The State of GenAI Adoption & ROI

SURVEY REPORT

SURVEY REPORT BY vertesia IN PARTNERSHIP WITH CMS WIRE VKTR

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Introduction

Generative AI (GenAI) investment has exploded over the last few years, with a global market size of $44 billion in 2023. There's so much money floating around and investment in GenAI tools and companies showing no signs of stopping. Are businesses realizing the value of those investments? If so, how? If not, what would it take to deliver a positive ROI for GenAI?

One storyline running through the media right now is that GenAI isn't living up to the hype. The thinking goes that organizations implementing GenAI programs want to see an immediate return on their investment.

The full story; however, is more nuanced — and more positive than what's being reported. Vertesia, a software platform provider that helps organizations build, deploy, manage and scale GenAI solutions, recently partnered with CMSWire INSIGHTS — the research arm of CMSWire — for a GenAI integration survey. We sought to gain insights beyond the headlines around GenAI. Where are organizations in their quest to deploy GenAI tools? How long does it take to deploy? Do their executives and business counterparts have a good grasp of the challenges around GenAI implementation? Do these projects deliver on the expectations, or are they overhyped?

Most organizations are still in the process of implementation. The headlines might be dour, but our research suggests the opposite. As most organizations we have spoken to have either implemented or are continuing to implement GenAI solutions, the IT leaders called out a few recurring gaps in the fundamental understanding from their executives in how they perceive the technical complexities of these programs and the requirements for getting full value from their GenAI solutions once deployed.

Despite the collective perception of Generative AI as overhyped, our respondents who have custom GenAI solutions launched into production overwhelmingly reported ROI that exceeds their expectations.

Demographics in Brief

400 IT leaders at enterprise-level businesses took the survey.
For full demographics information, see Appendix.

Key Findings

- **Adoption of custom GenAI solutions is widespread and ongoing**
  - 85% of enterprise-level organizations have customized (not off the shelf) GenAI solutions in production or progress.

- **Custom GenAI deployments take longer than they should — anywhere from 6 months to a year.**
  - For 36%, it takes more than 3 months to prepare data for a custom GenAI solution.
  - Once the data is prepared, for 32%, it takes more than 3 months to deploy a custom GenAI solution.

- **Many IT leaders feel they're matching the rate of innovation for GenAI adoption**
  - At the same time, many only feel as if they're keeping pace with the competition. 23% feel like they're falling behind.

- **Only 30% of organizations have custom GenAI solutions in production.**
  - These leaders experience fewer challenges vs. those whose programs are still in progress. Business leaders at organizations with solutions in production understand more about GenAI's potential than the rest.

The Current State of GenAI Adoption

Who's adopting custom GenAI solutions?

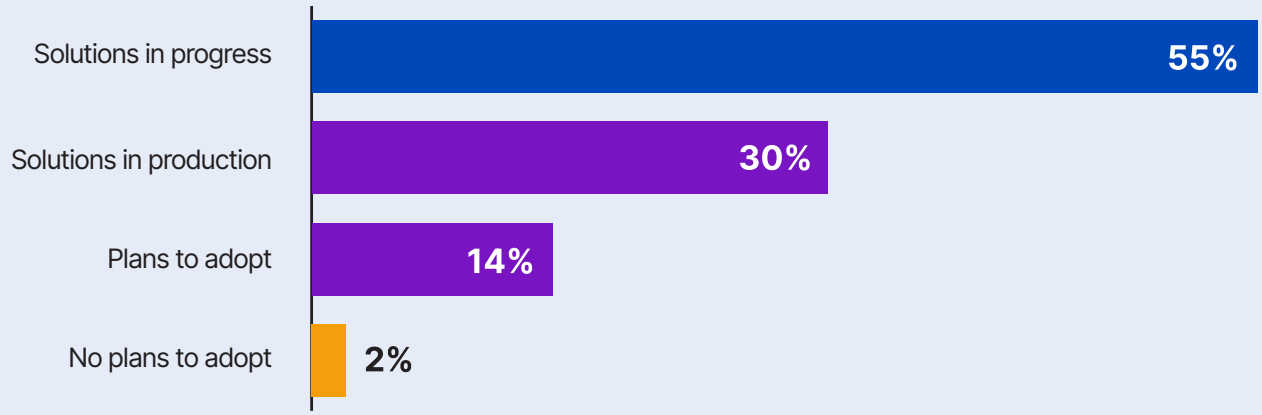
GenAI and Large Language Models (LLMs) have an undeniable hold on nearly every industry, promising improvements to the customer experience as well as increased business value to the organization. Their allure is unmistakable. According to our previous research, 90% of respondents believe that fine-tuned LLMs would bring value to their organization. This can come in the form of faster processes through automation, better outcomes or cost reductions. Their expectations aren't isolated either: experts suggest GenAI could add anywhere from $7-$7.9 trillion annually to the economy over the next decade in the form of increased productivity.

So! Who's ready for GenAI and LLM adoption? Quite a few, as it turns out. Adoption is coming at warp speed with a high level of confidence. However, although IT leaders are excited about GenAI and the benefits it can provide their organizations, few have moved to production. Only 30% of respondents say they have custom GenAI solutions in production (Figure 1). Now, GenAI is still very top of mind for almost everyone. And the rate of adoption is accelerating — the number of organizations with custom solutions in production was only 10% at the end of 2023 and about 15% earlier this year. Further, over half of survey respondents (55%) say that these solutions are in progress. Only 2% say they're not planning to adopt custom GenAI solutions at all — a testament to how much GenAI is dominating conversations these days. But few have managed to move from conversation to action.

