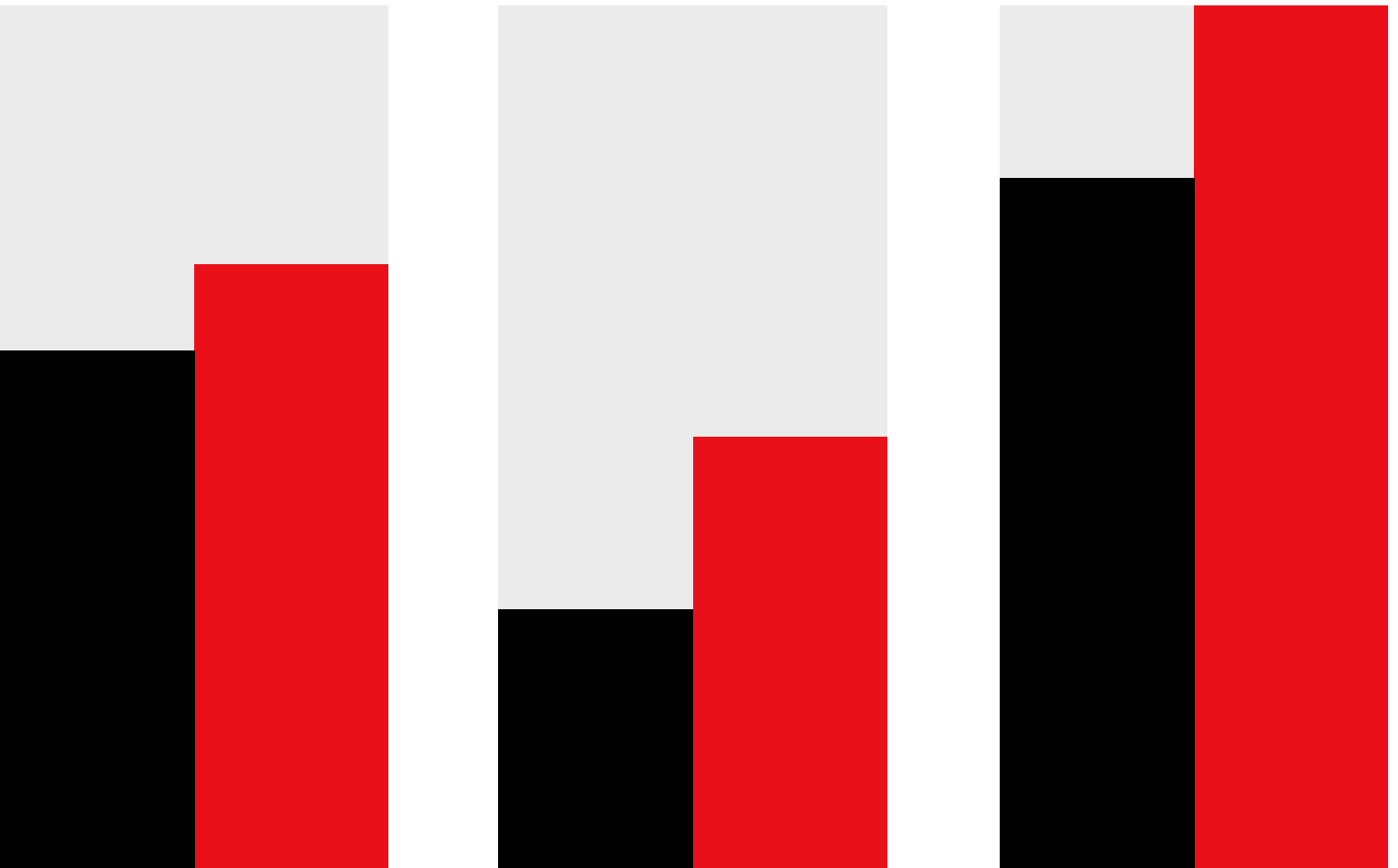INSIDER INTELLIGENCE | eMarketer

Tech Trends to Watch in 2024

Major Changes in Store for Search, Connected Cars, and Immersive Media

Contributors: Chris Keating

Contents

Generative AI will reshape search

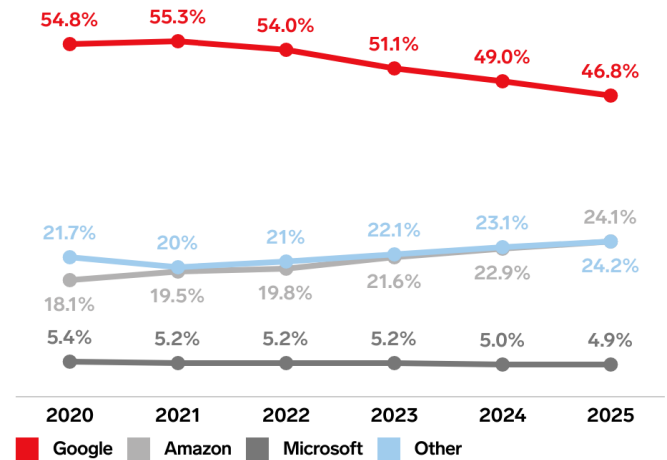**The generative AI (genAI) impact has only just begun.** Despite Google's experiments with generative search and Bing's early embrace of a ChatGPT-based interface, the search market didn't fundamentally change in 2023. That will likely shift in 2024 as Google and others roll out broadly conversational search interfaces based on sophisticated multimodal models that can process voice, images, and other inputs in addition to text.

New models will supercharge existing trends.

- **Visual search already is significant.** Google processes 12 billion monthly visual searches in Lens, and an October Bizrate/eMarketer survey found 7.3% of online shoppers use visual search regularly.

- **Virtual assistants are in line for big upgrades.** Google, Amazon, and Apple all plan upgrades to their assistants—already used by about 43% of the US population, according to our forecast—leading to more voice search in cars, homes, and phones.

- **Retail and social media already expanded their share of search.** Amazon now accounts for 21.6% of search revenues due to its dominant position in product search, according to our forecast, but Walmart, TikTok, Snapchat, and Meta, among others, are all exploring chatbot-powered search. Chatbot platforms such as OpenAI and Anthropic could also add advertising in the future.

Google's Dominant Lead Shrinks as Users Shift Some Search Tasks to Amazon and Social Media
% share of US search ad spending, 2020-2025

	2020	2021	2022	2023	2024	2025
Google	54.8%	55.3%	54.0%	51.1%	49.0%	46.8%
Amazon	18.1%	19.5%	19.8%	21.6%	22.9%	24.2%
Microsoft	5.4%	5.2%	5.2%	5.2%	5.0%	4.9%
Other	21.7%	20%	21%	22.1%	23.1%	24.1%

Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets, and other internet-connected devices; includes contextual text links, paid inclusion, paid listings (paid search), and SEO; net ad revenues after companies pay traffic acquisition costs (TAC) to partner sites
