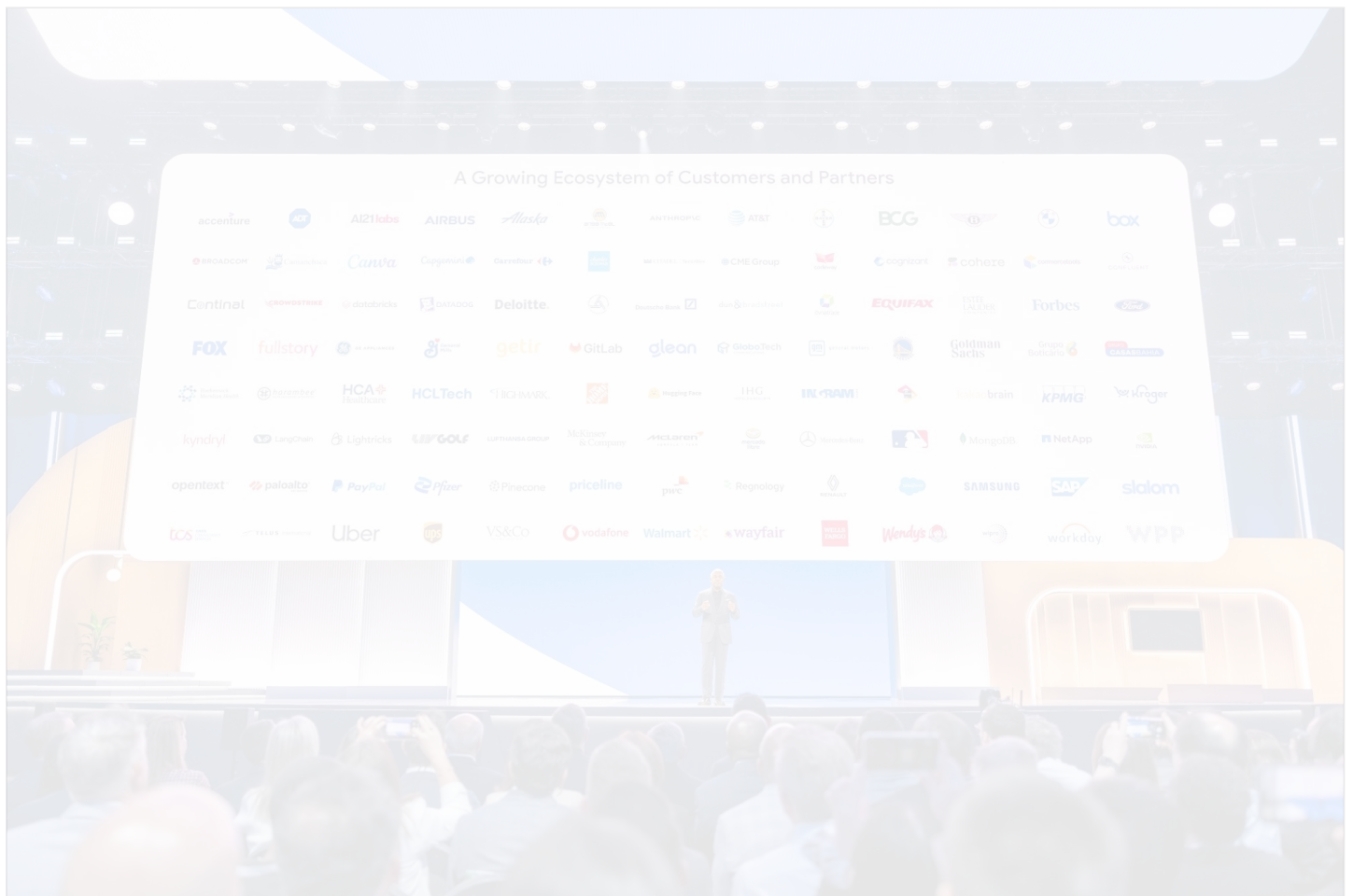


AI & Machine Learning

101 real-world gen AI use cases from the world's leading organizations

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At Google Cloud Next '24, top companies, governments, researchers, and startups showcased how they're already using Google's AI solutions to enhance their work.

Since generative AI first [captured the world's attention](#) a year and a half ago, there's been a vigorous discussion about what, exactly, the new technology is best used for. While we all enjoyed those early funny chats and witty limericks, we've quickly discovered that many of [the biggest AI opportunities are clearly in the enterprise](#).