Also, those organizations who have put custom solutions into production are doing it on several fronts — 87% of respondents say they have put between 2 and 5 custom GenAI solutions into production. And as further evidence of supporting the entire enterprise, organizations with custom solutions in production are deploying them to support a number of different outcomes, such as generating or repurposing content (77%), content analysis and reasoning (74%) and knowledge querying (68%).

Now, it's up to the in-progress organizations to get there.

FIGURE 1: CURRENT STATE OF CUSTOM GENAI SOLUTION ADOPTION



HOW ARE ORGANIZATIONS ADOPTING CUSTOM GENAI SOLUTIONS?

The ability to successfully scale custom GenAI implementation depends on consistency — organizations struggle when they try to get output from piecemeal AI technology adoption. To achieve the desired ROI from GenAI programs, organizations should implement custom GenAI solutions using programmatic delivery, where GenAI projects are managed and delivered according to a formalized program or framework to ensure consistent execution and results.

Happily, many survey respondents favor this approach.

Nearly three-quarters (74%) use programmatic delivery, leveraging people, processes and technology to deliver GenAI solutions across multiple use cases or departments (Figure 2) GenAI solutions can feature a number of different capabilities, such as security and access control, prompt design and management, or task orchestration. Organizations have several options to choose from when addressing capabilities: they can build (use in-house open-source and cloud service providers), buy (leverage a GenAI/LLM software platform) or borrow (use existing business apps with built-in AI capabilities).

There's no one clear preference around how organizations plan to address specific capabilities. Generally speaking, for all of the capabilities we asked about, there is a predictable spread in how they say their organizations are likely to address them (Figure 3).

FIGURE 2: PROGRAM STRUCTURE

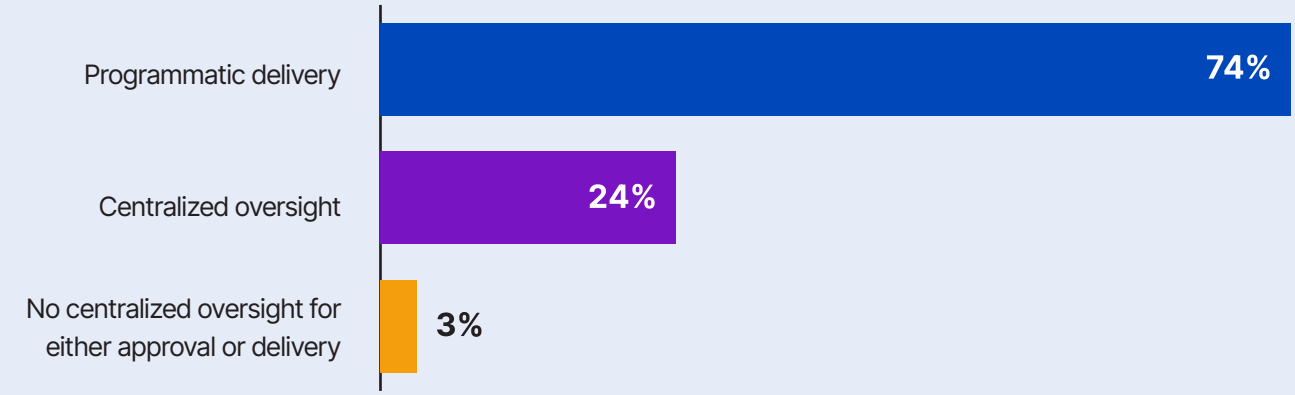
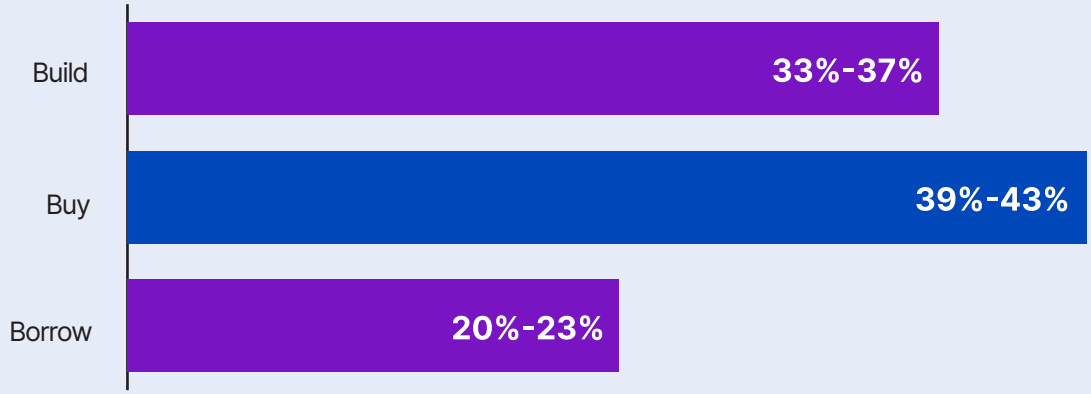


FIGURE 3: HOW ORGANIZATIONS PLAN TO BEST ADDRESS GENAI CAPABILITIES



[1]Capability options on the survey include Security and Access Control, Prompt Design and Management, LLM Gateways, Task Orchestration, Retrieval Augmented Generation, Versioning and Audit Trail and Monitoring and Observability.

Challenges to the Journey of GenAI Value

Let's take a closer look at the adoption challenges to GenAI implementation. After all, the majority haven't been able to move the needle from their projects being in progress to being in production. What's holding them back? Why do so many organizations seem stuck and what can be done to address their challenges?