Source: Insider Intelligence | eMarketer Forecast, Nov 2023

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New formats will shake up search advertising. As genAI directly answers questions instead of sending links, there will likely be fewer search ad placements that will be worth more to advertisers. Google is already experimenting with ads beneath and above conversational search answers. Expect a lot of innovation on this front.

Predictions

- **Google faces a huge challenge—but will adjust.** Google is already testing new ad formats in its search genAI experience and is as well placed as any company to figure out how to make money on new types of search.

- **Fragmentation of search advertising will accelerate.** With plugins and APIs, more sites will be able to introduce powerful, contextual search and advertise against it.

- **Supercharged virtual assistants will create new marketing media.** Conservational AI will also make virtual assistants more powerful, likely shifting some search to voice interfaces.

AI 'app stores' will proliferate

Consumers may start to add specialized bots, plugins, and extensions to their preferred search or chatbot platform. The transformation has already begun as several AI platforms have turned into more centralized nodes for applications.

The shift has already started.

- **OpenAI GPT and plugin stores.** The May 2023 release of plugins in ChatGPT included tools from a slew of brands. November's release of a "GPT store" for specialized bots could turn out to be even more significant.

- **Bard extensions.** Bard can connect with other Google apps, such as Gmail or Flights. It can't yet connect with third-party extensions—but these will come.

- **Amazon powerup.** Amazon is racing to revamp Alexa with a powerful large language model, which could serve as a platform for extensions. Currently, Amazon Bedrock has a portfolio of AI tools, including support for AI agents.

- **Meta chatbots.** Meta launched 28 chatbots, powered by Meta AI, that serve different functions. These likely will seed the ecosystem for third-party AI bots.