Our customers and partners at Google Cloud have found real potential for creating new processes, efficiencies, and innovations with generative AI. For proof, look no further than the 300-plus organizations who are featured at [this week's Next event in Las Vegas](#).

In a matter of months, organizations like these have gone from AI helping answer questions, to AI making predictions, to generative AI agents. What makes AI agents unique is that they can take actions to achieve specific goals, whether that's guiding a shopper to the perfect pair of shoes, helping an employee looking for the right health benefits, or supporting nursing staff with smoother patient hand-offs during shifts changes.

In our work with customers, we keep hearing that their teams are increasingly focused on improving productivity, automating processes and modernizing the customer experience. These aims are now being achieved through the AI agents they're developing in six key areas: customer service; employee empowerment; creative ideation and production; data analysis; code creation; and cybersecurity.

These special capabilities are made possible in large part by [the new multimodal capacity of generative AI and AI foundation models](#), which allow agents to handle tasks across a range of communications modes, including text, voice, video, audio, code, and more. With human support, agents can converse, reason, learn, and make decisions.



The hundreds of customers who joined us at Next '24 to showcase and discuss early versions of their AI agents and gen-AI solutions have come to rely on Google Cloud technologies that include our AI

infrastructure, Gemini models, Vertex AI platform, Google Workspace, and Google Distributed Cloud. We were also joined by more than 100 partners supporting the creation of AI agents and AI solutions, which [you can read about in detail](#).

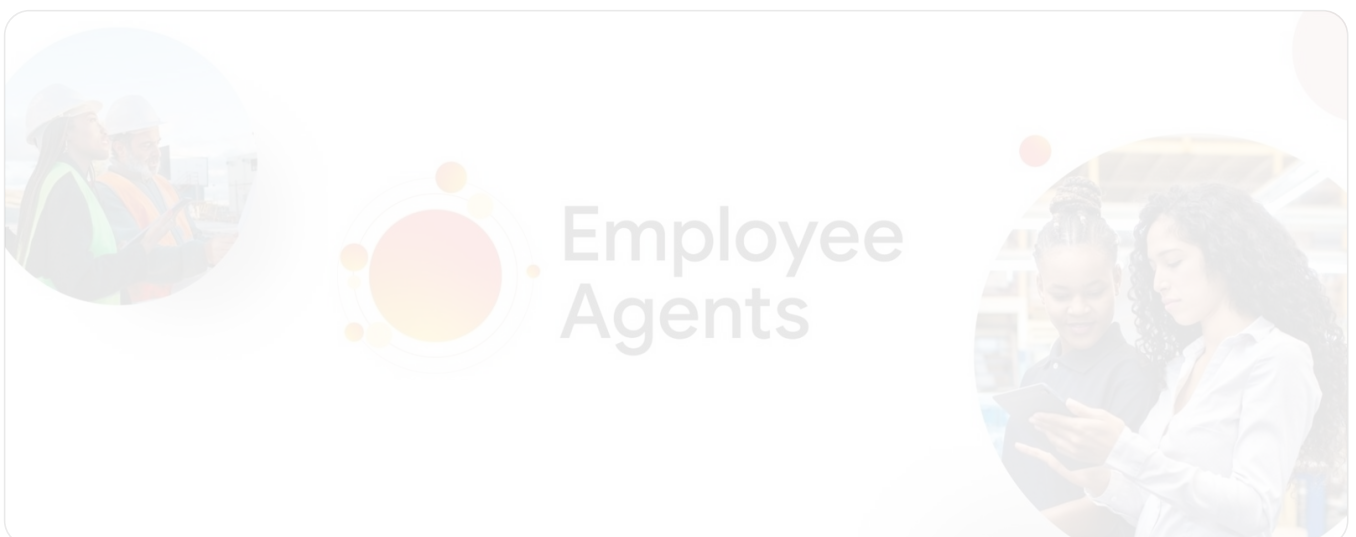
Here's a snapshot of how 101 of these industry leaders are putting AI into production today, creating real-world use cases that will transform tomorrow.



Similar to great sales and service people, customer agents are able to listen carefully, understand your needs, and recommend the right products and services. They work seamlessly across channels including the web, mobile, and point of sale, and can be integrated into product experiences with voice and video.

