Games

Your quick-start guide to generative AI

Google Cloud

Take your game development to the next level with gen AI.

$1 Billion

Estimated impact of generative AI use cases in the games industry (North America)[1]

Today's gamers seek fun, hyper-personalized experiences. And game companies are racing to keep up with these growing expectations. Leading companies are already deploying gen AI to boost productivity, content creation, and audience engagement.

By expanding the range of workflows, novel player experiences, and new avenues for monetization, gen AI can help you drive player engagement while keeping costs down.

Gen AI use cases apply across the gaming value chain, spanning content creation, delivery, distribution, and compliance.

In this guide, we explore the most promising use cases of gen AI for the games industry and share the critical considerations for starting your journey today.

1. McKinsey. (2023). The economic potential of generative AI: The next productivity frontier.

Consider these strategies to realize value from gen AI in your organization.

1. Scale content creation, production, and management →

2. Improve gameplay and personalize player experiences →

3. Enhance employee productivity →

Ready to go?

01 Scale content creation, production, and management.

Game developers are focused on optimizing and streamlining the game development to engage players. To do so, gen AI's capabilities can uplevel content creation across the value chain, keeping players engaged.

For game creators looking for creative assistance, gen AI can help with story building and idea visualization, while quickly building game worlds, assets, quests, and characters, leaving more time for creativity. Gen AI allows new ideas to move from text to images — and even to videos — at a rapid clip.

For players, gen AI can provide quicker content updates that are customized to their play preferences and style. This helps create more immersive and challenging games, with new and complex content.

20-45%

reduction in software engineering related-costs for game companies with gen AI[2]

2. McKinsey. (2023). Technology's generational moment with generative AI: A CIO and CTO guide.

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Getting started
Scaling content

Pursue quick wins while keeping the end goal in mind.

Even with big investments, game companies can struggle to keep up with increasing player demand for new content.

Gen AI can accelerate and simplify the development process — and increase the effectiveness of building game worlds that fully immerse players — by accelerating content creation.

> ### Key use cases
>
> ✏️ Creative assistance
>
> 🔍 Internal document and content search
>
> ☰ Content summarization and metadata

Here are a few areas your organization can benefit from gen AI:

Create content faster
Gen AI can accelerate game content creation, unlocking new ways to design and create text, illustrations, 3D assets, SFX, and more. Not only does this take away the need for high-level technology in the initial stage of game development, it also helps with long-term aspects of game development, such as idea generation and experience personalization.

Develop effective roadmaps
In the short term, gen AI can help in game play and character design, art asset development, and SFX generation. In the long term, it can help generate highly immersive, dynamic, and interactive virtual worlds, adaptable games based on a player's journey, and complex animations and simulations.

Optimize content value chains
In the pre-production stage, gen AI helps accelerate tasks like performance analysis, and market and persona research — helping creators quickly build unique narratives, concepts, and visualizations.

In game content production, gen AI helps with creating even the most complex of assets. It helps characters, narratives, audio, scripting, and dynamic gameplay.

In post-production, gen AI can accelerate and simplify activities such as game testing, the detection of defects and inefficiencies, and real-time game adaptations like in-game localization.

Drive creativity and innovation.

Building a dedicated gen AI adoption team — one with an "action office" to coordinate strategy and initiatives — can be beneficial. To start, these teams can roll out off-the-shelf tools that are easy for employees to pick up, then work on upskilling employees on more complex tools.

> Vertex AI helps simplify the game development process and speeds up the adoption of gen AI solutions.

Balance the risk-reward trade-off.

Game companies face many unique risks around topics like consumer privacy, gamer experience, and content sensitivity. With gen AI's ability to rapidly create new and personalized content, it will be important to set up guardrails to ensure compliance.

> Text Moderation is powered by PaLM 2 LLM to help you identify and avoid a wide range of harmful content, including hate speech, bullying, and sexual harassment.[1]

> Google's responsible AI guidelines offer recommended practices for communicating AI usage with customers.

Implement monitoring policies for newly generated content to ensure compliance with internal and external content guidelines. Gen AI models can be trained on developer-specific rules, and these models can be used to can identify a wide range of harmful content, including hate speech, bullying, and sexual harassment.

Tracking the performance of those gen AI tools will help you avoid inappropriate content and targeting.