TIME CONSTRAINTS

Many challenges come down to timing. First, it's no secret that the pace of GenAI innovation is happening almost faster than organizations can keep up. When asked about the main challenges to keeping up with GenAI innovation, the top answer according to our survey respondents was the rapid pace of technological change (47%). Respondents identified other challenges at similar rates, such as regulatory concerns (46%) or difficulty integrating AI into their legacy systems (44%) (Figure 4).

We don't expect the top two challenges to decrease anytime soon.

Another key takeaway from the survey is that GenAI deployment is taking longer than it needs to.

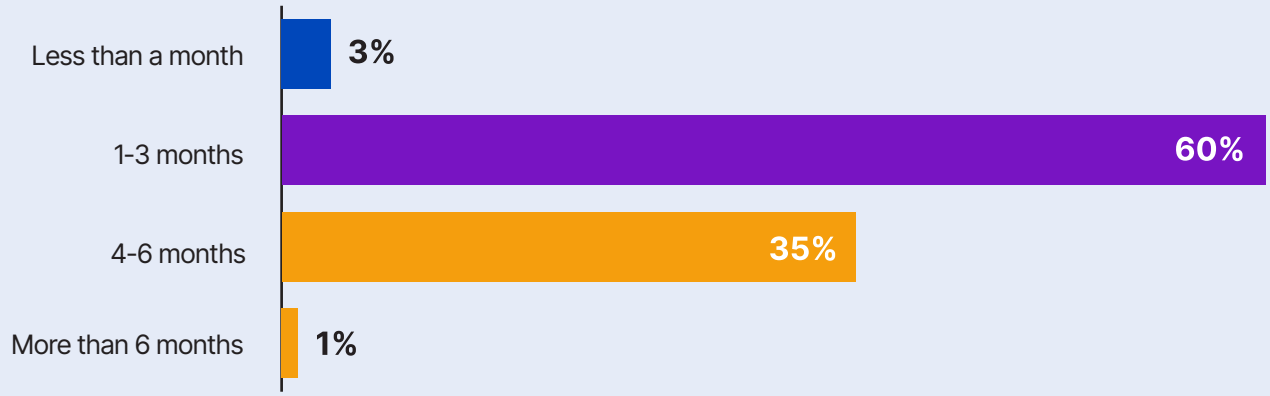
Implementing custom GenAI solutions come in two parts: data management (cleaning and preparation) and then the actual solution deployment. The success or failure of customer GenAI solutions often depends on data quality — an LLM is only as good as the data it draws from. Strong data management, then, becomes critical for a successful GenAI rollout. Confidence in data management is a key differentiator between organizations who are successful at AI initiatives and everyone else.

But data management also takes time. And it often takes longer than expected.

For the majority of survey respondents it takes up to three months to prepare data for GenAI solutions. At a third of organizations, it takes up to six months (Figure 5). While data management is critical, the time it takes to prepare data for GenAI solutions hinders organizations' ability to implement initiatives in a timely manner. Given that data should be ready before the solution is implemented, having clean data is often one of the first roadblocks to putting solutions in place.

FIGURE 4: MAIN CHALLENGES TO KEEPING UP WITH GENAI/LLM INNOVATION

FIGURE 5: AVERAGE TIME TAKEN TO PREPARE DATA FOR GENAI/LLM SOLUTIONS



For an overwhelming majority of respondents it takes up to three months to put custom GenAI solutions into production — and more than 4 months for a third of organizations (Figure 6). Any of the challenges mentioned in Figure 4 — together with trying to put a custom solution in place without a platform or having a decentralized approach to custom solution implementation — can cause the project timeline to run over.

From the data, respondents think of these two activities as stacked — first comes data preparation and then comes custom solution deployment. Which means putting a custom solution into production could take anywhere from 6-12 months if these two activities aren't happening concurrently. It's a long time to complete, particularly when the pace of change is so rapid.

> Putting a custom solution into production could take anywhere from 6-12 months if data cleaning and custom solution deployment aren't happening concurrently."

