

The Lucidworks logo is positioned in the top left corner. It features the word "Lucid" in white and "works" in a teal color. The background of the entire page is a dark blue with abstract, glowing network patterns of lines and dots in teal and purple. A large, stylized wave of teal lines flows from the left side across the middle of the page. On the right side, there is a large circular graphic with a teal-to-purple gradient border and a dark blue center.

Lucidworks

Generative AI Global Benchmark Study Vol. 2

2024 STATE OF GENERATIVE AI IN GLOBAL BUSINESS

The second annual report of the largest global generative AI study — primary research conducted by Lucidworks, a leader in search and total AI solutions

EXECUTIVE SUMMARY

Generative AI continues to drive massive change around the world — and it's only the beginning. In 2023, Lucidworks conducted the largest global study to date to understand key areas of generative AI investment and how advanced organizations are in adopting this technology. In 2024, global business leaders remain eager to implement their plans and stay ahead of the competition as the technology transforms from hype to reality.

As the path to AI success emerges, companies worldwide are enthusiastic about the possible impact on customer experience, automation, and business operations. However, the study found that spending has slowed slightly as businesses more carefully consider the most valuable areas to invest in.

A third of business leaders feel like they're falling behind competitors despite almost everyone struggling to implement this new transformational technology. One of the biggest roadblocks to deploying AI initiatives is a significant uptick in concerns around implementation costs. Additionally, data security concerns have more than doubled from last year and concerns around response accuracy have grown by five times.

As the hype slowly turns to reality, the race is on to maximize the potential value of generative AI while balancing cost and security concerns. This report offers a roadmap with best practices to help companies plan and execute their generative AI roadmap.

WHAT IS GENERATIVE AI?

The conversation around generative AI has moved beyond “what could be possible” in 2023. Now, in 2024, business leaders expect it to deliver real value. Unlike traditional AI which excels at analyzing existing data, generative models can learn from vast datasets and use that knowledge to produce novel outputs. Advancements in multimodal AI have allowed generative models to process text, images, and audio, leading to even richer content creation. This technology holds immense potential for streamlining workflows, boosting innovation, and unlocking new ways of working across industries worldwide.

The Need for an Ongoing Global, Generative AI Benchmark

When the inaugural benchmark study was conducted in 2023, there was no standard for generative AI adoption. Business leaders were scrambling to gain a competitive edge by incorporating this new technology into their processes and digital experiences — possibly without a real plan for measuring its true impact. A year later, there's been trial and error as organizations identify the most well-suited use cases and discover the most effective and secure way to deploy generative AI.

As Gen AI becomes more powerful, trial and error won't survive as a strategy. The question from 2023's study still stands: **How do executives know what to do next, why, and how do they compare to others in the race to adopt generative AI?**

Lucidworks executed the largest global study of Gen AI practices for the second year. The study was conducted between April and May 2024

with over 2,500 participants. All participants were affiliated with organizations actively pursuing generative AI initiatives and were involved in decision-making, implementation, and use of generative AI tools.

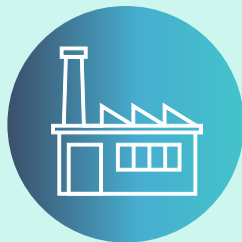
The study included participants from over 1,000 companies with 100 or more employees, 14 industries, and nine functional departments. Roughly 23% of the research participants are executives, 50% are managers, and 86% are involved in technology decision-making. 39% of respondents are in North America, 36% are in EMEA, and 24% are in the APAC region.

The study evaluated 80 generative AI best practices across five categories and identified four stages of generative AI development. The research findings support probable generative AI 'next steps' specific to various industries and provide valuable insights for companies looking to advance their generative AI initiatives.