ChatGPT Drives Overall Generative AI Usage
millions of US users
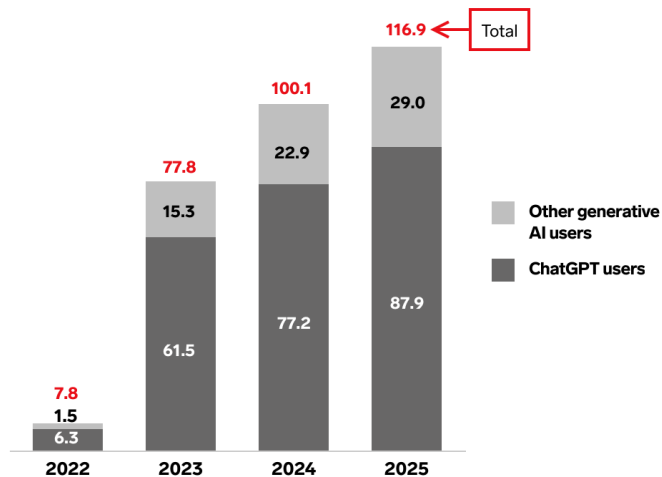
Note: generative AI users are internet users of any age who enter a prompt for a generative AI system at least once per month; ChatGPT users are internet users of any age who enter a prompt for ChatGPT on the OpenAI site or app at least once per month
Source: Insider Intelligence, June 2023

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This changes the path to discovery. As AI platforms become new destinations for information, brands need to establish a presence. It's still early days, but there's little question that consumers will use these platforms to find product and service information.

Predictions

- **Google will add extensions for brands**. Google has a handful of Bard extensions for its own media, but it's only a matter of time until it creates a platform akin to Meta's AI or OpenAI's plugins.

- **Task-oriented bots will become targets for partnerships.** As bots gain the ability to take action, brands will create partnerships with them to try to capture any automated transactions that may result.

- **Standalone bots will also thrive.** Although a presence on these chat platforms will become more important for brands, it won't reduce the demand for standalone chatbots running on brand properties.

Advertising turns an eye toward sustainability

Lowering carbon impact is a major goal of many agencies. Digital advertising is feeling heat for its carbon impact. With a new California law mandating carbon tracking for large businesses—and client concerns about their own sustainability—the advertising industry faces an imperative to change quickly.
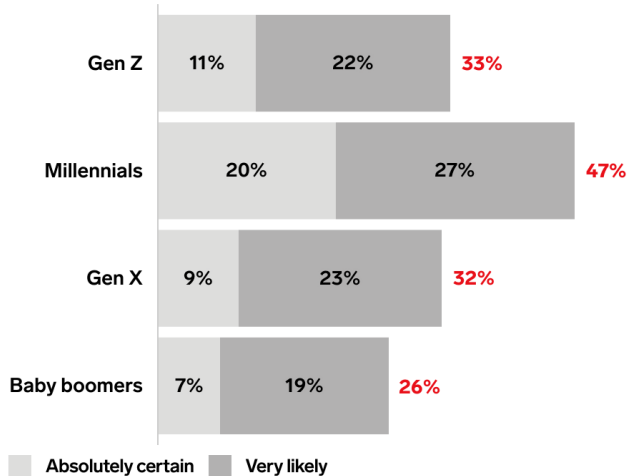
Parts of the ad stack face an adjustment.

- **Programmatic ads confront a climate reckoning.** Programmatic ads alone contribute annual carbon emissions equivalent to 24 million gallons of gasoline, according to Scope3.

- **Made-for-advertising (MFA) sites are big culprits.** One of the easier ways to reduce carbon is to limit ad bids to premium sites. Blacklisting MFA sites is on the rise.

- **Brand websites reduce and reuse.** Using smaller digital files, reusing assets, and even choosing dark mode can reduce the energy needed to run a site, according to Google.

- **GenAI is both a problem and a solution.** GenAI takes a huge amount of resources to run, but AI also can model more efficient ways to use energy.

Nearly Half of US Millennials Are Likely to Consider Carbon Neutrality When Making a Purchase
% of respondents, April 2023

Q: How likely are you to consider purchasing a product or services that is carbon neutral?