1. **ADT** is building a customer agent to help its millions of customers select, order, and set up their home security.
2. **Alaska Airlines** is developing a personalized travel search experience using advanced AI techniques, creating hyper-personalized recommendations that engage customers early and foster loyalty through AI-generated content.
3. **Best Buy** is using Gemini to launch a generative AI-powered virtual assistant this summer that can troubleshoot product issues, reschedule order deliveries, manage Geek Squad subscriptions, and more; in-store and digital customer-service associates are also gaining gen-AI tools to better serve customers anywhere they need help.
4. **The Central Texas Regional Mobility Authority** is using Vertex AI to modernize transportation operations for a smoother, more efficient journey.
5. **Etsy** uses Vertex AI training to optimize their search recommendations and ads models, delivering better listing suggestions to buyers and helping sellers grow their businesses.
6. **Golden State Warriors** are using AI to improve the fan experience content in their Chase Center app.
7. **IHG Hotels & Resorts** is building a generative AI-powered chatbot to help guests easily plan their next vacation directly in the IHG One Rewards mobile app.
8. **ING Bank** aims to offer a superior customer experience and has developed a gen-AI chatbot for workers to enhance self-service capabilities and improve answer quality on customer queries.

9. **Magalu**, one of Brazil's largest retailers, has put customer service at the center of its AI strategy, including using Vertex AI to create "Lu's Brain" to power an interactive conversational agent for Lu, Magalu's popular brand persona (the 3D bot has more than 14 million followers between TikTok and Instagram).
10. **Mercedes Benz** will infuse e-commerce capabilities into its online storefront with a gen AI-powered smart sales assistant. Mercedes also plans to expand its use of Google Cloud AI in its call centers and is using Vertex AI and Gemini to personalize marketing campaigns.
11. **Oppo/OnePlus** is incorporating Gemini models and Google Cloud AI into their phones to deliver innovative customer experiences, including news and audio recording summaries, AI toolbox, and more.
12. **Samsung** is deploying Gemini Pro and Imagen 2 to their Galaxy S24 smartphones so users can take advantage of amazing features like text summarization, organization, and magical image editing.
13. The **Minnesota** Division of Driver and Vehicle Services helps non-English speakers get licenses and other services with two-way real-time translation.
14. **Pepperdine University** has students and faculty who speak many languages, and with Gemini in Google Meet, they can benefit from real-time translated captioning and notes.
15. **Sutherland**, a leading digital transformation company, is focused on bringing together human expertise and AI, including boosting its client-facing teams by automatically surfacing suggested responses and automating insights in real time.
16. **Target** uses Google Cloud to power AI solutions on the Target app and Target.com, including personalized Target Circle offers and Starbucks at Drive Up, their curbside pickup solution.
17. **Tokopedia**, an Indonesian ecommerce leader, is using Vertex AI to improve data quality, increasing unique products being sold by 5%.
18. **US News** saw a double-digit impact in key metrics like click-through rate, time spent on page, and traffic volume to its pages after implementing Vertex AI Search.
19. **IntesaSanpaolo**, **Macquarie Bank**, and **Scotiabank** are exploring the potential of gen AI to transform the way we live, work, bank, and invest — particularly how the new technology can boost productivity and operational efficiency in banking. Watch the session to learn more.