SECOND STUDY OF GENERATIVE AI INITIATIVES



3 continents
6 countries



14 industries
9 functional departments



1,000+ companies
with active AI initiatives



23% executives &
50% managers



2,500+ global
AI practitioners and
stakeholders

KEY FINDINGS

- 1 Flattened Spending Points to More Thoughtful Planning
- 2 Deployment Delays Stall Anticipated ROI
- 3 Implementation Costs Raise Alarms
- 4 Practicality Drives Generative AI Adoption
- 5 Leaders Invest in Future-Proof AI Initiatives

Only
63%

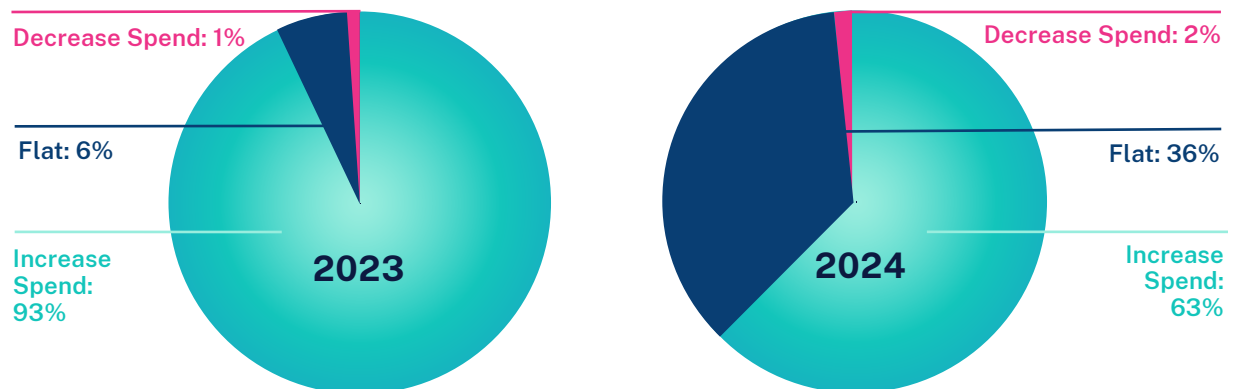
of global companies
plan to increase
AI spending in the
next 12 months,
compared to
93% last year

1 Flattened Spending Points to More Thoughtful Planning

The hype slows as organizations ground applications in reality

The generative AI landscape has advanced exponentially in the past year. However, applying the technology has presented some unexpected challenges, including dangerous hallucinations and incredibly high implementation costs. In 2024, business leaders are slowing down spending to balance the benefits, costs, and risks of this relatively new technology.

AI 12-Month Spending Plans



Planned spending flattened this year, with only 63% of global companies planning to increase AI spending in the next 12 months, compared to 93% last year. The USA leads this list at 69%. **Only 49% of Chinese leaders plan to increase AI spending in 2024, a massive drop from 100% in 2023.** Across all organizations, 36% of leaders plan to keep spending flat, compared to only 6% in last year's survey. Despite the drop, these still sizeable investments demonstrate the necessity of adoption to remain competitive.

2024 State of Generative AI in Global Business

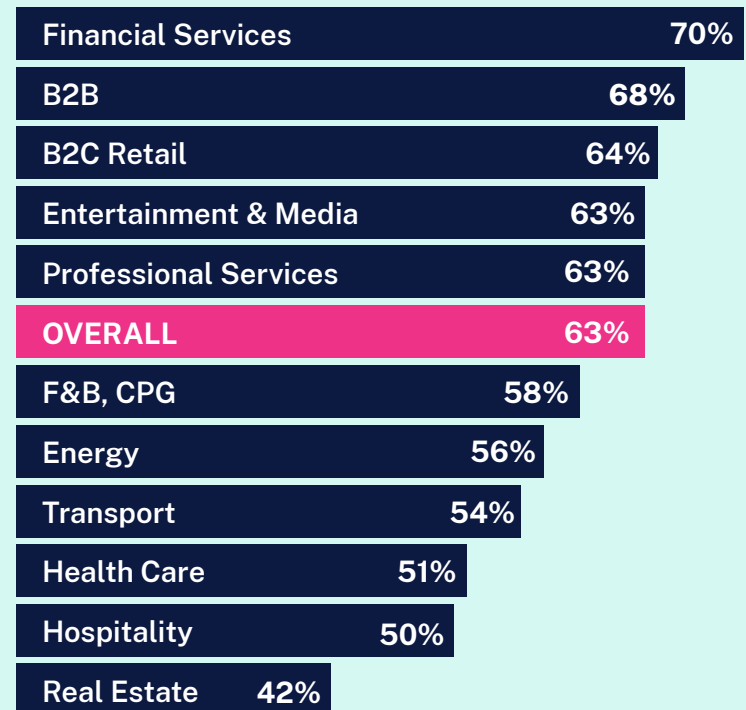
There is some variability in planned spending across industries. Financial Services moved to the front of the pack, with 70% of organizations planning to increase spending over the next 12 months, followed closely by B2B at 68% and B2C retail at 64%. Healthcare and hospitality are laggards in 2024, with only 51% and 50% of businesses planning to increase their investment in the coming months. Manufacturing leaders have also decided to be more conservative. Their planned spending is down to 58% from 93% in 2023.

