

# Trendanalyse Generative AI

**Main question:** What impact / possibilities does generative AI have on the creative sector and marketing?

**Sub questions:**

- When did Generative AI become trending on a global scale?
- What are the possibilities of generative AI for the creative and marketing sector?
- What is the current market value of Generative AI?
- Who are the key players in generative AI?
- What impact does generative AI have on the creative sector?
- Where is generative AI already used in the marketing sector?
- What can we expect in the coming years?

**Methode:** Library research, Trend analysis

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## Introduction

For my graduation project I will investigate how generative AI can be used within GroupM. The reason for this being that AI has the potential to automate progresses within GroupM easier and efficiently. It has lots of business potential and is for this reason important to look into possible future applications.

For this research I will be diving deeper into the context of why generative AI is trending. By getting the insights of these findings I will understand the relevance and even urgency of why GroupM should invest/research into these new technologies and even incorporate them into their workflow.

# When did Generative AI become trending on a global scale?

To understand why Generative AI is trending we need to know when it started. With the help of Google trends I will look into when a specific search query is popular.

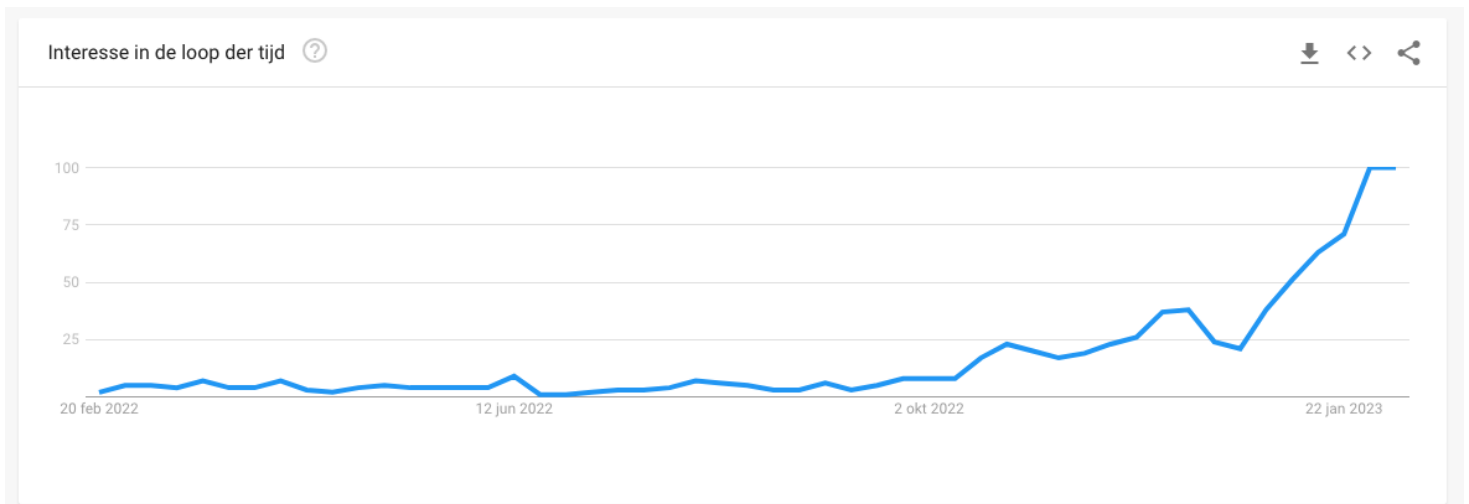


Figure 1: Generative AI Google trends worldwide 12mnd. (Google, 2023)

In figure 1 we can see around three instances where the search term for generative AI was increased. The first being around October - November 2022. The second in December 2022. The third starting in December until now. We can see that around December something big happened and the general interest went skyrocketing. The cause being the release of ChatGPT by OpenAI.

