

Generative AI experiences rapid adoption, but with mixed outcomes

Highlights from **VotE: AI & Machine Learning**

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Generative AI has taken the enterprise by storm, and investment has graduated from pilots into production capabilities. However, the organizational impact of these projects has not progressed as quickly as their increased implementation.

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Introduction

Adoption of generative AI has exceeded even the ambitious strategies set by organizations in 2024. The technology has been shifting from experimentation to operational implementation, although many organizations are still trying to fully scale up deployments. However, the organizational impact of these projects has not progressed as quickly as their increased implementation. Voice of the Enterprise: AI & Machine Learning, Use Cases 2025 — a survey of 1,006 midlevel and senior IT and line-of-business professionals across North America and Europe — reveals that despite high enthusiasm and investment, many organizations are not seeing much more benefit than when they were just experimenting with the technology.

THE TAKE

Generative AI is delivering impact to organizations. The growing question is whether this impact measures up against organizational investments, as well as the opportunity cost. The commonly held view has been that this cost/benefit balance would shift in favor of generative AI as model performance improved and organizations began integrating generative AI into practices. Instead, this year's data indicates that fewer organizations are seeing positive impacts from generative AI, and in many cases, AI projects' performance against KPIs is stagnating. Higher reported project failure rates, likely driven by the accelerated approach to generative AI adoption, is another worrying indicator as to how these investments are performing. However, a cohort of high-performance organizations are defying this broader pattern with a more mature monitoring and tailoring strategy, a more holistic approach to project prioritization, and a better handle on security, bias and data privacy challenges.

Summary of findings

The rate of generative AI adoption outstrips longer-standing forms of AI, as well as enterprise forecasts.

Most organizations that are actively investing in AI have generative AI in production. Of these, 27% say they have organization-wide adoption, while 33% say it is limited to specific departments or projects. This marks an increase from the year-ago survey figures of 13% and 28%, respectively. The adoption rate surpasses that of pattern-based and rules-based AI initiatives and exceeds the forecasts organizations made in 2024. By the end of 2025, 40% expect organization-wide rollout of generative AI tools.

Project failure rates appear to be elevated, as organizations attempt to deliver generative AI projects at pace.

The percentage of companies abandoning the majority of their AI initiatives before they reach production has surged from 17% to 42% year over year, with organizations on average reporting that 46% of projects are scrapped between proof of concept and broad adoption. This marks a significant departure from the previous downward trend, highlighting the difficulties many organizations face in rapidly deploying AI projects. Companies with higher project failure rates are notably more prone to encountering resistance from customers and employees, and have a greater level of concern surrounding reputational damage. Organizations with a lower project failure rate have a more holistic approach to project prioritization and are comparatively more likely to consider compliance, risk and data availability criteria when selecting projects.

Fewer organizations report positive outcomes from generative AI, but some are finding value in unexpected areas.

The proportion of organizations citing a positive impact from generative AI investments has fallen across every enterprise objective assessed. While the majority of organizations still perceive a positive impact, the latest survey reflects a notable year-over-year drop in areas such as revenue growth objectives (76%, down from 81%), cost management (74%, down from 79%) and risk management (70%, down from 74%). These declines stand out because many expected the performance of generative AI initiatives to increase as the technology matured, and as organizations moved from experimenting with tools to embedding them into processes. Concerningly, among respondents whose organizations had invested in generative AI, 46% reported that no single enterprise objective had seen a "strong positive impact" from that investment. Considering the investments that organizations have made into generative AI, and the clear opportunity costs, the performance of these applications is concerning.

A more positive story is emerging around some generative AI application areas that fewer organizations were targeting or deriving value from a year ago. Notably, internal system interaction, complex multi-step processes such as design and prototyping, and sales outreach appear to be associated with higher levels of enterprise impact than popular areas such as content creation or information summarization. Because these more complex, task-based challenges are closely associated with “agentic” frameworks, these application areas may see a further shot in the arm in the coming year.

AI agents are perceived as a key to unlocking value with generative AI. In the face of these lower-than-expected benefits, the emerging paradigm of agentic AI is prompting renewed enthusiasm in its potential for value creation. Interest is nearly universal: 58% of respondents say they are seeking opportunities to implement agents and assistants, and another 40% are open to exploring them. Users expect agents to drive the biggest impact in the arenas of task and process automation. Process automation is a primary area where organizations have reported lesser-than-expected benefits from existing generative AI initiatives. Relatedly, organizations are pursuing a mix of techniques to improve quality, relevancy and security of model outputs, including monitoring live responses (55%), fine-tuning (48%) and response caching (38%), all of which take on increased importance in the intricate world of agents and agent management, as these entities are increasingly autonomous and capable of taking self-directed action.

More organizations are getting a handle on key generative AI challenges, but cost is an increasing area of focus. Organizations continue to identify major challenges around generative AI. The most commonly identified challenges relate to data privacy (38%), security risks (38%) and costs (37%). However, fewer organizations cite security risks as a challenge relative to a year ago — the figure shows a 7-point decrease from the prior survey — and organizations also appear to be more effective in identifying use cases and addressing content diversity. While some concerns such as training data availability and sustainability saw slight elevation, the overall pattern was positive, with many key challenges declining year on year. However, cost is becoming an increasing concern for many organizations. Not only has there been a slight year-on-year increase in how often cost is cited as a challenge to generative AI adoption, it has also emerged as the most commonly identified decision-making factor in AI project prioritization. Additionally, not only was cost the worst-performing project KPI, but assessments of performance appear to have worsened year on year.

Skills shortage remains a persistent challenge. In the year-ago survey, 10% of respondents indicated that skills shortages were the primary concern across their AI initiatives, making it the most poignant issue identified in the survey. This year, the percentage of organizations recognizing it as a concern remains consistent at 27%, meaning it is still a prevalent challenge. However, the proportion who consider it the top concern slightly decreased to 8%, as issues related to budget constraints, accuracy and privacy have gained attention. The impact of skills shortages varies across sectors; it is particularly pronounced in manufacturing, telecommunications, construction and real estate. These industries also report notably lower returns on investment from AI initiatives, suggesting that skills shortages are a significant obstacle to success. In response, organizations are diversifying their strategies to address this challenge. Approximately half of organizations facing skills shortages are focusing on reskilling or upskilling their current workforce (49%), while a similar proportion are turning to IT integrators and consultants (46%) to bridge the gaps.

Investment in MLOps continues to increase, with organizations enhancing measurement practices. Although AI project performance has not notably improved, the number of criteria used to measure AI performance has increased. Organizations on average report using 7.1 of the 20 AI measurement metrics considered in the survey, versus 6.3 in the prior-year survey. Despite performance improvements in areas such as inference time and frequency of usage, fewer criteria overall are deemed “very successful” compared to a year ago, with worsening scores related to risk and cost metrics. The increase in the number of measurement techniques may partly reflect incremental improvements in MLOps investment. The proportion of organizations that have invested in MLOps tools increased from 24% to 27% year on year, and a further 42% expect to start using an MLOps tool over the next 12 months. The main reasons why organizations have not invested in MLOps relate to limited existing AI usage and difficulty in proving the ROI of such investments.

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