“The initial wave of enthusiasm for generative AI is being met with a more strategic approach. Businesses are recognizing the potential of this technology, but they’re also cautious about the risks and costs. This is reflected in the flattened spending, which suggests a shift toward more thoughtful planning. This planning ensures that AI adoption delivers real value, balancing the need to stay competitive with managing costs and potential risks.”

–Mike Sinoway, CEO, Lucidworks

Spending Plans Vary By Industry

Plans to Increase AI Spend in Next 12 Months



42%

of companies
have yet to see a
significant benefit
from generative AI
initiatives

2 Deployment Delays Stall Anticipated ROI

Half of leaders say they're getting few benefits from Gen AI

In 2023, global leaders expected to see significant positive impacts across business operations, automation and efficiency, and customer experience with generative AI initiatives. The survey examined financial benefits — profit and revenue — and soft benefits — customer satisfaction, employee satisfaction and competitive position. Unfortunately, the financial benefits of implemented projects have been dismal. 42% of companies have yet to see a significant benefit from their generative AI initiatives.

The report highlights a key reason for the slowdown in generative AI adoption: the low success rate of getting projects beyond the initial stages. Companies were asked how many initiatives progressed past pilot programs or proof-of-concept and became fully operational. The findings reveal that only 25% of planned generative AI investments have been fully implemented so far.

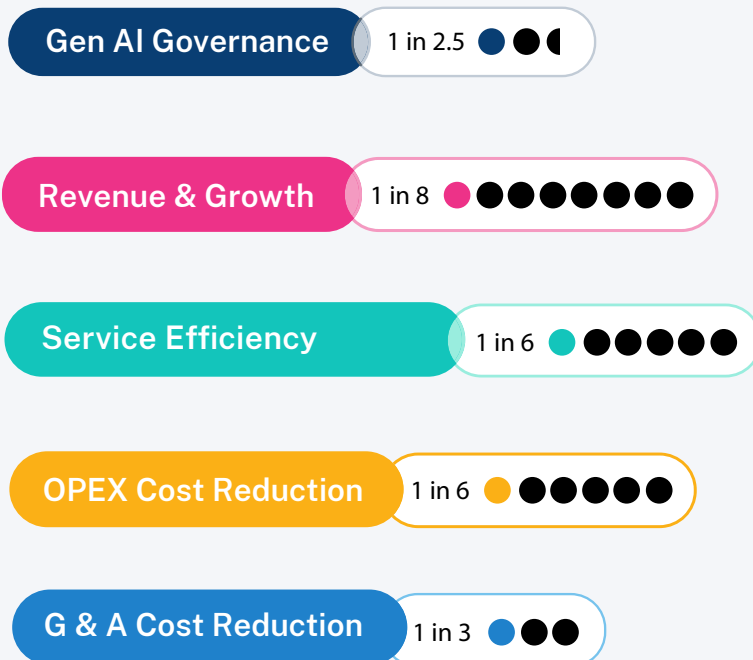
Tech and retail companies report the greatest success. The tech sector leads with the most deployed initiatives across all industries and half have already realized financial benefits, despite an above average level of delays. Retail is a close second and has achieved the highest deployment of revenue and growth initiatives.



2024 State of Generative AI in Global Business

Despite all the spending, 20% of companies report significant delays during deployment with only one in eight planned revenue and growth initiatives and one in six OpEx cost reduction initiatives implemented. Organizations are experiencing a significant learning curve in launching initiatives and **companies are twice as likely as they were last year to feel they are falling behind their peers**. More than 85% of business leaders feel they're behind or only on par with their competition.