	Absolutely certain	Very likely	Total
Gen Z	11%	22%	33%
Millennials	20%	27%	47%
Gen X	9%	23%	32%
Baby boomers	7%	19%	26%

Note: Ages 18+
Source: Morning Consult, "National Tracking Poll #2304076," April 2023

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Carbon efficiency will become a differentiator. Close to half (47%) of millennial consumers want brands to support environmental goals, according to Morning Consult. With clients looking for ways to cut emissions, agencies and media will frame carbon efficiency as a selling point—as are Kroger's media network and Sharethrough's GreenPMPs. Sharethrough reports carbon efficient ad-buying may cost more upfront but performs better. Numbers will only improve, as carbon technology is booming with record-level investments, according to PitchBook.

Predictions

- **Carbon efficiency will be a differentiator for publishers**. As carbon accounting becomes more comprehensive, brands and agencies will turn to ad platforms and publishers that have a low net impact.

- **MFA sites will survive despite headwinds.** As platforms take their high carbon impact into account, MFA sites will fare poorly. These sites also will face challenges from AI-powered search. Even so, their profitability ensures they'll remain part of the landscape.

- **Most companies will stall their efforts.** The new rules in California won't take effect until 2026, so many companies will delay implementation—as they have with privacy regulations.

## Immersive media will take a qualitative leap

Expect a year of innovations. The last few years have been designated the year of the metaverse or AR—only to fizzle or at least fail to meet expectations. Even so, we estimate AR already counts over 90 million users with most engaging with social media AR lenses on their smartphones. The arrival of several innovative immersive media devices in 2024 may spur innovation that will spill into the broader immersive media landscape.

New devices will enhance immersive media.

- **Apple's Vision Pro.** Apple changes a market when it enters, and it's entering the mixed reality (both AR and VR) headset market in 2024 with Vision Pro. Few people will buy the device due to its price tag, but developers will flock to the platform to experiment.

- **Meta Quest 3.** Arriving late in 2023 and far more affordable than Vision Pro, Quest 3 has pass-through technology—basically enhanced AR—to the masses.

- **Meta Ray-Ban Stories 2.** These smart glasses will arrive late in 2023 and will include a camera and a Meta AI powered interface.

- **Humane AI pin and similar devices.** Startup Humane has intrigued investors with a voice- and holograph-powered pin qua AI chatbot. OpenAI also reportedly is working on an AI device.

- **Smart glasses.** Smaller companies have released a series of smart glasses with mini displays on their lenses for niche purposes, such as gaming or entertainment.

More Advanced Headsets Will Boost Shipments and Increase the Audience for Advanced Features
millions of shipments worldwide, 2020-2027

Year	Shipments
2020	7.4
2021	10.9
2022	9.2
2023	9.8
2024	16.2
2025	32.0
2026	53.1
2027	75.0
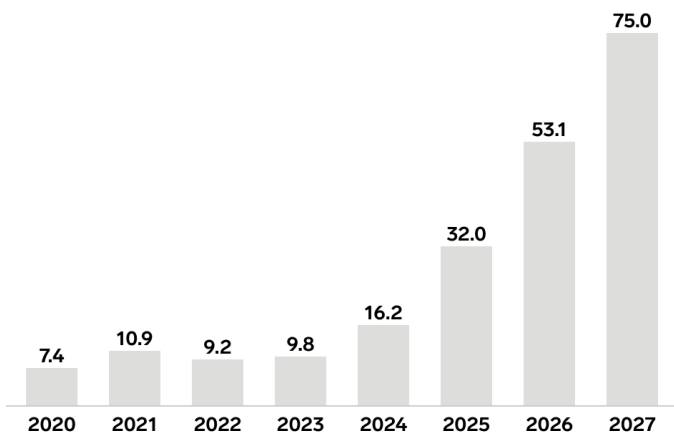
Note: includes standalone VR, tethered VR (desktop, laptop, console, or smartphone), smartphone shell VR, AR smart glasses, and enhanced AR
Source: CCS Insight as cited in press release, June 1, 2023

350727
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Next year will showcase immersive media's future.
Although Meta Quest 3 will undoubtedly sell millions of devices, it won't usher in the metaverse, and the other devices will remain small scale. But they all represent big leaps in immersive-media capabilities.