FIGURE 6: AVERAGE TIME TAKEN TO PUT CUSTOM GENAI SOLUTIONS INTO PRODUCTION

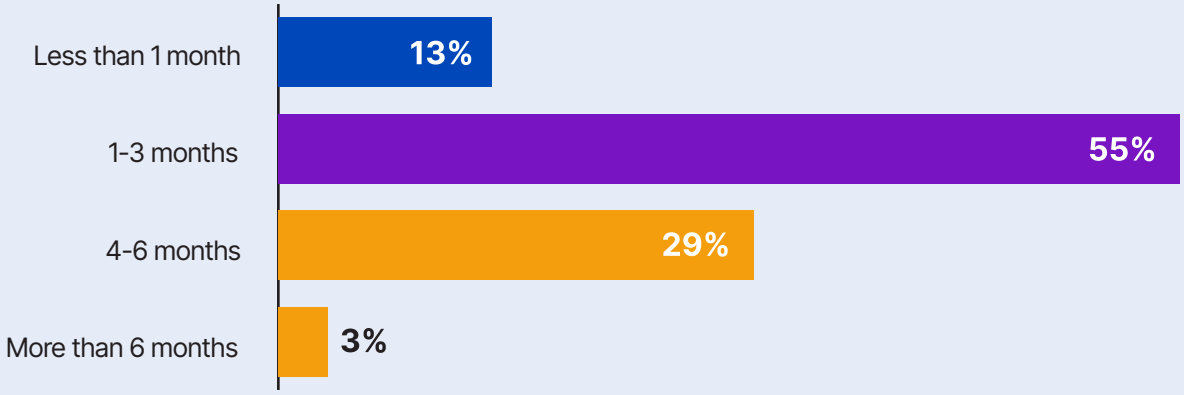
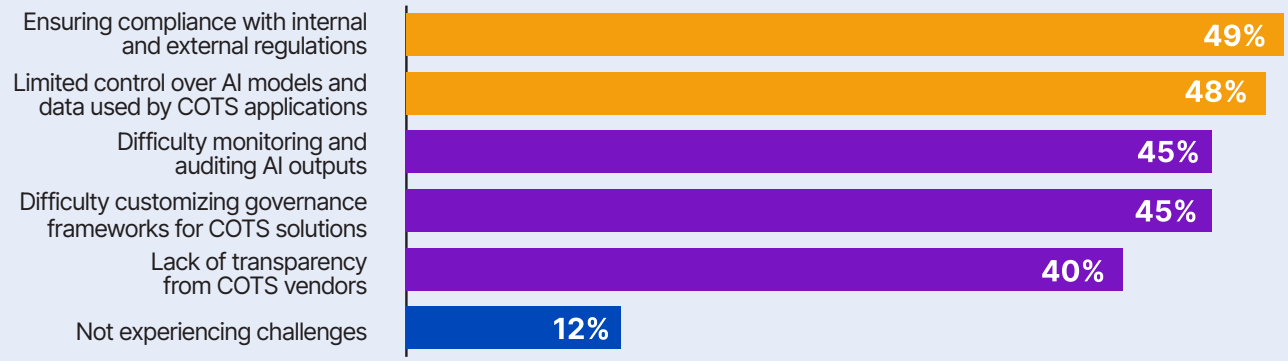


FIGURE 7: BIGGEST CHALLENGES IN GOVERNING AI PROVIDED BY COMMERCIAL OFF-THE-SHELF (COTS) APPLICATIONS



GOVERNING AI FROM COMMERCIAL OFF-THE-SHELF APPLICATIONS

For most of our survey, we were interested in custom-built AI solutions. Developing custom solutions is one of the key differentiators separating organizations who are leading with AI from everyone else, according to IBM research. Commercial off-the-shelf (COTS) applications have their place in processes and workflows, but weren't the focus for our survey. Besides, 92% of enterprise IT leaders have high or moderate confidence they can effectively govern COTS solutions.

Despite the confidence, there are challenges here, too. Only 12% of respondents aren't experiencing any challenges with COTS applications. The rest report various challenges, from keeping up with compliance to monitoring outputs and applying governance frameworks to COTS applications (Figure 7).

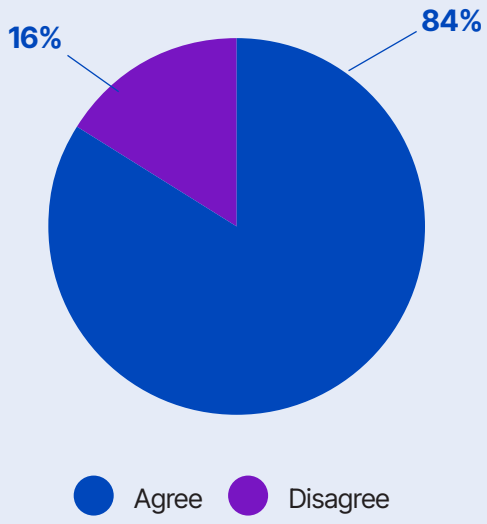
DO LEADERS EXPECT TOO MUCH FROM GENAI?

Is there friction between IT and business leaders over GenAI? After all, there can be vast differences between expectations and reality, and GenAI solutions are no exception. The hyperbole around AI can be extreme — in 2023, *Time* magazine said that the use of AI would contribute to "The greatest redistribution of power in history."

That's a lot to set on the shoulders of a custom solution, and part of what IT leaders are up against when it comes to managing the expectations of their business leaders.

The reality is more nuanced (as reality often is). On the whole, a majority of IT leaders say that their business leaders have realistic expectations of GenAI's capabilities (Figure 8).

FIGURE 8: MY ORGANIZATION'S BUSINESS LEADERS HAVE REALISTIC EXPECTATIONS OF GENERATIVE AI'S CAPABILITIES



[2] Examples of COTS applications include productized AI-enabled services (Salesforce, Gong), AI copilots (Microsoft Copilot, GitHub Copilot) or assistants (ChatGPT).

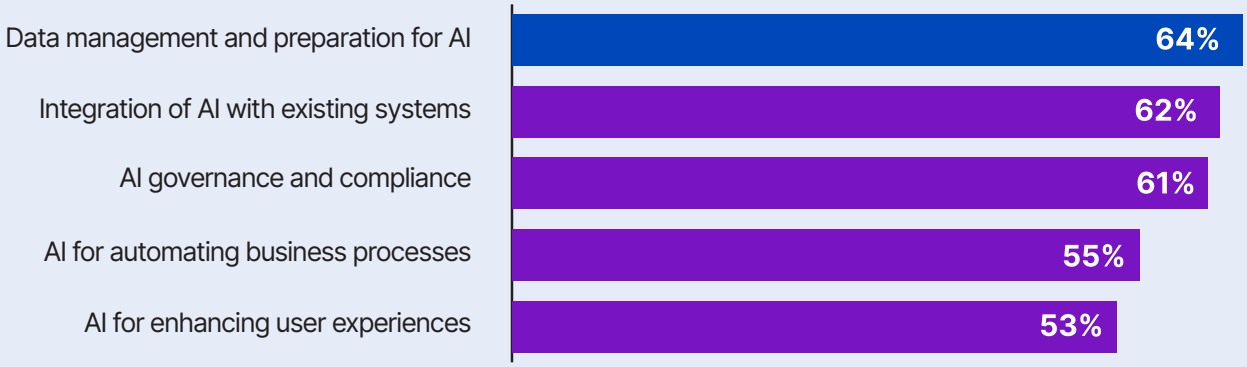
However, while expectations overall seem to be in line with reality, IT leaders also say that business leaders could use more education in certain areas. First and foremost is an understanding of AI's technical limitations, followed (perhaps not surprisingly) by more realistic timelines for AI integration (Figure 9).