Success Rate of Gen AI Initiatives



“The 2023 survey showcased some impressive results: efficiency gains, happier customers, and a solid competitive edge. However, only 25% of Gen AI initiatives have actually reached full deployment. While the tech and retail sectors are leading the way, most others are struggling with delays and a steep learning curve. The takeaway is clear: succeeding in AI means moving beyond the hype and putting in the hard work. To truly unlock this technology’s potential, businesses need to prioritize implementation in real use cases and push past the pilot phase.

– Guy Sperry, CTO, Lucidworks

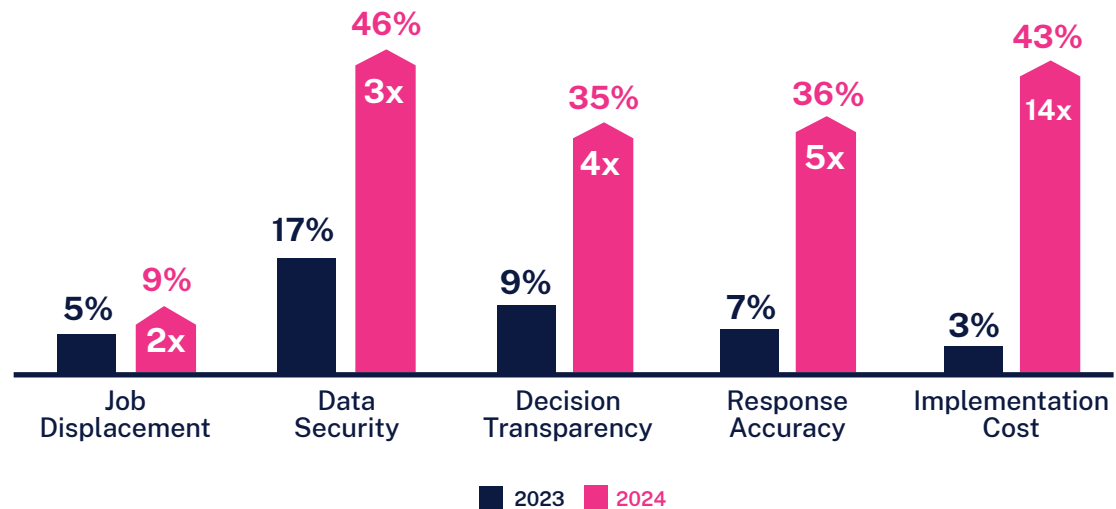
3 Implementation Costs Raise Alarms

High implementation costs have leaders reassessing spend

A year ago, data security was the biggest worry, and implementation cost was only a concern for 3% of business leaders. Today, concerns have increased exponentially across the board. The most striking? Concerns about implementation cost increased 14 fold in 2024. Retailers have some of the highest concerns around cost (63%), likely due to the required responsiveness and high number of customer queries. Another significant increase includes a 5x increase in concerns around response accuracy, likely stemming from issues around hallucinations.

Significantly Increasing Concerns

Top Gen AI Concerns 2023 v. 2024



Concerns about implementation cost increased

14x in 2024

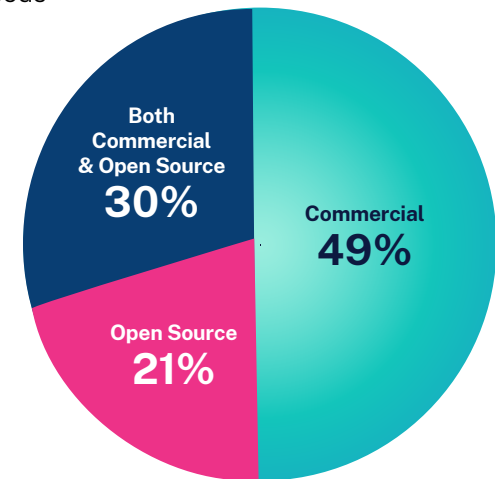
WHY HAVE COST CONCERNS INCREASED 14X?

