcing. According to CSA and Google Cloud's research, more than a third (33%) of IT and security professionals point to a skills gap and shortage of knowledgeable staff as a challenge to implementing AI in security.[26] Research by SANS Institute found that organizations are increasingly seeking professionals skilled in AI and cybersecurity, with 66% of organizations anticipating a need for expanded AI expertise.[27]

PARTNER HIGHLIGHT

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Palo Alto Networks is using Gemini to create a grounded AI assistant for 24/7 security platform support to improve agent efficiency and response time. Grounding the assistant in organizational data and security protocols has greatly improved the accuracy of responses.

PARTNER HIGHLIGHT

D.

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Deloitte helps a number of their customers to search, gather, and understand cybersecurity threat information much faster with Google Threat Intelligence.

Companies tighten security using AI tools

Bayer leverages Google Cloud to support the identification of security threats and sees value from high security standards.

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Apex Fintech has accelerated the creation of complex threat detections, reducing the time required from hours to mere seconds with Google Security Operations.

Read more →

One New Zealand, a New Zealand telecommunications company, is working on infusing gen AI capabilities from within Google Security Operations to ultimately predict, prepare for, and address security risks faster.

Read more →

AI-enabled security in 2025

Industry predictions

Financial services

> We'll see banks focusing on AI-powered KYC systems with more robust capabilities to detect counterfeit documents and analyze photos for signs of manipulation, such as subtle inconsistencies in movements or lighting."

Zac Maufe, Managing Director, Regulated Industries, Google Cloud

Manufacturing

“We expect manufacturers to employ AI-powered systems to verify data integrity and detect prompt injection risks, ensuring the authenticity and reliability of data used in training AI-powered robots and machinery. This will involve robust data provenance tracking and anomaly detection to identify inconsistencies and potential risks.”

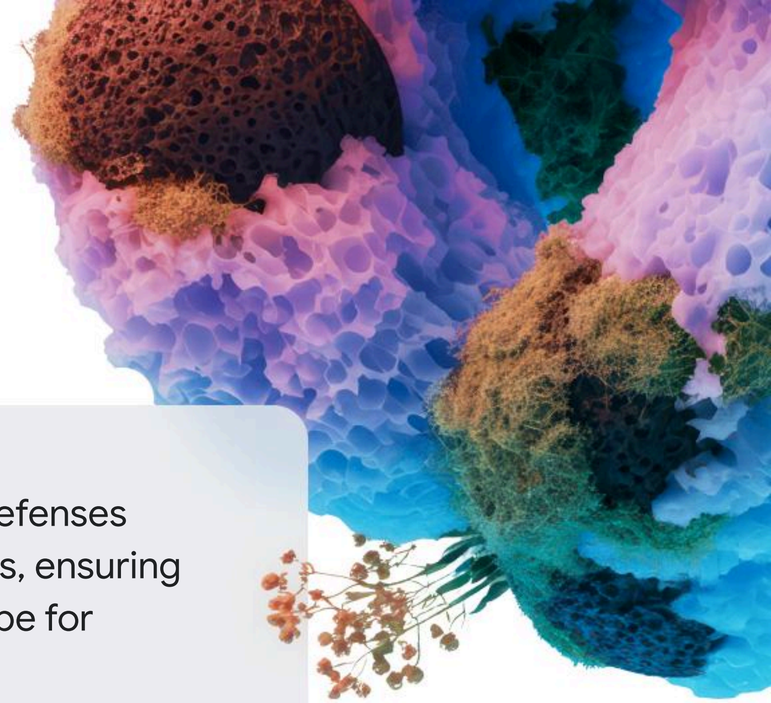
Praveen Rao, Global Director, Head of Manufacturing Industry, Google Cloud

Media and entertainment

“Synthetic media offers creative possibilities, from reviving iconic figures to creating personalized interactive experiences with celebrities. However, deepfakes have the potential to spread misinformation, violate copyrights, and erode trust in content authenticity. Media and entertainment companies will elevate the responsible use of AI—and the tools and models that support it—as a critical industry movement.”

