

[The AI Index](#), an initiative sponsored by Stanford University, recently released its [2024 AI Index Report](#), a dense and comprehensive guide to the state of AI across nine different dimensions ranging from technical performance to responsible AI to impact on the economy, public opinion and beyond. Below is a high level summary of key themes and implications for advertising agencies.

1. **There has been a massive surge in Generative AI Investment:** Despite a decline in overall AI private investment last year, funding for generative AI surged, nearly octupling from 2022 to reach \$25.2 billion. Major players in the generative AI space, including OpenAI, Anthropic, Hugging Face, and Inflection, reported substantial fundraising rounds.

Private investment in generative AI, 2019–23

Source: Quid, 2023 | Chart: 2024 AI Index report

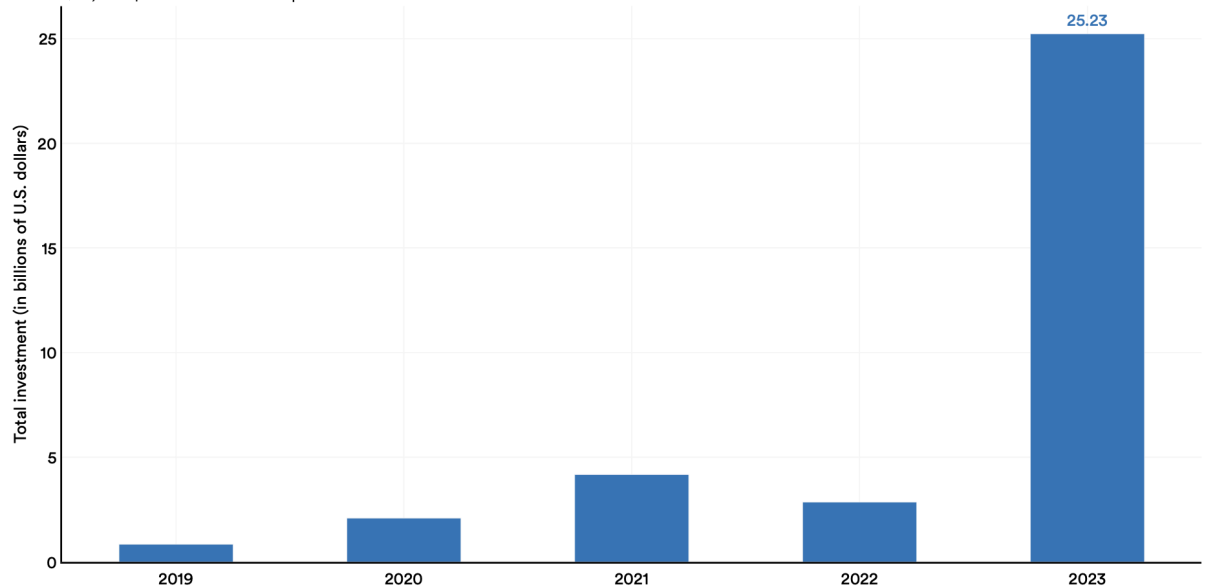


Figure 4.3.3

2. **AI models get smarter:** AI has surpassed human performance on several benchmarks, including some in image classification, visual reasoning, and English understanding. Yet it trails behind on more complex tasks like competition-level mathematics, visual commonsense reasoning and planning.