ChatGPT went viral after users experienced first hand the possibilities ChatGPT offers. You can find it on TikTok, Instagram, Google, everyone is talking about ChatGPT. The reason for this being that it is available for everyone and how easy it is to use the tool. An example of how ChatGPT is used: writing articles, papers, blogs, etc. Everything text related can be generated with ChatGPT. Often you cannot distinguish if it is written by this AI. (DePeau-Wilson, 2023)

The possibilities are endless how ChatGPT can be used. After the release of ChatGPT generative AI became more widely known. Not only the possibilities but also that it has become widely accessible for the public to use. Generative AI is not new but the way you can communicate with it right now is.

## What are the possibilities of generative AI for the creative and marketing sector?

Generative AI has many potential applications within the creative/marketing sector. As it can produce new content and is available for everyone. In every creative process stage AI could possibly enhance the performance of the user. Which leads to them working more efficiently and effectively.

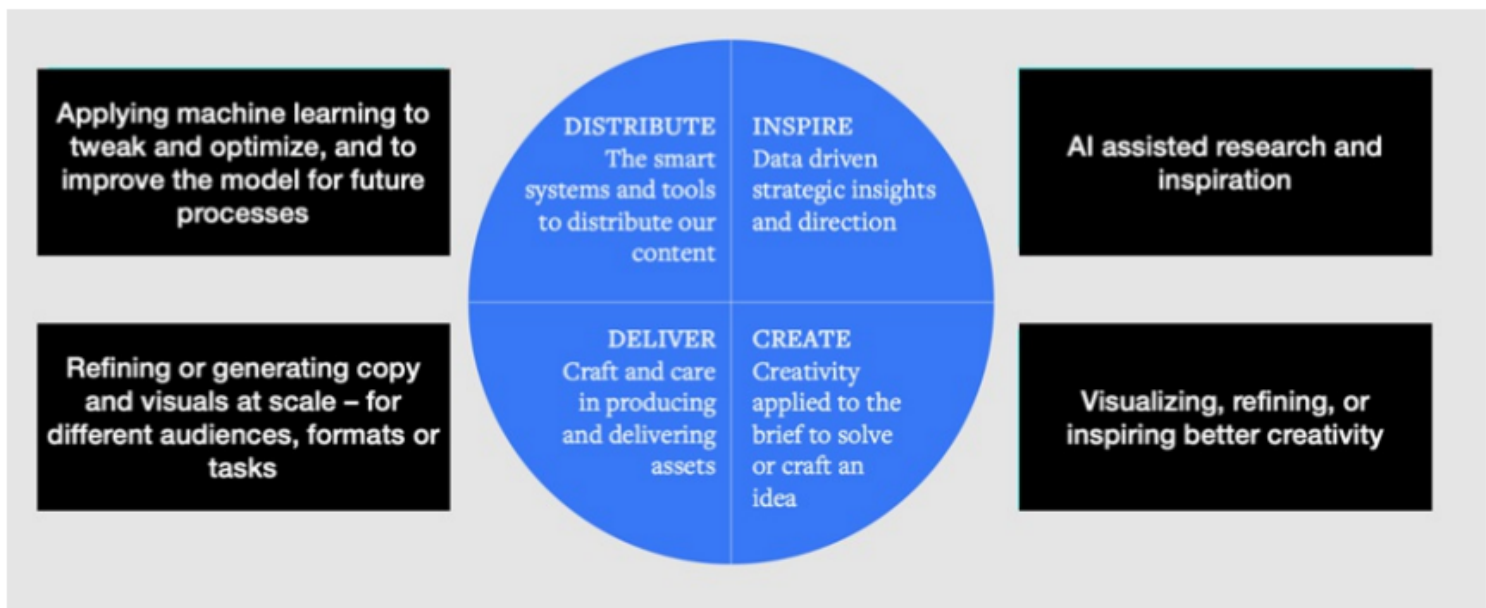


Figure 2: Generative AI in different creative process stages.

### **Inspire:** Accelerating research, shaping first drafts

- Text generators can help with researching through quickly summarizing vast amounts of text. It can give propositions of how things could be done, give new insights or help with grammar / writing.
- It can help with your thinking in different directions.
- It is great for first drafts of a concept, story, etc. Making it visible will make initial ideas more appealing for stakeholders.