Explain when and how AI is used to your players to build trust. Do this by proactively addressing and establishing controls and guardrails, both technically and in the context of character discrimination.

Unlock disparate data sources.

Often, data is siloed or locked within legacy systems, letting strategic values and insights fall by the wayside. Gen AI can unlock and understand data across interactive prompts, player preferences, and game parameters to create multiple iterations of unique level layouts or storylines.

The next step is combining structured and unstructured data to gain deeper insights. And gen AI can do just that. Unstructured information, such as chat messages, service interactions, and social posts can be integrated with structured data from players. This helps you access real-time engagement analytics that can enhance player profiles and platforms.

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02 Improve gameplay and personalize player experiences.

From tailored recommendations to storylines based on preferences and unique game journeys, gamers' expectations of game developers are rising. Game companies are increasingly focused on hyper-personalizing the game and game-adjacent experiences to drive player engagement.

For game creators, marketers, and publishers, gen AI can automate difficult tasks across the value chain, including player research, ad development and deployment, and personalized content creation. For example, Gen AI can help generate interactive content based on the explicit or implicit actions of players, from instantly generated new items and levels to in-game characters that can have dynamic discussions.

For game companies, gen AI represents a paradigm shift. It creates the opportunity to provide personalized and real-time interactive experiences that drive higher engagement, reduce churn, and improve monetization with in-game purchases and ad revenues.

Key use cases

👍 Content recommendations

🔍 Content search experiences

💬 Branded consumer interactions

Getting started
Personalization

Prioritize players' needs.

71%

of consumers expect companies to deliver personalized interactions[3]

77%

of consumers believe that immersive experiences will influence how they engage with a brand after purchasing, using, and servicing their product[4]

There are a number of player interaction modes, both within a game and in the broader gaming ecosystem, that are critical to engaging players on an ongoing basis. Targeting the highest priority areas for your players will lead to the fastest returns on investment. Leading game companies are looking at the following:

Game discovery is a key part of player satisfaction. By unlocking dormant and cross-platform data, gen AI helps companies tap into their data to generate deeper insights on gameplay and player preferences, faster. This can help you provide more personalized recommendations to engage and re-engage players.

The in-game experience sits high on the list for game companies. Gen AI can help build intelligent non-playable characters (NPC) for personalized and real-time responses to players and provide bespoke challenges, levels, and narratives according to a player's preferences. Gen AI can also improve in-game campaign management and optimize in-app purchase offers based on player past behavior and spending patterns.

Content engagement with hyper-personalization offers players the dynamic playing experience they seek. Gen AI helps create dynamic content and personalized features like in-game conversations, reactive music, and novel images.

Immersive and interactive experiences in the broader gaming ecosystem increases player engagement and player retention. Gen AI helps decrease the time and effort it takes to provide these experiences. These tools can help companies create and curate live-chat community platforms across modalities (such as text and voice) and even languages.

Vertex AI helps create highly-personalized recommendations like in-game purchases for avatars and next step actions or battles.

3. McKinsey. (2021). The value of getting personalization right—or wrong—is multiplying.
4. Capgemini. (2023). Immersive Experiences – The New Frontier Of Commerce.

Getting started
Efficient operations

Balance the risk-reward trade-off.

All new technologies come with inherent risks. It's important to test early AI outputs, monitor the performance of gen AI tools to promote positive game experiences among the player community.

When deploying new gen AI solutions, adversarial security testing, also known as "red teaming", can be used to stress-test new use cases, internally identifying vulnerabilities to attacks. Google uses these "ethical hacks" to test its AI systems and support its new Secure AI Framework.

For game companies, Gen AI can also de-risk existing operations. Gen AI can be used to monitor player voice and text channels or user-generated content to rapidly flag content that may not align with community guidelines or policies.

Invest in data and prioritize the data that matters most.

Games are unique among industries in that games today are digital by nature. As such, game companies tend to collect and store a much higher volume of data, including purchase behavior, in-game activities, chat and voice logs, user-generated content, and help desk tickets. A lot of this data sits unused.

Gen AI can help you unlock dormant data sets. By analyzing and combining both structured and unstructured player data, companies can develop insights about your player bases on a very granular level. This can allow you to create personalized recommendations and experiences for your players, drive monetization, and inform product and content roadmaps.