Select AI Index technical performance benchmarks vs. human performance

Source: AI Index, 2024 | Chart: 2024 AI Index report

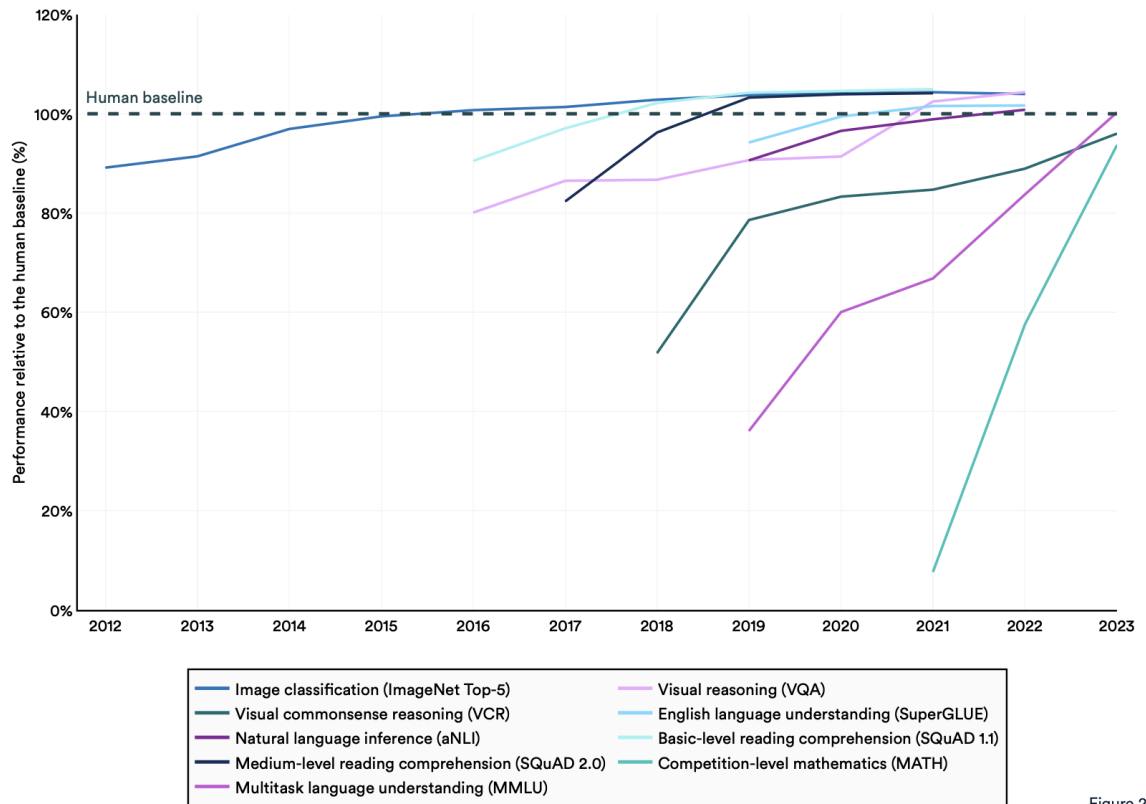


Figure 2.1.16²

The last few months have also seen significant advancements in “multimodal AI.”

Traditionally AI systems have been limited in scope, with language models excelling in text comprehension but faltering in image processing, and vice versa. However, recent advancements have led to the development of strong multimodal models, such as Google’s Gemini and OpenAI’s GPT-4. These models demonstrate flexibility and are capable of handling images and text and, in some instances, can even process audio.

AI agents are also having a moment. These systems are capable of autonomous operation in specific environments and represent a leap forward - it’s like AI automating itself. Research suggests that the performance of autonomous AI agents is improving. Current agents can now master complex games like Minecraft and effectively tackle real-world tasks, such as online shopping and research assistance.

Still, the report highlights that the human element remains important. Human-generated data increases the diversity of content produced by LLMs when compared to synthetic data generated by machines. “Researchers found that generative image models trained

solely on synthetic data cycles—or with insufficient real human data—experience a significant drop in output quality.” (pg 54) Humans are also crucial in evaluating the quality of output from AI models.

3. **Clients are increasingly leveraging AI:** A 2023 McKinsey report reveals that 55% of organizations now use AI (including generative AI) in at least one business unit or function, up from 50% in 2022 and 20% in 2017. In 2023, AI was mentioned in 394 earnings calls of Fortune 500 companies (nearly 80% of all Fortune 500), significantly up from 266 in 2022, demonstrating broad corporate integration of AI.
4. **AI improves worker productivity and output quality:** AI tools improved task completion speed and quality of work, as evidenced by multiple studies in 2023 highlighting AI’s contribution to productivity. The chart below illustrates impact of Chat GPT-4 usage amongst a group of consultants:

Effect of GPT-4 use on a group of consultants

Source: Dell’Acqua et al., 2023 | Chart: 2024 AI Index report

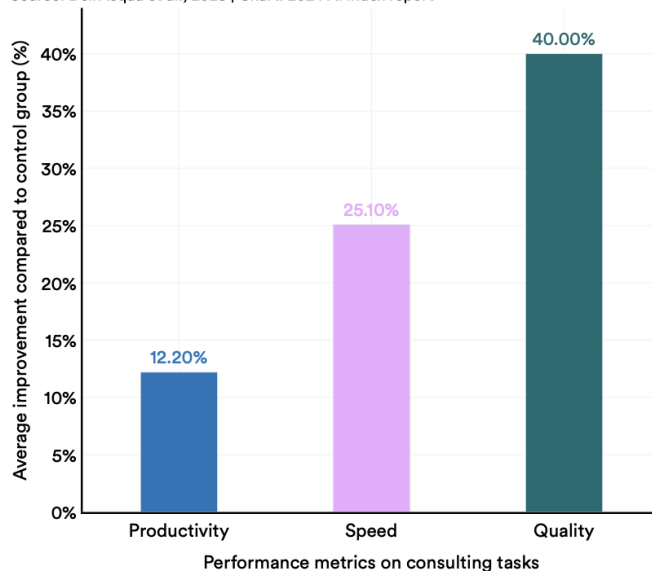


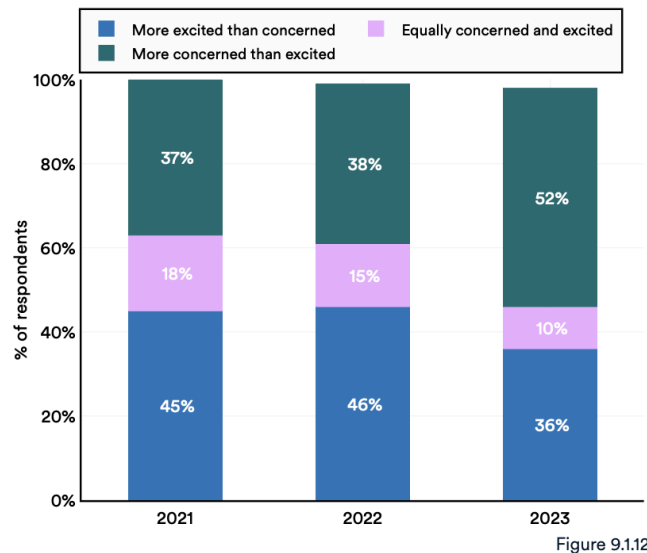
Figure 4.4.20

In addition, a McKinsey survey revealed that 42% of surveyed organizations report cost reductions from implementing AI (including generative AI), and 59% report revenue increases. Compared to the previous year, there was a 10 percentage point increase in respondents reporting decreased costs, suggesting AI is driving significant business efficiency gains.

5. **Regulation looms:** not surprisingly, substantial increases in both legislative records and regulations have been observed over the last few years. For example, in the last year, the count of proposed AI-related bills more than doubled, rising from 88 in 2022 to 181 in 2023. Only one of those proposed bills passed in 2023, and most of the discussion amongst policymakers is not specific to marketing and advertising. Still, the volume of discussion and increasing concern across Federal and State levels - as well as amongst consumers - means AI will continue to garner more and more discussion.
6. **People are becoming increasingly nervous:** Recent Pew data suggests that 52% of Americans report feeling more concerned than excited about AI, rising from 38% in 2022.

Americans' feelings toward increased use of AI in daily life (% of total), 2021–23

Source: Pew Research, 2023 | Chart: 2024 AI Index report



7. **Responsible AI is crucial but difficult:** There are a variety of benchmarks and testing systems available to measure responsible AI, but leading developers, including OpenAI, Google, and Anthropic, primarily test their models against different responsible AI benchmarks. This practice complicates efforts to systematically compare the risks and limitations of top AI models.

Reported responsible AI benchmarks for popular foundation models

Source: AI Index, 2024 | Table: 2024 AI Index report

Responsible AI benchmarks	GPT-4	Llama 2	Claude 2	Gemini	Mistral 7B
TruthfulQA	✓	✓	✓		
RealToxicityPrompts	✓			✓	
ToxiGen		✓			
BOLD		✓			
BBQ			✓	✓	

Figure 3.1.10

Intellectual property and copyright are frequently cited as reasons to be cautious about generative AI usage. And in fact, multiple studies have shown that LLMs can output copyrighted material, including excerpts from The New York Times or scenes from movies. Whether such output constitutes copyright violations is becoming a central legal question.

Identical generation of Thanos

Source: [Marcus and Southen, 2024](#)



Figure 3.2.7

Implications for Agencies:

- **AI continues its explosive growth, both in terms of investment and capability.** What seemed impossible yesterday may soon be commonplace - especially as multi-modal AI and autonomous agents emerge. Keep a sharp eye on where private investment is flowing (but beware of a potential bubble as some analysts are speculating), and empower your teams to experiment with new use cases to keep pace with ever-evolving platform opportunities.
- **Embrace the opportunity to have the AI conversation with clients.** As enterprise AI adoption grows and productivity gains become clear, the discussion around how agencies leverage AI and what it means for business and economic models is inevitable. The 4A's believes that human and machine collaboration will remain crucial and lead to better outcomes than AI alone - and data from the Index Report supports this perspective. Importantly, AI usage by an agency does NOT necessarily mean lower costs - it may, however, force a discussion about different compensation models that reflect value rather than time and materials.
- **Approach with cautious optimism.** A potent cocktail of increasing consumer hesitation mixed with reactionary regulations and an industry-wide need for responsible AI presents challenges. But impressive improvements in productivity and quality enabled by AI are difficult to ignore. Agencies must find a way to embrace AI while navigating regulations, data security, consumer sentiment, legal / IP concerns, ethical use of AI and the potential for bias. Human oversight - especially at the beginning and end of any process involving AI - remains critical and may well be the key to successful AI implementation. Training, upskilling / reskilling, and hiring for AI aptitude will become more important in the years to come.