Digging deeper into usage and use cases also brings up areas where IT leaders believe their business leaders could use more education. Chief among them is data management and preparation for AI (64%) (Figure 10).

Consider Figures 5 and 6 above — data management and custom solution implementation takes time with the status quo. While IT leaders are aligned with their expectations vs. the reality of such projects, they feel their leaders need better knowledge about how long such projects will take.

FIGURE 9: GAPS THAT EXIST IN BUSINESS LEADERS' UNDERSTANDING OF GENAI, ACCORDING TO IT

FIGURE 10: AREAS OF GENAI USAGE WHERE IT LEADERS BELIEVE REQUIRE MORE EDUCATION FOR BUSINESS LEADERS



Leaders' Outlook On Custom GenAI Adoption Is Positive

It's not all doom and gloom. Despite all the challenges, despite the time it takes to manage and implement, organizations are fairly bullish on their understanding of what GenAI can do for the organization. They have reason to be: custom solutions have exceeded the expectations of many. This is one reason why some organizations consider themselves leading the way with custom solution implementation.

LEADERSHIP EXPECTATIONS VS. REALITY

Successful custom GenAI adoption depends on leadership and their involvement in program adoption. Here, IT leaders feel confident in their business leaders' understanding. Overall, most IT leaders think their executives have a good grasp on GenAI, both its potential uses and limitations. Nearly all IT leaders believe their leaders have a good grasp on the potential use cases for custom GenAI (Figure 11).

Having a good grasp on the use cases for custom GenAI goes hand-in-hand with identifying the potential benefits to the organization. Here, organizations are looking for custom GenAI to deliver on a number of different business goals. First among them is increased operational efficiency (56%) followed by the flexibility to innovate (53%) (Figure 12).

FIGURE 11: MY ORGANIZATION'S BUSINESS LEADERS HAVE A STRONG UNDERSTANDING OF THE POTENTIAL USES OF GENAI

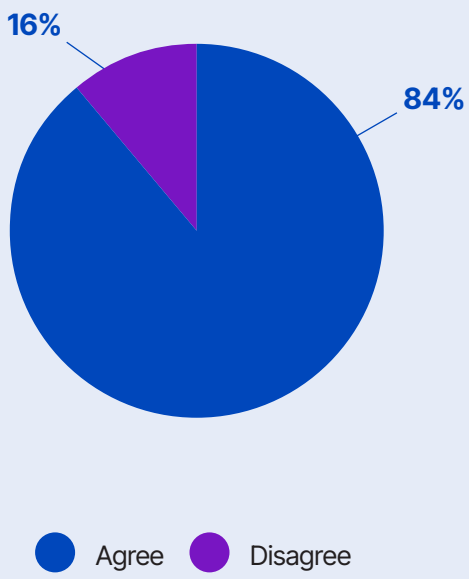
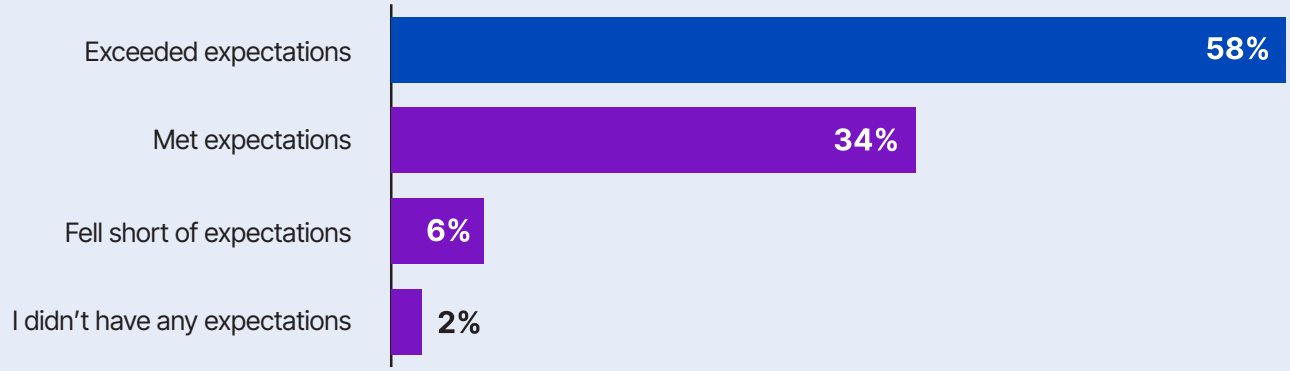


FIGURE 12: BENEFITS BUSINESS LEADERS EXPECT TO ACHIEVE BY CREATING CUSTOM GENAI SOLUTIONS

FIGURE 13: ROI OF CUSTOM GENAI SOLUTIONS IN PRODUCTION



OUTCOMES AND INDUSTRY POSITION

We must now ask the question: are custom GenAI solutions delivering on those benefits? It seems that they are, and many organizations have experienced a Return on Investment (ROI) that either met or exceeded their expectations. For over half of all IT leaders, the custom GenAI solutions that are in production have delivered ROI that exceeded their expectations (Figure 13).