### **Create:** A creative partner where you can spar with and generate new ideas, or refine and visualize.

- It can help with getting inspiration, this could mean possible mockups for a product, moodboards for a brand, etc. It can also help with writing phrases, product descriptions.
- Helps with getting inspiration and making things quickly visible.

### **Deliver:** Upscaling assets, refining designs, SEO content, web copy, etc.

- Generative AI can easily make multiple versions of texts that have to be written about. It can be used for inspiration with copy text.
- Also great for older content to be upscaled.
- Can easily create long descriptions on simple prompts.

**Distribute:** Version control, checking, optimizing, analyzing, performance.

- Generative AI can check vast amounts of data and summarize it more efficiently than humans. This is great for analytics and performance checking. Based on results you can fine tune your projects. Based on the received data it is easier to make decisions that are relatively low risk.

In general generative AI has many potential applications within the creative sector as it can enhance performance of the users. Although it can be a helpful tool there are still limitations and problems. It is therefore always advisable to keep it as a helptool and not entirely depend on generative AI to create the work.

## What is the current market value of Generative AI?

The global generative AI market size was valued at USD 8.0 billion in 2021. (Grand View Research, 2022)

The many possibilities with generative AI is driving the demand for these technologies among industries. These possibilities include modernizing workflows within companies, the advancement in highly-realistic images, videos output and more.

Reportlinker announces in their report that between 2022 - 2030 the market for generative AI is expecting to expand at a CAGR (Compound Annual Growth Rate) of 34.6%. Meaning that in 2030 the market size for generative AI will reach USD 109.37 billion. (Grand View Research, 2022)

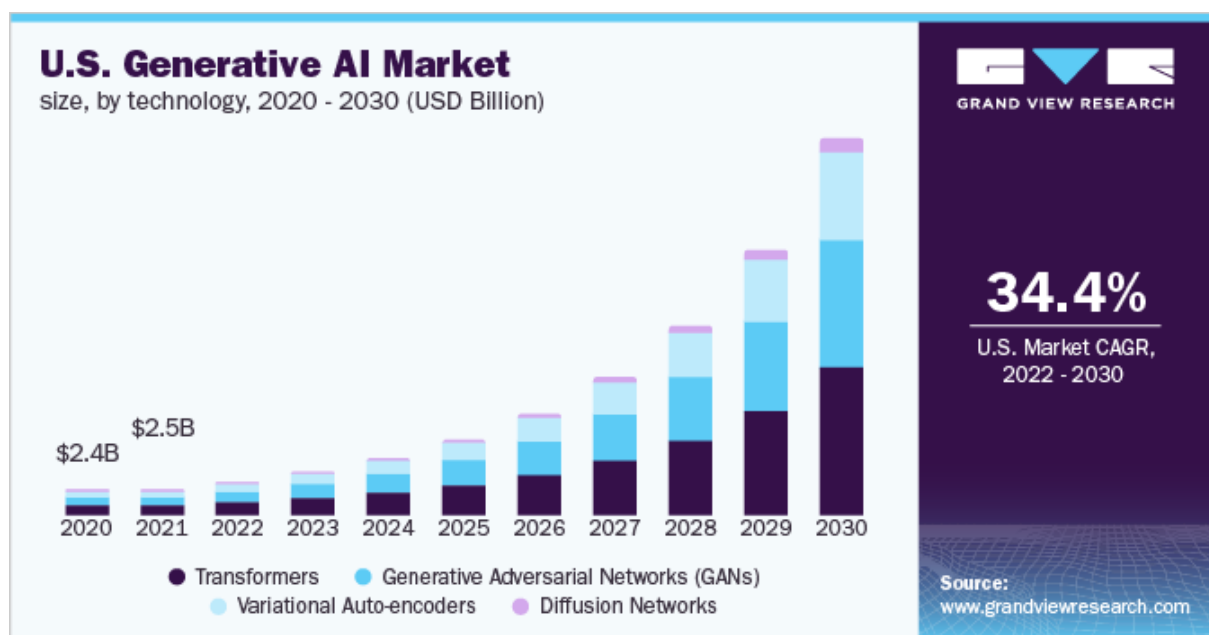


Figure 3: Generative AI market in 2022 - 2030 (Grandviewresearch, 2022)