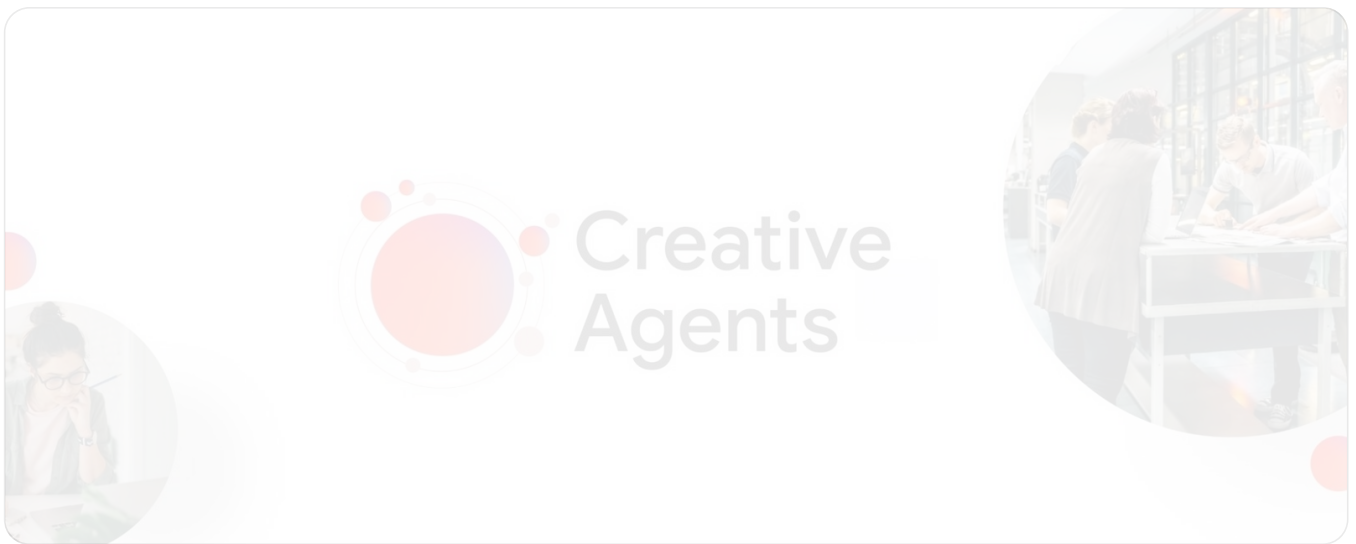


Employee agents help workers be more productive and collaborate better together. These agents can

streamline processes, manage repetitive tasks, answer employee questions, as well as edit and translate critical communications.

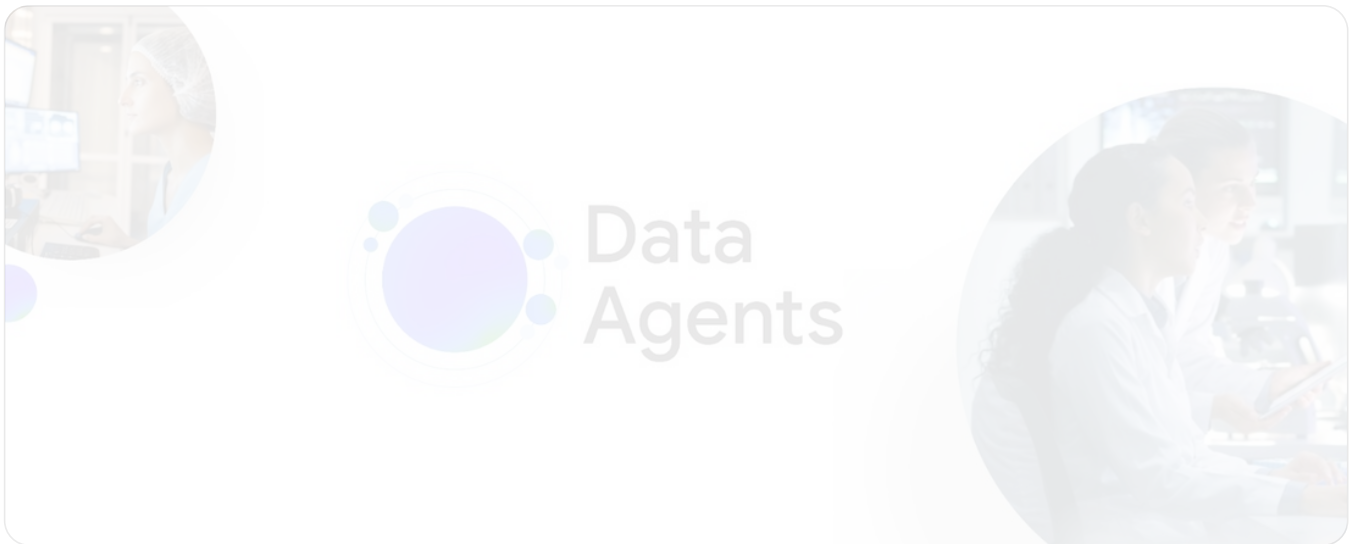
1. **Avery Dennison** empowered their employees with generative AI to enable secure, flexible, and borderless collaboration for enhanced productivity to drive growth.
2. **Bank of New York Mellon** built a virtual assistant to help employees find relevant information and answers to their questions.
3. **Bayer** is building a radiology platform that will assist radiologists with data analysis, intelligent search, and to create documents that meet healthcare requirements needed for regulatory approval. The bioscience company is also harnessing BigQuery and Vertex AI to develop additional digital medical solutions and drugs more efficiently.
4. **Bristol Myers Squibb** is transforming its document processes for clinical trials using Vertex AI and Google Workspace. Now, documentation that took scientists weeks now gets to a first draft in minutes.
5. **BenchSci** develops generative AI solutions empowering scientists to understand complex connections in biological research, saving them time and financial resources and ultimately bringing new medicine to patients faster.
6. **Cintas** is using Vertex AI Search to develop an internal knowledge center for customer service and sales teams to easily find key information.
7. **Covered California**, the state's healthcare marketplace, is using Document AI to help improve the consumer and employee experience by automating parts of the documentation and verification process when residents apply for coverage.
8. **Dasa**, the largest medical diagnostics company in Brazil, is helping physicians detect relevant findings in test results more quickly.
9. **DaVita** leverages DocAI and Healthcare NLP to transform kidney care, including analyzing medical records, uncovering critical patient insights, and reducing errors. AI enables physicians to focus on personalized care, resulting in significant improvements in healthcare delivery.
10. **Discover Financial** helps their 10,000 contact center representatives to search and synthesize information across detailed policies and procedures during calls.
11. **HCA Healthcare** is testing Cati, a virtual AI caregiver assistant that helps to ensure continuity of care when one caregiver shift ends and another begins. They are also using gen AI to improve workflows on time-consuming tasks, such as clinical documentation, so physicians and nurses can focus more on patient care.
12. **The Home Depot** has built an application called Sidekick, which helps store associates manage inventory and keep shelves stocked; notably, vision models help associates prioritize which actions to take.
13. **Los Angeles Rams** are utilizing AI across the board from content analysis to player scouting.
14. **McDonald's** will leverage data, AI, and edge technologies across its thousands of restaurants to implement innovation faster and to enhance employee and customer experiences.
15. **Pennymac**, a leading US-based national mortgage lender, is using Gemini across several teams including HR, where Gemini in Docs, Sheets, Slides and Gmail is helping them accelerate recruiting, hiring, and new employee onboarding.