Albert Lai, Global Director, Media & Entertainment, Google Cloud

Conclusion



We've seen how multimodal AI is making interactions more intuitive and natural, paving the way for even richer and more human-like communication experiences.

AI agents are streamlining workflows and boosting productivity, promising a future where human-machine collaboration reaches new heights of efficiency. AI-powered search is revolutionizing knowledge discovery, transforming how we access and interact with information in the enterprise. AI-driven customer experiences are becoming more personalized and seamless, offering a future where businesses can anticipate and cater to individual needs with exceptional accuracy.

And AI security solutions are fortifying defenses against increasingly sophisticated threats, ensuring a safer and more resilient digital landscape for organizations worldwide.

In this dynamic period, organizations are using AI to go from concept to impact. By fusing sophisticated AI with powerful infrastructure, developer tools, data, security, and collaboration solutions, businesses can solve problems in bold and creative ways and reimagine solutions to achieve the previously impossible.

This is the future of AI, and it’s closer than you think.

See what these trends mean for your business.

Contact us

Citations

[1] Andreessen Horowitz, RIP to RPA: The Rise of Intelligent Automation | Andreessen Horowitz, Nov 2024

[2] Credence Research, All-In-One Infrastructure Market Size, Share and Forecast 2032, October 2024

[3] McKinsey & Company, AI power: Expanding data center capacity to meet growing demand, October 2024.

[4] Bick, A., Blandin, A., & Deming, D. J. (2024). The Rapid Adoption of Generative AI. National Bureau of Economic Research

[5] MIT Technology Review, Multimodal: AI's new frontier, May 2024

[6] Forbes, Sensing Success: OpenAI, Anthropic And 40+ Others Leverage Multimodal AI, May 2024

[7] Nestor Maslej, Loredana Fattorini, Raymond Perrault, Vanessa Parli, Anka Reuel, Erik Brynjolfsson, John Etchemendy, Katrina Ligett, Terah Lyons, James Manyika, Juan Carlos Niebles, Yoav Shoham, Russell Wald, and Jack Clark, "The AI Index 2024 Annual Report," AI Index Steering Committee, Institute for Human-Centered AI, Stanford University, Stanford, CA, April 2024.

[8] Research Nester, Multimodal AI Market Size and Share, by Component, Sept 2024

[9] Stanford, MIT, and NBER, Generative AI at Work, November 2024

[10] Capgemini Research Institute, Harnessing the value of generative AI, 2024

[11] Cui, Zheyuan and Demirer, Mert and Jaffe, Sonia and Musolff, Leon and Peng, Sida and Salz, Tobias, The Effects of Generative AI on High Skilled Work: Evidence from Three Field Experiments with Software Developers, September 03, 2024

[12] Coherent Market Insights, Enterprise search market analysis, June 2024

[13] IDC, The Intelligent CX Revolution: How AI is Changing the Game, Oct 2024

[14] Gartner, Deploy Generative AI to Drive CX Innovation, July 2024

[15] McKinsey, The next frontier of customer engagement: AI-enabled customer service, March 2023

[16] Bain & Company, Companies That Earn Customers' Loyalty Outperform With Investors, October 2024

[17] McKinsey, What is Personalization?, May 2023

[18] Forrester, Generative AI Is The Catalyst For Change In The Contact Center, June 2024

[19] Forbes, Driving Performance With Content Hyper-Personalization Through AI And LLMs, Feb 2024

[20] Gartner, Protect Your Organization From Disinformation Campaigns, September 2024

[21] IBM, Cost of a Data Breach Report 2024, 2024

[22] The Cloud Security Alliance (CSA) and Google Cloud, State of AI and Security Survey Report, CSA and Google Cloud, 2024, 2024

[23] IBM, Cost of a Data Breach Report 2024, 2024

[24] SANS Institute, SANS 2024 AI Survey: AI and Its Growing Role in Cybersecurity, September 2024

[25] Mandiant, M-Trends 2024 Special Report, April 2024

[26] The Cloud Security Alliance (CSA) and Google Cloud, State of AI and Security Survey Report, CSA and Google Cloud, 2024, 2024

[27] SANS Institute, 2024 AI Survey: AI and Its Growing Role in Cybersecurity, September 2024