The COVID-19 pandemic had a positive impact on the generative AI market and digitalisation of different industries. Many organizations adopted Machine Learning and Artificial Intelligence as a response to the pandemic. (Reportlinker, 2022) Key players in the generative AI market such as Microsoft, IBM, Google LLC and Amazon Web Services Inc saw growth in their sales during the pandemic. The demand for AI technologies and modernization of workflows accelerated the progress of generative AI applications. (Globe News Wire, 2023)

# Who are the key players in generative AI?

OpenAI is the best-known company that builds generative AI. The industry consists of two players. One provides AI infrastructure, including cloud computing and core engines. The other one adapts these models and uses them for specific purposes through applications. (Wurmser, 2023)

## Google

Google is a leader in generative AI. They have in their name several important models such as PaLM (Pathways Language Model), LaMDA (Language Model for Dialogue Applications) invented. They also have several models that generate synthetic outputs such as images, video, music, speech and code.

Google sees ChatGPT as a problem as they simplified search. This results that people who normally use Google will now ask ChatGPT for answers. Which of course leads to fewer clicks on links and fewer ads to show.

One of their recent developments is Google Bard. Google Bard is similar to OpenAI, a chatbot that can respond to various queries and requests. It is their response to compete with ChatGPT. Bard is only available for trusted users but one of the big advantages is that ChatGPT has information up to 2021 which makes Bard more up-to-date. In the first demo of Bard it made a mistake by providing inaccurate information. (Desk, 2023)

Google has also invested \$300 million into Anthropic, an OpenAI rival. They are officially joining the competition of having the best generative AI. (Silicon Valley Journals, 2023)

## Microsoft

Microsoft is a central investor in OpenAI, and have an exclusive partnership together. Microsoft considers investing 10 Billion dollars into OpenAI. (Browne, 2023)

Microsoft allows OpenAI to offer services via Azure. OpenAI has created together with Microsoft and GitHub the GitHub Copilot. The AI helps you with coding. A simple prompt will write lines of code for you. Although the AI works great, Microsoft has been sued for open-source piracy. The training of this model has used billions of lines of code from public repositories which violate the terms of open-source licenses. This could possibly be an example of what the regulations are going to be for these generative AI's. (Toula, 2022)

This is one of the many projects Microsoft has worked on together with OpenAI. But they have models trained for speech, video, audio, image, etc. They also collaborated together with NVIDIA to create one of the most powerful LLMs, Megatron-turing Natural Language Generation. (Wurmser, 2023)

## Meta

Meta has worked on a conversational engine called BlenderBot. The beta release of this bot has disappointed many due to it being biased and making incorrect statements. Meta also was working on Galactica, a Large Language Model (LLM) that was being trained on millions

of academic papers but was withdrawn from release after just 3 days due to giving incorrect information. (Bastian, 2022)

Although Meta had a few setbacks they had more luck with their image and video generating engines: Make-A-Scene and Make-A-Video.

Meta's Make-A-Scene makes it possible to create output based on text and a sketch. The problem with most generative AI is that the creators don't have much say in the output of their content. A prompt for example: "A bear riding a car" can be interpreted in many ways. The animal is too big or smaller than the car. It could be facing the camera or sideways. Much of the generative process is random. (Wheatley, 2022) They made this tool to give creators more ways to manipulate the output as they had envisioned. Unfortunately Make-A-Scene is not open-source and has limited access for now.

### **Amazon**

Amazon has several models for language, speech and music generation. One example of their music generation being DeepComposer that can create an entire song with a shower melody. It can help with the creative process of generating music. Amazon also offers Amazon Web Services (AWS) hosting many generative AI models. One of them is called Polly that turns text into speech. (Van Rijmenam, 2022)

### **Lots of startups**

Many startups such as OpenAI, Anthropic, Stability AI, Midjourney, AI21 Labs and Cohere all have leading generative AI models. (Wurmser, 2023)

# What impact does generative AI have on the creative sector?

Generative AI has a great impact on the creative sector as it simply can create content faster than a human can. Some examples where it could have impact are:

- **Personalized content:** The new technology can analyze user behavior through big chunks of data meaning that data could be faster collected on the interest of one specific person. By identifying this faster leaves more time to create better personalized marketing.
- **Efficiency:** Generative AI can speed up the process of creating content. Generative AI can generate faster and it has come to a point that the quality is equal to that of a human. Not always. For this reason some tasks can be automated through generative AI leaving more time for other tasks.
- **Cost saving:** Generative AI can modernize workflows meaning that employees can work more efficiently on tasks. When less time is needed for completion of certain tasks more money can be saved.
- **Creativity:** Generative AI has the potential to create new, original content in a way that is difficult or impossible for humans to do. (Andriole, 2023) It can also inspire people to think in different ways than they are used to, leading to many cool original ideas.
- **New business opportunities:** As generative AI becomes better more business opportunities will arise. An example could be that media can be distributed faster and on a wider scale. This is only one example but due to the advancement in this technology the media sector could offer entire new services to their clients. (Van Rijmenam, 2022)



## Where is generative AI already used in the marketing sector?

Generative AI has become widely accessible for the public and has proven that they can produce personalized, quality content such as images, text, video and audio. Which can all be used in advertising. This new technology enables companies to look at new ways of advertising and personalizing content for their users.

There are already great examples of generative AI being used in brand advertising. In March 2021 Lays launched Messi Messages. Using deepfake technology to personalize greetings from Lionel Messi. (Khurana, 2022) The results: in the first 24 hours it made 38 million hits, the site was very popular. This campaign shows how generative AI can personalize content that connects with users on a deeper level than normal advertising. (Lays, 2021)



*Figure 4: Messi messages campaign by Lays (Lays, 2021)*

In October 2021, Bulgari used AI-image generation to create a massive art installation for their Serpentine line. (Bulgari, 2021)

Netflix held a campaign in May 2022 to promote the launch of Love Death + Robots season 3. They used Dream by WOMBO to encourage users to customize logos of LDR. It resulted in 12 million images produced by 2 million users (Khurana, 2022) The speed and scale of this project could never have been feasible by an in-house marketing team.