16. **Robert Bosch**, the world's largest automotive supplier, revolutionizes marketing through gen AI-powered solutions, streamlining processes, optimizing resource allocation, and maximizing efficiency across 100+ decentralized departments.
17. **Symphony**, the communications platform for the financial services industry, uses Vertex AI to help finance and trading teams collaborate across multiple asset classes.
18. **Uber** is using AI agents to help employees be more productive, save time, and be even more effective at work. For customer service representatives, they've launched new tools that summarize communications with users and can even surface context from previous interactions, so front-line staff can be more helpful and effective
19. **The U.S. Dept. of Veterans Affairs** is using AI at the edge to improve cancer detection for service members and veterans. The Augmented Reality Microscope (ARM) is deployed at remote military treatment facilities around the world. The prototype device is helping pathologists find cancer faster and with better accuracy.
20. **The U.S. Patent and Trademark Office** has improved the quality and efficiency of their patent and trademark examination process by implementing AI-driven technologies.
21. **Verizon** is using generative AI to help teams in network operations and customer experience get the answers they need faster.
22. **Victoria's Secret** is testing AI-powered agents to help their in-store associates find information about product availability, inventory, and fitting and sizing tips, so they can better tailor recommendations to customers.
23. **Vodafone** uses Vertex AI to search and understand specific commercial terms and conditions across more than 10,000 contracts with more than 800 communications operators.
24. **WellSky** is integrating Google Cloud's healthcare and Vertex AI capabilities to reduce the time spent completing documentation outside work hours.
25. **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. It's also using Gemini to create next-generation promotions, as well as for quickly assisting customer service reps in summarizing all previous customer interactions in real time.
26. **Box, Typeface, Glean, CitiBank, and Securiti AI** discuss developing AI-powered apps across the enterprise, with measurable returns on investment for marketing, financial services, and HR use cases.
27. **Highmark Health** and **Freenome** join Bristol Myers Squibb to [explore](#) how AI can improve efficiency and innovation across care delivery, drug discovery, clinical trial planning, and bringing medicines to market.