Predictions

- **Vision Pro will transform the industry—even without many users.** Developers will flock to it to create completely new types of immersive media. Brands would be wise to see what they build.

- **Ray-Ban Stories 2 will be a breakthrough product.** No one has figured out a cheap way to build smart glasses. Meta has taken a totally different approach with Stories 2 and may have solved the puzzle.

- **Mobile AR will remain the main gateway for immersive media**. Despite some exciting new devices, most people will continue to experience immersive media through social and retail apps.

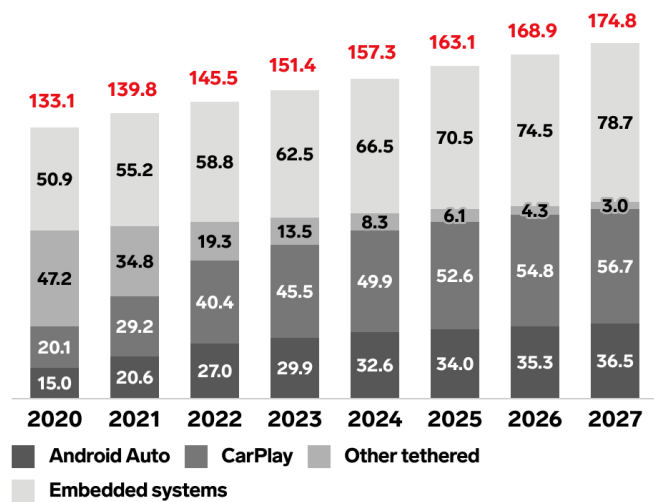## Control over connected car media will become more contentious

Systems become more powerful. Most US drivers already drive a connected car. As the technology improves, manufacturers are less willing to lose data and media control to Google's Android Auto and Apple's CarPlay—but consumers remain hesitant to dive fully into embedded car systems.

Fragmentation still rules the connected-car space.

- **Apple.** CarPlay remains the single most important entry point for car-based media, and its lead continues to grow. Apple continues to work on its own car, but it will not come out in 2024.

- **Google.** Android Auto ranks second, but it's not Google's only play. Android Automotive is a more complete operating system and is poised to become the leading embedded car OS.

- **Automakers.** Nearly every automaker is working on its own operating system (many based on Android Automotive), but they still haven't lured drivers away from phone-based systems.

- **Other tech companies.** Microsoft also has a car operating system, and Amazon wants to own a part of the infotainment space with Fire TV for cars.

Aftermarket Systems Fade as Phone-Based and Embedded Systems Spread Rapidly
millions of US drivers, 2020-2027

	2020	2021	2022	2023	2024	2025	2026	2027
Total	133.1	139.8	145.5	151.4	157.3	163.1	168.9	174.8
Embedded systems	50.9	55.2	58.8	62.5	66.5	70.5	74.5	78.7
Other tethered	47.2	34.8	19.3	13.5	8.3	6.1	4.3	3.0
CarPlay	20.1	29.2	40.4	45.5	49.9	52.6	54.8	56.7
Android Auto	15.0	20.6	27.0	29.9	32.6	34.0	35.3	36.5

■ Android Auto ■ CarPlay ■ Other tethered
■ Embedded systems

Note: ages 14+; licensed drivers who drive a connected car and use an embedded system or connect the interface to the internet via tethering, accessing internet-enabled features at least once in the past year; numbers may not add up to total due to rounding
Source: Insider Intelligence | eMarketer, Aug 2023

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Native car media and ads will grow. With multiscreen functionality and better integration with car systems in the newest version of CarPlay and better integration of media in Android Automotive, it's likely that media and ads will become more customized for cars. This may lead to additional mobility-conscious video ads, as well as native display ads on heads-up displays and dashboards.

Predictions

■ **The new version of CarPlay will cement its central place.** Consumers already prefer to connect their phones to their cars, and the latest version will give them more reasons to do so.

■ **Embedded systems will coalesce around Android Automotive.** Carmakers will want to have a common standard for apps—Android Automotive is the obvious answer.

■ **Native forms of advertisement will start to pop up.** As car systems allow more video and display media, native car ads will grow more common.

Insider Intelligence Interviews

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Brian O'Kelley
Co-founder and CEO
Scope3
Interviewed November 8, 2023

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Sources

Bizrate

Magna Global

PitchBook

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