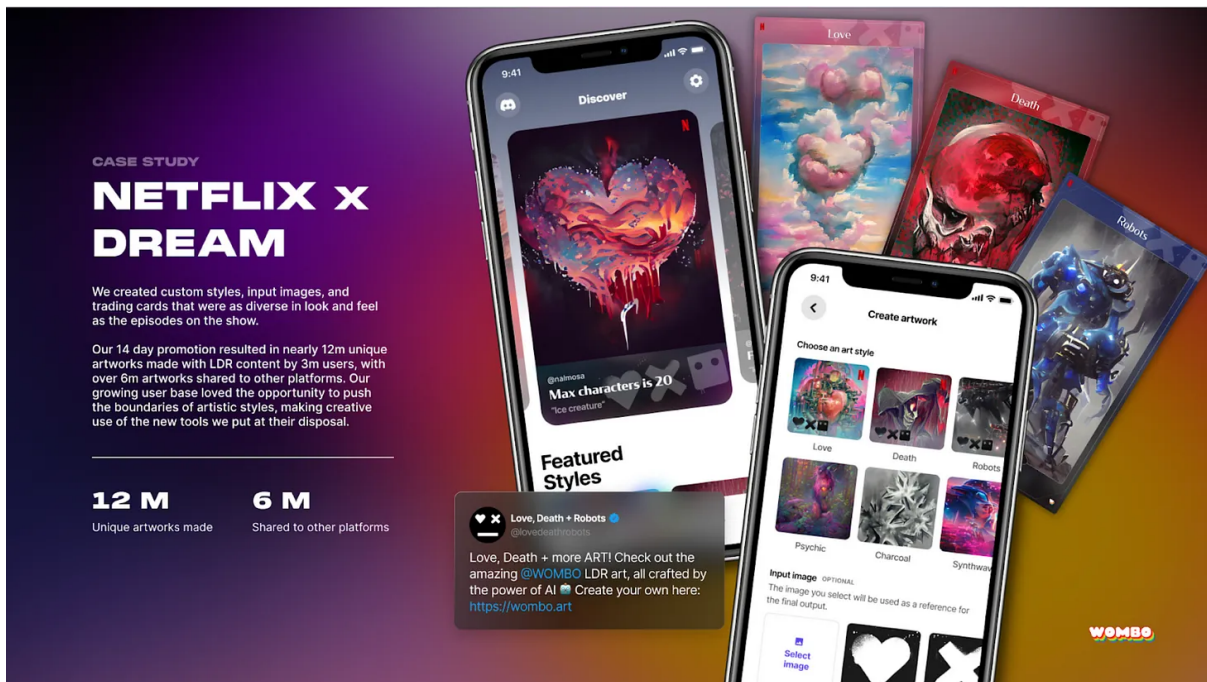


Figure 5: Netflix x Dream generative AI campaign (Khurana, 2022)

Heinz launched a similar campaign in August 2022 using Dall-E 2 to draw ketchup alongside human submission.

Racingnews365 en TDE launched a campaign video for the new F1-season. The video is entirely generated through AI: script is written with ChatGPT, the voice over is made with Murf, music was composed with Soundraw and the video itself is created through Midjourney. This video showed the F1-coureurs in their childhood dreams. (Fonk, 2023)

There are many examples of generative AI being used in advertising. Due to this new technology, new creative ways to make advertising becomes interesting for brands to use. In the examples above it can be very successful when executed correctly.

## Conclusion: What can we expect in the coming years?

Generative AI is going to rapidly evolve over the coming years as the demand for such technologies is rising. This new technology will become more sophisticated and will eventually not be noticed if it is generated by AI or humans. Language generation is already showing significant progress in summarization of text, dialogue generation and story writing. NLP will become more natural and coherent.

Another point for the future is big companies such as Google, Microsoft, Amazon, and more startup companies are working on their own generative AI and investing in these technologies. From each company their tools will improve and eventually will become accessible for the public.

Some companies are already experimenting using generative AI in their advertising campaigns and were very successful. These campaigns show a new way of personalized advertising and is very interesting for the advertising industry to look into. For a company such as GroupM it becomes important to stay ahead of new technologies and make use of them. Generative AI if done correctly can be more engaging than traditional advertising. Making it so interesting to experiment with this technology. For the future more companies will experiment with generative AI based advertising.

Not only in the advertising is generative AI interesting but also to modernize workflows. Generative AI can help speed up the creative process in almost every phase. From inspiring new ideas, actually visualizing, delivering and distribution of this media. It can all be done faster with the help of generative AI.

Generative AI is already having such a big impact on the marketing sector as we speak. It shows new ways on how to make advertising better for people. However this technology is relatively new, it is important to look at long term problems it can oppose. As generative AI is open for the general public it can be used for good or bad. It is for this reason important to look at the limitations of generative AI and possible harm it can do.

## Literature list

Andriole, S. (2023, 4 januari). How Generative AI Will Change Business. All You Have To Do Is Ask. Forbes.

<https://www.forbes.com/sites/steveandriole/2023/01/03/how-generative-ai-will-change-business--all-you-have-to-do-is-ask/>

Bastian, M. (2022, 17 november). Galactica is an open source language model for scientific progress. THE DECODER.

<https://the-decoder.com/galactica-is-an-open-source-language-model-for-scientific-progress/>

Browne, R. (2023, 10 januari). Microsoft reportedly plans to invest \$10 billion in creator of buzzy A.I. tool ChatGPT. CNBC.

<https://www.cnbc.com/2023/01/10/microsoft-to-invest-10-billion-in-chatgpt-creator-openai-report-says.html> Bulgari. (2021, 8 oktober). SERPENTI METAMORPHOSIS - REFIK ANADOL INSTALLATION [Video]. YouTube. <https://www.youtube.com/watch?v=C8o3rZejMt4>

DePeau-Wilson, M. (2023, 3 februari). Peer-Reviewed Journal Publishes Paper Written Almost Entirely by ChatGPT. MedPage Today.

<https://www.medpagetoday.com/special-reports/exclusives/102960>

Desk, O. W. (2023, 8 februari). Can Google Bard Stop Microsoft-Backed ChatGPT's Rise In Conversational AI Market? <https://startup.outlookindia.com/>.