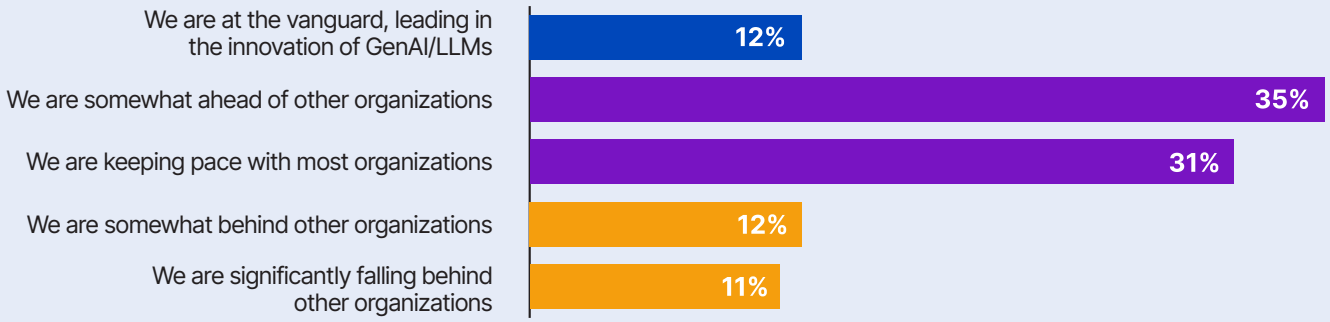
With all this good news, you would expect that organizations believe they're doing a good job with custom GenAI solution implementation, right? After all, business leaders seem to have a good grasp on the potential of custom GenAI, while IT leaders have realistic expectations of the time it takes to implement.

The real answer; however, may surprise you. Nearly a quarter of all organizations (23%) feel they're behind their competitors in keeping up with GenAI innovation. Only 12% believe they're in the vanguard (Figure 14).

Is there a clear difference between those who feel they're ahead and those who feel they're behind? As it turns out, there is. How far along your organization is with custom GenAI solutions, the amount of roadblocks you encounter and the benefits you've received is strongly correlated with whether your organization is walking the walk or simply talking the talk.

Is your custom solution already in production or merely in progress? It makes all the difference.

FIGURE 14: EVALUATING ORGANIZATIONS' POSITION IN KEEPING UP WITH THE RATE OF INNOVATION IN GENAI AND LLMS

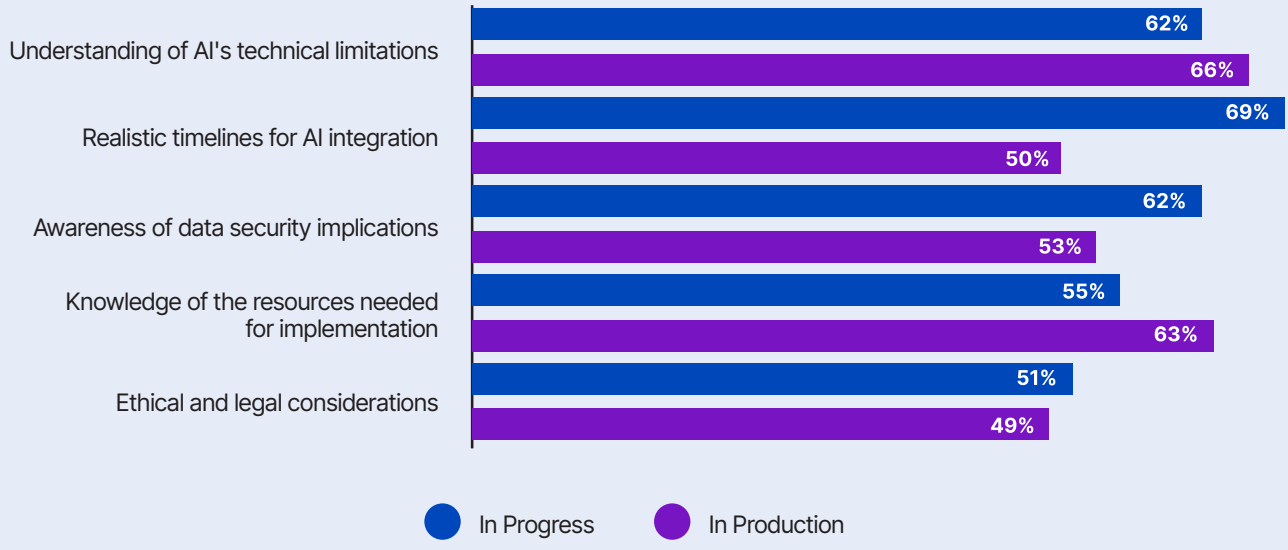


The Clear Value Of Custom GenAI Maturity

In the survey, we identified two broad groups: those with custom GenAI solutions already in production, vs. those whose GenAI solutions were only in progress. When viewing survey responses by the differences between these two groups, definite gaps emerge in attitudes, expectations and outcomes. The leaders in the GenAI space are the 30% who already have custom GenAI solutions in production, vs. those whose programs are merely in progress. The further along an organization is in implementation, the more likely they are to say ROI has exceeded expectations, and less likely they are to say their executives have knowledge gaps related to GenAI that concern them.

Business leaders' knowledge differs depending on whether an organization's GenAI solution is in production or in progress. In several key areas (time and data security) gaps in business leaders' understanding of GenAI is much lower for those in production than for those in progress (Figure 15). This isn't too surprising; business leaders who have already put a custom solution into production will almost certainly have a better idea of the time it takes to do so.