BigQuery helps game developers generate real-time insights from huge amounts of player and game data.

Canva

Canva launched Translate and what that enables you to do with just a few clicks is turn any of your designs into over a hundred languages. Magic Design for Video helps you skip over editing by creating shareable, engaging, and professional videos in a matter of seconds.

[Watch the full story](#)

03 Enhance employee productivity.

In an industry driven by creativity, innovation, and tight project deadlines, efficient collaboration and high-performing internal operations are essential.

For employees, gen AI can help make coding more efficient across development and testing. It also helps customer service agents automate routine tasks like addressing in-game complaints while automating office operations like drafting and reviewing legal contracts. For those in creative roles, gen AI can make content generation and development faster and more efficient.

For game companies, gen AI can fast-track production, reducing both engineering and customer costs. Across the games industry, gen AI is expected to yield an estimated saving of $50 million in customer service modernization in North America.[1]
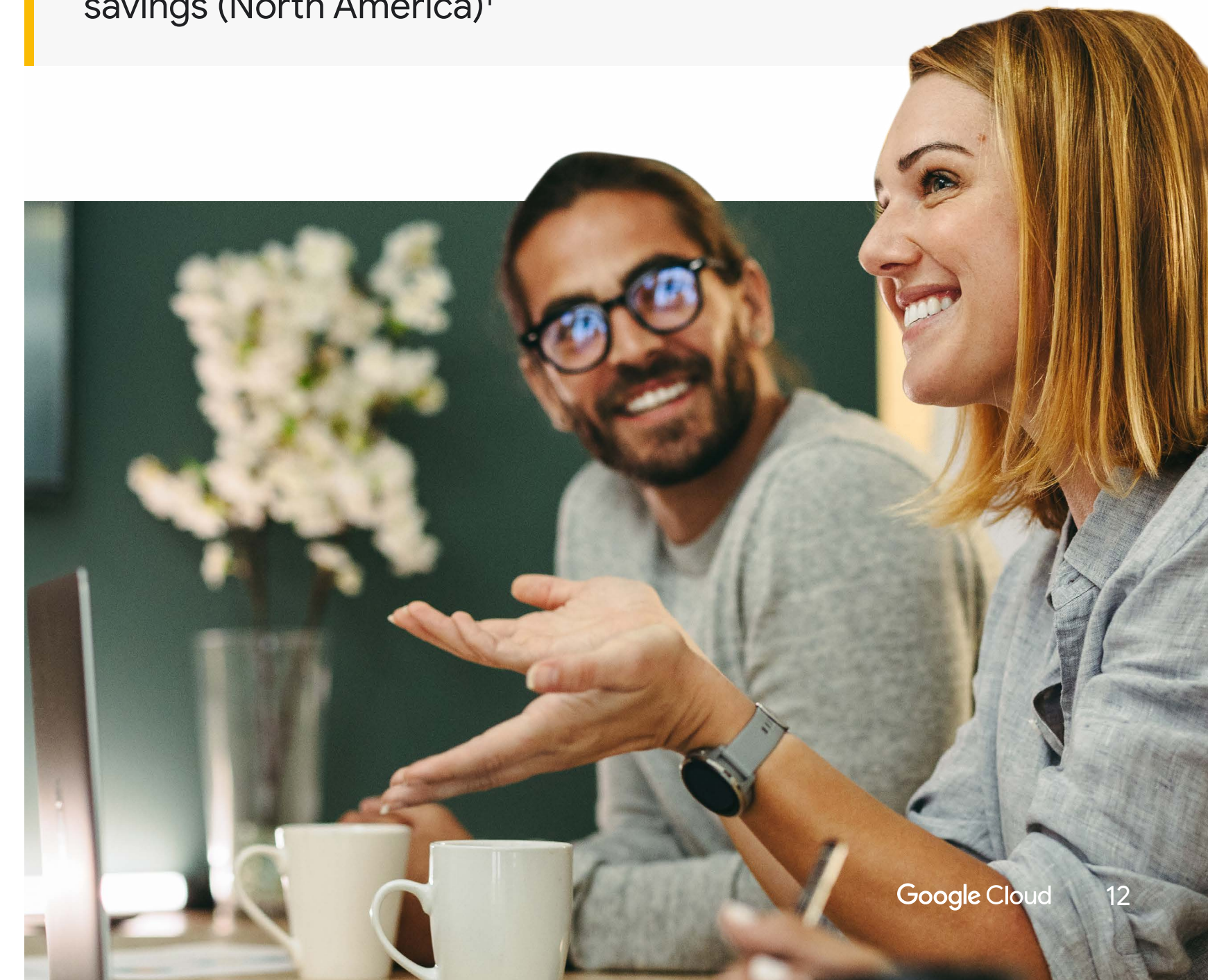
$80–160 million

economic potential of gen AI in developer productivity (North America)[1]