Businesses aren't just using one model to make Gen AI work for them — they're deploying multiple models to drive performance. The more advanced and aggressive companies are with generative AI initiatives, the more models they employ. A rookie in the space may be using one LLM compared to two or three LLMs used by their competitors.

Types of LLM Driving Costs

Nearly eight in 10 companies use commercial LLMs such as Gemini and ChatGPT, and 20% have opted for open-source-only such as LLaMA 3 and Mistral. This will likely shift as open source models become more capable and have advantageous features at a lower cost.

For now, using more than one model is the best (and most expensive) way to satisfy the broad needs of commerce, knowledge management, and customer support search queries. Another significant increase includes a 5x increase in concerns around response accuracy, likely stemming from issues around hallucinations.



“Security remains a top concern, but a 14x jump in cost worries and a 5x spike in fears about hallucinations paint a new picture of generative AI. Leaders need to understand requirements around responsiveness, security requirements, and data types to choose the large language models that meet their needs without tacking on unnecessary costs.”

–Brian Land, VP Sales Engineering, Lucidworks

4 Practicality Drives Generative AI Adoption

Governance and cost reduction are top applications of Gen AI

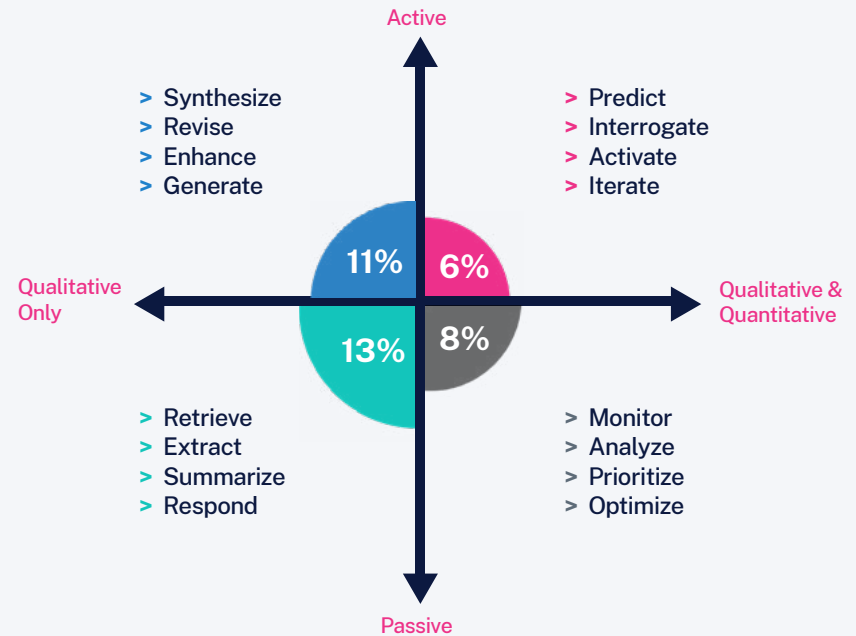
Companies have deployed **33%** of planned Governance and Cost Reduction initiatives

Despite the expanding variety of applications for generative AI, global businesses prioritize practical applications of the technology in 2024. Governance and cost reduction are the most successfully deployed generative AI initiatives across all industries. Examples of this include creating defined guidelines around the use of generative AI (governance) and using the technology to help generate first drafts of new computer code (G&A cost reduction).

GOVERNANCE	GENERAL & ADMINISTRATIVE COST REDUCTION
<p>Companies understand the critical need for responsibility around data privacy, transparency, and fairness as they adopt new generative AI practices.</p> <p>Most Successfully Deployed Governance AI Initiatives:</p> <ul style="list-style-type: none">> Standard Gen AI tools and models defined to ensure alignment> Restricted access to Gen AI tools and data based on role> Gen AI guidelines defined and distributed to minimize risk	<p>Today, with concerns around implementation costs skyrocketing, the need to balance innovation with costs is top of mind for business leaders.</p> <p>Most Successfully Deployed G&A Cost Reduction AI Initiatives:</p> <ul style="list-style-type: none">> Gen AI for QA testing and debugging code> Provide employees with help and FAQs> Gen AI generates first draft of new code

The report created a framework to identify patterns in generative AI initiatives. The report organized the most common use cases across four types of applications.