FIGURE 15: GAPS THAT EXIST IN BUSINESS LEADERS' UNDERSTANDING OF GENAI, ACCORDING TO IT (BY MATURITY)



Further, the benefits business leaders expect to receive thanks to GenAI adoption also differ. While both are realistic on cost savings and competitive advantage, there are different expectations (Figure 16).

There are other differences too, both in approach as well as outcome. From a delivery standpoint, nearly all of the organizations with solutions in production have programmatic delivery (89%) (Figure 17).

FIGURE 16: BENEFITS BUSINESS LEADERS EXPECT TO ACHIEVE BY CREATING CUSTOM GENAI SOLUTIONS (BY MATURITY)

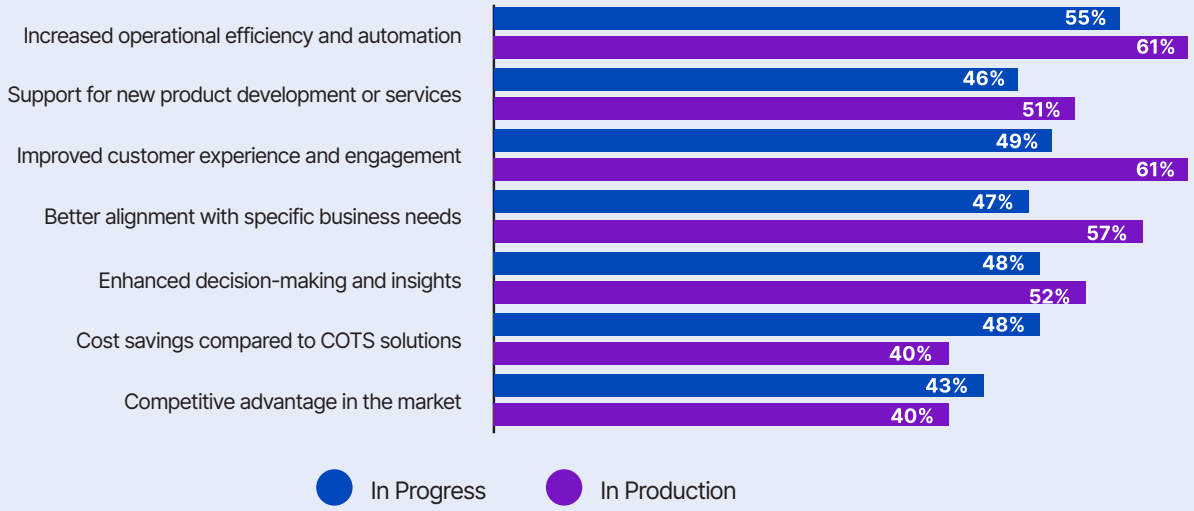
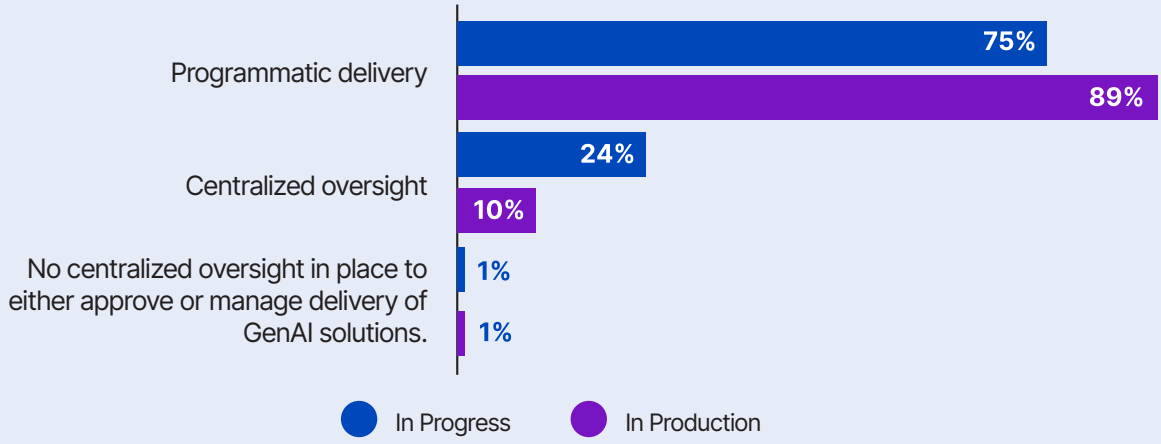


FIGURE 17: PROGRAM STRUCTURE (BY MATURITY)



The ROI experienced by organizations currently in production with custom GenAI solutions is the most likely to have "exceeded expectations." Further, more organizations with GenAI solutions in production are likely to self-identify as being in the vanguard of GenAI development. Meanwhile, those with solutions in progress are more likely to consider themselves just keeping pace with the competition (Figure 18).

With their GenAI solutions in production, those organizations report fewer challenges to keeping up with GenAI innovation. In particular, organizations with solutions in production are more likely to report facing no challenges and less likely to face organizational resistance to change (Figure 19).