Creative agents can expand your organization with the best design and production skills, working across images, slides, and exploring concepts with workers. Many organizations are building agents for their marketing teams, audio and video production teams, and all the creative people that can use a hand. With creative agents, anyone can become a designer, artist, or producer.

1. **Belk ECommerce** is using generative AI to craft better product descriptions, a necessary yet time-consuming task for digital retails that has often been done manually.
2. **Canva** is using Vertex AI to power its Magic Design for Video, helping users skip tedious editing steps while creating shareable and engaging videos in a matter of seconds.
3. **Carrefour** used Vertex AI to deploy Carrefour Marketing Studio in just five weeks — an innovative solution to streamline the creation of dynamic campaigns across various social networks. In just a few clicks, marketers can build ultra-personalized campaigns to deliver customers advertising that they care about.
4. **Major League Baseball** continues to innovate its Statcast platform, so teams, broadcasters, and fans have access to live in-game insights.
5. **Paramount** currently relies on manual processes to create the essential metadata and video summaries used across its Paramount+ platform for showcasing content and creating personalized experiences for viewers. VertexAI Text Bison is now helping to streamline this process.
6. **Procter & Gamble** used Imagen to develop an internal gen AI platform to accelerate the creation of photo-realistic images and creative assets, giving marketing teams more time to focus on high-level planning and delivering superior experiences for its consumers.
7. **WPP** will integrate Google Cloud's gen AI capabilities into its intelligent marketing operating system, called WPP Open, which empowers its people and clients to deliver new levels of personalization, creativity, and efficiency. This includes the use of Gemini 1.5 Pro models to supercharge both the accuracy and speed of content performance predictions.



Data agents are like having knowledgeable data analysts and researchers at your fingertips. They can help answer questions about internal and external sources, synthesize research, develop new models — and, best of all, help find the questions we haven't even thought to ask yet, and then help get the answers.

1. **AI21 Labs** offers a BigQuery integration called Contextual Answers that allows users to query data conversationally and get high-quality answers quickly
2. **Anthropic** has partnered with Google Cloud to offer its family of Claude 3 models on Vertex AI — providing organizations with more model options for intelligence, speed, cost-efficiency, and vision for enterprise use cases.
3. **The Asteroid Institute** is using AI to discover hidden asteroids in existing astronomical data. This is a major focus for astronomers researching the evolution of the Solar System, investors and businesses hoping to fly missions to asteroids, and for all of us who want to prevent future large asteroid impacts on Earth.
4. **Contextual** is working with Google Cloud to offer enterprises fully customizable, trustworthy, privacy-aware AI grounded in internal knowledge bases.
5. **Cox 2M**, the commercial IoT division of Cox Communications, is able to make smarter, faster business decisions using AI-powered analytics.
6. **Essential AI**, a developer of enterprise AI solutions, is using Google Cloud's AI-optimized [TPU v5p accelerator chips](#) to train its own AI models.
7. **Generali Italia**, Italy's largest insurance provider, used Vertex AI to build a model evaluation pipeline that helps ML teams quickly evaluate performance and deploy models.
8. **Globo**, one of Brazil's largest media networks, is using Service Extensions and Media CDN to fight piracy during live events by blocking pirated streams in real time.
9. **Hugging Face** is collaborating with Google across open science, open source, cloud, and hardware to enable companies to build their own AI with the latest open models from Hugging Face and Google Cloud hardware and software.
10. **Kakao Brain**, part of Korean technology company Kakao Group, has built a large-scale AI language model that is the largest Korean language-specific LLM in the market, with 66 billion parameters. They've also developed a text-to-image generator called Karlo.