- > **Passive:** taking the data and passing it along in a different form through summarization or synthesis
- > **Active:** using generative AI to transform data into insights
- > **Qualitative:** using text and narrative to provide results or responses
- > **Quantitative:** adding in numerical tools for applications, including online personalization and optimizing search results



Qualitative applications — generating FAQs or providing HR support — have been the most successful to date with roughly a quarter already implemented. These include some of the less complex applications of generative AI, including retrieving documents and information, extracting the relevant details, summarizing them, and responding to queries.

Applications with a quantitative component lag behind, with less than 15% having been successfully implemented. These more complicated applications include optimizing search results, screening candidates for hire, supporting financial close, and online personalization. The Active/Quantitative quadrant holds some of the greatest potential for generative AI, where the applications are actionable and not simply processing already existing text.

“The untapped power of generative AI lies in its ability to quantify qualitative information. By analyzing unstructured signals, Gen AI can reveal hidden patterns and empower businesses to take actions based on insights that were previously inaccessible. From optimizing production to predicting customer behavior, quantitative AI applications are the key to unlocking real-world value.”

– Mike Sinoway, CEO, Lucidworks

**Dozens
of factors**
influence decisions
around
generative AI
initiatives

5

Leaders Invest in Future-Proof AI Initiatives

Key considerations to maximize success with Gen AI

An LLM alone is not a generative AI solution that can drive results. There are dozens of factors that influence decisions around AI initiatives. The first step is to define the use case. Governance and cost reduction are the areas where most businesses prioritize their efforts. Leaders should carefully consider what will best serve their unique needs. Once those initiatives are agreed upon, companies must identify the data required before addressing security concerns, selecting an LLM and tracking performance.

Here are additional data-related questions to consider:

What are the data security requirements?

If the LLM will only be used for external needs, a commercial LLM will suffice. If the LLM will be ingesting private, internal data, businesses need a lean LLM behind the firewall to provide the necessary security.

What are the expectations around responsiveness?

Response time from large commercial models is still measured in seconds, not milliseconds. While that may be fine for employees searching for information internally, it's not sustainable for customers doing online shopping.

Where is it best to put costs?

With commercial LLMs, start-up costs are low initially but costs increase according to the number of API calls. In contrast, an open-source model costs more upfront to create, but costs are lower moving forward.



Define Use Case



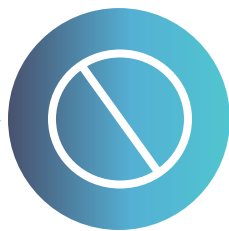
Data Acquisition



Security & Accuracy



LLM Model(s)



Access Control



Cost Control



Track Business Case

Generative AI Path To Success

Gen AI Orchestration Engine

“A language model alone is not a gen AI solution. Once key considerations around security, responsiveness, and cost have been addressed, leaders can define KPIs to track the business case over time. This pathway is how you get beyond 1 in 5 successful initiatives.”

– Mike Sinoway, CEO, Lucidworks

GENERATIVE AI IN 2024: REALITY SETS IN

The honeymoon phase of generative AI is over. While leaders remain enthusiastic about its potential to transform businesses, the initial euphoria has given way to a more measured approach. This year's report highlights a shift in focus from hype to practical implementation, emphasizing cost-effectiveness and responsible development.

Key findings reveal a slowdown in spending as companies prioritize ROI and grapple with implementation challenges. Concerns around data security and response accuracy have risen sharply, with implementation costs emerging as a major hurdle. Despite these obstacles, leaders are actively deploying Gen AI for applications with clear financial benefits, such as governance and cost reduction.

The study emphasizes the importance of a well-defined roadmap for Gen AI adoption. Leaders are advised to prioritize use cases with a high success rate, such as text-based applications. Careful consideration of data security, response time needs, and cost structure is crucial for successful implementation.

Companies can maximize the value of this transformative technology by focusing on practical applications, responsible development, and a strategic approach to cost management. As open-source models mature and costs come down, the future of Gen AI appears bright, but the path to success requires careful planning and execution.

Lucidworks clients are more than 2.5x more likely to deploy AI initiatives than their peers

Learn how Lucidworks can power your path to Gen AI success.

Contact us today.



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