FIGURE 18: EVALUATING ORGANIZATIONS' POSITION IN KEEPING UP WITH THE RATE OF INNOVATION IN GENERATIVE AI AND LLMS (BY MATURITY)

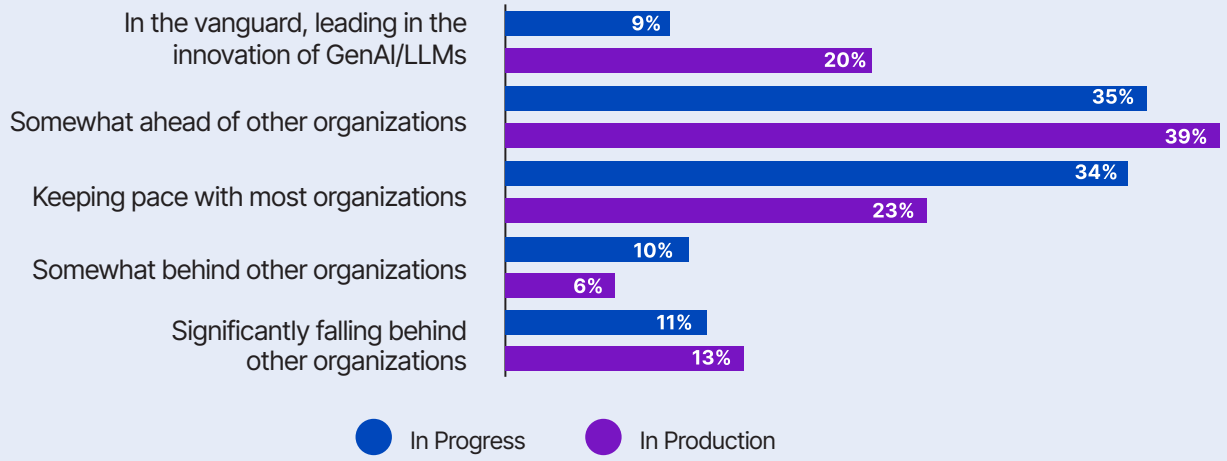
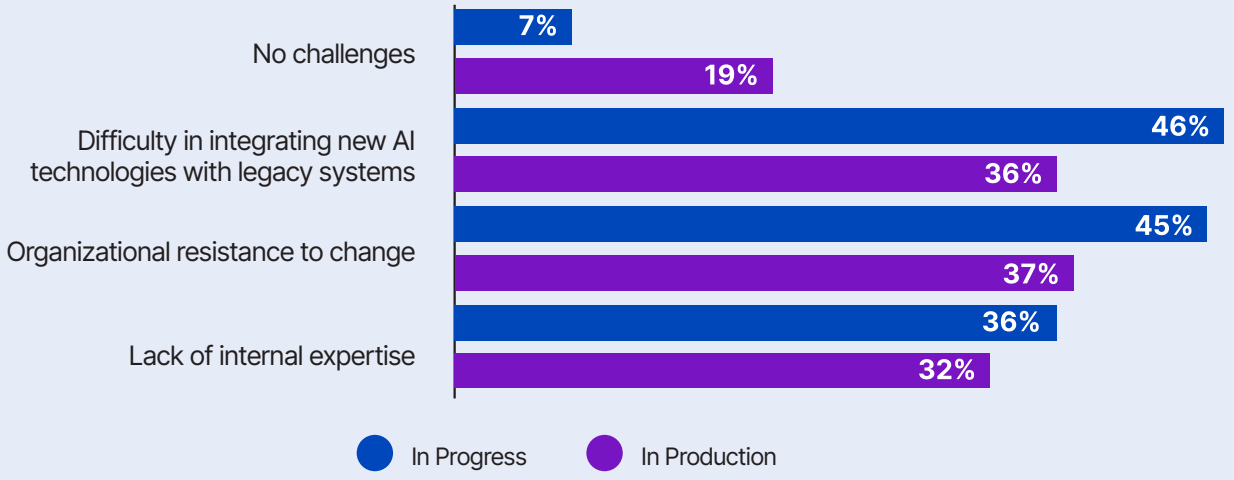


FIGURE 19: MAIN CHALLENGES TO KEEPING UP WITH GENAI/LLM INNOVATION (BY MATURITY)



Conclusion

Organizations are making significant IT investments in the rush to infuse GenAI and LLMs into business applications and leverage their potential for increased productivity and efficiency. Yet, even as IT leaders are bullish on the state of GenAI at their organization, the time it takes to realize a return on investment is longer than it needs to be. And despite all this enthusiasm, many are stuck with programs in progress, rather than in production.

The outcome is clear: Organizations who have custom GenAI solutions already in place outperform those whose custom solutions are merely in progress. Organizations with custom solutions in production report fewer challenges to GenAI innovation, are more likely to recognize the ROI of their investments and generally feel like they're ahead of the competition.

The tools are there, along with the knowledge and realistic expectations of the potential and limits of GenAI. If your organization doesn't want to fall behind your competitors, you need to start.

Appendix

DEMOGRAPHICS IN FULL

Name of survey
GenAI Integration

Survey dates
October 2024

Respondents
400

Company size
Less than 999: 0%
1,000-4,999: 41%
5,000-9,999: 28%
10,000-24,999: 14%
25,000-49,999: 9%
50,000 or more: 8%

Respondents in technical roles
100% of respondents

Respondent job responsibilities
Engineering/Development: 10%
Artificial Intelligence/Machine Learning: 17%
Architecture: 10%
Information Technology: 43%
Product Development/Management: 10%
Program Management: 10%

Respondent seniority level
100% of respondents are at or above Director level.

Respondent role in evaluating/purchasing decisions
88% of respondents are decision-makers or buyers for enterprise software

*Percentages are rounded to the nearest whole number and may not total 100%.

About

Vertesia accelerates the delivery of AI strategies by empowering businesses to improve their core processes with AI technologies. The Vertesia Platform seamlessly integrates AI across the business, providing the fastest time to value in the market. By providing a comprehensive software platform that enables enterprise teams to design, test, deploy and operate intelligent solutions, Vertesia enables its customers to unlock the full potential of their AI initiatives.

Learn more at vertesiahq.com.

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