11. **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.
12. **McLaren Racing** is using Google AI to get up-to-the-millisecond insights during races and training to gain a competitive edge.
13. **Mercado Libre** is testing BigQuery and Looker to optimize capacity planning and reservations with delivery carriers and airlines to fulfill shipments faster.
14. **Mistral AI** will use Google Cloud's AI-optimized infrastructure, to further test, build, and scale up its LLMs, all while benefiting from Google Cloud's security and privacy standards.
15. **MSCI** uses machine learning with Vertex AI, BigQuery and Cloud Run to enrich its datasets to help our clients gain insight into around 1 million asset locations to help manage climate-related risks.
16. **NewsCorp** is using Vertex AI to help search data across 30,000 sources and 2.5 billion news articles updated daily.
17. **Orange** operates in 26 countries where local data must be kept in each country. They are using AI on Google Distributed Cloud to improve network performance and deliver super-responsive translation capabilities.
18. **Spotify** leveraged Dataflow for large-scale generation of ML podcast previews, and they plan to keep pushing the boundaries of what's possible with data engineering and data science to build better experiences for their customers and creators.
19. **UPS** is building a digital twin of its entire distribution network, so both workers and customers can see where their packages are at any time.
20. **Workday** is using natural language processing in Vertex Search and Conversation to make data insights more accessible for technical and non-technical users alike.
21. **Woven — Toyota's** investment in the future of mobility — is partnering with Google to leverage vast amounts of data and AI to enable autonomous driving, supported by thousands of ML workloads on Google Cloud's AI Hypercomputer. This has resulted in resulting in 50% total-cost-of-ownership savings to support automated driving.
22. **Broward County, Florida**, and **Southern California Edison** are using geospatial capabilities and AI to improve infrastructure planning and monitoring, generate new insights, and create regional resilience for communities facing climate challenges today and tomorrow.
23. **Kinaxis** and **Dematic** are building data-driven supply chains to address logistics use cases including scenario modeling, planning, operations management, and automation.
24. **NOAA** and **USAID** are among the U.S. government agencies using Google Cloud AI to unlock critical data insights to streamline operations and improve mission outcomes — all with an emphasis on [responsible AI](#). Watch the session to learn more.



Code agents are helping developers and product teams to design, create, and operate applications faster and better, and to ramp up on new languages and code bases. Many organizations are already seeing double-digit gains in productivity, leading to faster deployment and cleaner, clearer code.

1. **Capgemini** has been using Code Assist to improve software engineering productivity, quality, security, and developer experience, with early results showing workload gains for coding and more stable code quality.
2. **Commerzbank** is enhancing developer efficiency through Code Assist's robust security and compliance features.
3. **Quantiphi** saw developer productivity gains of more than 30% during their Code Assist pilot.
4. **Replit** developers will get access to Google Cloud infrastructure, services, and foundation models via Ghostwriter, Replit's software development AI, while Google Cloud and Workspace developers will get access to Replit's collaborative code editing platform.
5. **Seattle Children's** hospital is using AI to boost data engineering productivity and accelerate development.
6. **Turing** is customizing Gemini Code Assist on their private codebase, empowering their developers with highly personalized and contextually relevant coding suggestions that have increased productivity around 30 percent and made day-to-day coding more enjoyable.
7. **Wayfair** piloted Code Assist, and those developers with the code agent were able to set up their environments 55 percent faster than before, there was a 48 percent increase in code performance during unit testing, and 60 percent of developers reported that they were able to focus on more satisfying work.



Security agents assist security operations by radically increasing the speed of investigations, automating monitoring and response for greater vigilance and compliance controls. They can also help guard data and models from cyberattacks, such as malicious prompt injection.

1. **BBVA** uses AI in Google SecOps to detect, investigate, and respond to security threats with more accuracy, speed, and scale. The platform now surfaces critical security data in seconds, when it previously took minutes or even hours, and delivers highly automated responses.
2. **Behavox** is using Google Cloud technology and LLMs to provide industry leading regulatory compliance and front office solutions for financial institutions globally.
3. **Charles Schwab** has integrated their own intelligence into the AI-powered Google SecOps, so analysts can better prioritize work and respond to threats.
4. **Fiserv's** security operations engineers create detections and playbooks with much less effort, while analysts get answers more quickly.
5. **Grupo Boticário**, one of the largest beauty retail and cosmetics companies in Brazil, employs real-time security models to prevent fraud and to detect and respond to issues.
6. **Palo Alto Networks'** Cortex XSIAM, the AI-driven security operations platform, is built on more than a decade of expertise in machine-learning models and the most comprehensive, rich, and diverse data store in the industry. Backed by Google's advanced cloud infrastructure and advanced AI services, including BigQuery and Gemini models, the combination delivers global scale and near real-time protection across all cybersecurity offerings.
7. **Pfizer** can now aggregate cybersecurity data sources, cutting analysis times from days to seconds.

To find even more customers using our AI tools to build agents and solutions for their most important enterprise projects, visit [the Google Cloud customer hub](#) and watch [the Next '24](#)

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