50%

reduction in human-serviced contacts with gen AI[1]

$30–50 million

economic potential of gen AI back office savings (North America)[1]

Getting started
Employee productivity

Solve employee pain points.

Game companies can use gen AI to help solve what employees care about most. Start by identifying the biggest process challenges employees face.

For example, developers and product managers need tools that help them identify coding errors and streamline manual writing and documentation. This will empower them to drive productivity and creativity, and speed up high-quality coding.

Solutions that allow for tool customization are a priority for developers, their coding efficiency, and their ability to provide an integrated experience across the software development lifecycle.

Gen AI can also be leveraged to help with talent retention across customer and employee service agents, developers, and the back office.

Empower your employees.

Investing in your people will help allow you to make the most of gen AI. Coach your employees around prompt generation, when to leverage AI tools, and how to use them safely in customer-facing environments. Customer service agents can act as a 'human-in-the-loop' to provide expert guidance to customers on complex cases and help prevent bias.

To plan for effective change management, communicate new responsibilities to your employees, update internal policies in line with changing regulations, and create a culture focused on the responsible use of gen AI.

Key use cases

⚙ Marketing process automation

📈 HR, Finance, and Legal productivity

〈 〉 Improved coding efficiency

📋 Customer service modernization

Vertex AI can help developers tune and customize underlying models and connect them to the Gemini experience.

Be bold and responsible.

Take a holistic approach to responsible AI. Enact an organization-wide strategy and enterprise-wide controls that encourage thoughtful and safe adoption and scaling of new tools.

Establish a Center of Excellence as the single source of truth for internal policies around responsible AI. This function might focus on training modules for employees, handbooks, and stakeholder management.

And, to build trust and transparency, always explain when and how AI is used. For example, Google watermarks images generated by Google AI tools, and offers image markups for publishers to indicate when an image is AI-generated.

See Google's responsible AI guidelines.

Know your AI technology.

Learning about the tech tooling providers helps you understand how the solution will integrate with your existing infrastructure and back-end systems. This will drive seamless workflows and data exchanges. Before integration, it's important to identify the appropriate technical assets that gen AI solutions will rely on and assign the right employees to gather this information.

Google Cloud's guidelines for gen AI provide best practice recommendations and solutions to help integrate policies on data governance and privacy, security and compliance, and sustainability across the ML lifecycle.

Unify data for in-depth insights into consumer behavior. Use multimodal data to reach harder-to-engage groups like non-native speakers or those with disabilities, with bespoke and relevant content. This data will empower your team to more easily provide personalized content recommendations to customers.

Support experimentation among the team to keep up with fast-changing technology in the games industry. Designating a small team to constantly engage in proof-of-concept tests and track the latest industry research can help you do this.

Game companies can consider investing in gen AI for readiness and skills training, including prompt articulation for content creation. This can further enhance your team's productivity.

Get started with gen AI for games.

We've covered a number of considerations for adopting gen AI in your organization. Here are some key steps that you can prioritize, today:

Align on vision and commitment from the leadership team. By prioritizing key domains, based on impact and transformation feasibility as well as business and P&L implications.

Assess foundational capabilities for gen AI to make sure you have the right people, technology, and models in place.

Create a roadmap by identifying pilot use cases in prioritized domains and planning for scaled use cases.

Plan for company-wide adoption ensuring skill building and responsible AI practices are at the core.

Time to take action with gen AI?

When a new technology moves as fast as gen AI, it can be hard to keep up. Google Cloud can help you solve for all the considerations outlined in this guide.

Our gen AI tools are backed with frameworks, tools, and governance structures to help you hit the ground running.

→ **Contact us** to set up time to discuss how to get started on your gen AI journey.

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