<https://startup.outlookindia.com/analysis/can-google-bard-stop-microsoft-backed-chatgpt-rise-in-conversational-ai-market--news-7424>

Fonk. (2023, 22 februari). Campagnes: Racingnews365 en TDE laten kinderdromen Verstappen en Hamilton zien. Fonkmagazine.nl. Geraadpleegd op 1 maart 2023, van

[https://fonkmagazine.nl/artikelen/campagnes/racingnews365-en-tde-laten-kinderdromen-verstappen-en-hamilton-zien-63332.html?utm\\_source=latest](https://fonkmagazine.nl/artikelen/campagnes/racingnews365-en-tde-laten-kinderdromen-verstappen-en-hamilton-zien-63332.html?utm_source=latest)

Globenewswire. (2023, 5 januari). Generative AI Market Size, Share & Trends Analysis Report By Component, By Technology,, By End-use, By Region And Segment Forecasts, 2022 - 2030. GlobeNewswire News Room. Geraadpleegd op 1 maart 2023, van

<https://www.globenewswire.com/news-release/2023/01/05/2583874/0/en/Generative-AI-Market-Size-Share-Trends-Analysis-Report-By-Component-By-Technology-By-End-use-By-Region-And-Segment-Forecasts-2022-2030.html>

Google. (2023, februari). Generative AI. trends.google.nl. Geraadpleegd op 1 maart 2023, van <https://trends.google.nl/trends/explore?q=generative%20ai>

Grand View Research. (2022). Generative AI Market Size, Growth & Trends Report, 2030. grandviewresearch.com. Geraadpleegd op 1 maart 2023, van

<https://www.grandviewresearch.com/industry-analysis/generative-ai-market-report>

Khurana, R. (2022, 26 oktober). Radical New World of Generative Advertising.

<https://genarrative.substack.com/p/radical-new-world-of-generative-advertising>

Lays. (2021). Lay's: Messi Messages. UNIT9. Geraadpleegd op 1 maart 2023, van <https://www.unit9.com/project/lays-messi-messages/>

Reportlinker. (2022, december). Generative AI Market Size, Share & Trends Analysis Report By Component, By Technology,, By End-use, By Region And Segment Forecasts, 2022 - 2030. www.reportlinker.com. Geraadpleegd op 1 maart 2023, van [https://www.reportlinker.com/p06377946/Generative-AI-Market-Size-Share-Trends-Analysis-Report-By-Component-By-Technology-By-End-use-By-Region-And-Segment-Forecasts.html?utm\\_source=GNW](https://www.reportlinker.com/p06377946/Generative-AI-Market-Size-Share-Trends-Analysis-Report-By-Component-By-Technology-By-End-use-By-Region-And-Segment-Forecasts.html?utm_source=GNW)

Silicon Valley Journals. (2023, 5 februari). Google invests \$300M in generative AI startup Anthropic. siliconvalleyjournals. Geraadpleegd op 1 maart 2023, van <https://siliconvalleyjournals.com/google-invests-300m-in-generative-ai-startup-anthropic/>

Toulas, B. (2022, 4 november). Microsoft sued for open-source piracy through GitHub Copilot. BleepingComputer. <https://www.bleepingcomputer.com/news/security/microsoft-sued-for-open-source-piracy-through-github-copilot/>

Van Rijmenam, M. (2022, 14 november). What is Generative AI, and How Will It Disrupt Society? Dr Mark van Rijmenam, CSP - The Digital Speaker | Strategic Futurist. <https://www.thedigitalspeaker.com/what-is-generative-ai-how-disrupt-society/>

Wheatley, M. (2022, 14 juli). Meta's latest generative AI system creates stunning images from sketches and text. SiliconANGLE. Geraadpleegd op 1 maart 2023, van <https://siliconangle.com/2022/07/14/metas-latest-generative-ai-system-creates-stunning-images-sketches-text/>

Wurmser, Y. (2023, februari). ChatGPT and Generative AI. Insider Intelligence. Geraadpleegd op 1 maart 2023.