

GEN AI WILL ACCELERATE FINANCE FIRMS' ABILITY TO COMPETE

Google Cloud Survey Shows
Banks Ready to Embrace AI

softserve

Google Cloud

Will financial institutions achieve the transformative opportunities open to them if they embrace Generative AI (Gen AI) to automate business processes, energise data, and fortify decision-making? According to a recent survey by Google Cloud¹ the answer is a resounding “YES” as some 92% of the banking executives questioned not only said there is high demand for Gen AI within the banking sector, but 95% believed it has the potential to transform the industry.

At its most fundamental Gen AI is also expected to make banks and insurers more competitive by enriching the way they interact with customers to build loyalty and grow revenues.

Bankers are not only beginning to understand this opportunity, but it looks like they are putting their money where their mouths are. Some 40 percent of respondents said Gen AI deployment will require a 26%-50% increase in their IT budgets over the next 1-2 years. While we know that banks and insurers are already concerned about IT costs, it appears that extra money is expected to be largely self-financed from the increased ROI and reduced TCO that Gen AI will deliver.

Some 49% of the banking executives surveyed said the top benefit Gen AI can bring is increased operational efficiency and cost savings. Specifically, 38% of them said that Gen AI will deliver 61%-80% in cost savings over the next five years.

This was reinforced by internal research into Gen AI-led productivity benefits conducted by SoftServe data science teams. These showed a 31% reduction in the time needed to bring new capabilities to market and a 45% increase in output when deploying Gen AI. The study engaged more than 1,000 technicians to run 1,500 experiments on over 100 use cases in seven countries.

Bank Support for AI Booms

95%

SAY AI WILL TRANSFORM THE INDUSTRY

40%

EXPECT UP TO 50% BUDGET RISE FOR AI

38%

SEE 60%+ COST SAVINGS FROM AI

93%

WILL SEEK PARTNERS FOR AI STRATEGIES

¹This survey was conducted online within the United States by The Harris Poll sponsored by Google from October 2-11, 2023, among 350 IT Decision Makers or Senior Level Executives that have decision-making authority in selection, direction, or procurement of Generative Artificial Intelligence technologies for their organization, among whom 117 are employed at National Banks, 117 Regional Banks, and 116 Local Banks. The ITDMs or Senior Level Executives are US full time employees, adults age 18+, who work at a company with a minimum of 500 employees. On October 10 - 12, 2023, a consumer study, sponsored by Google, was conducted online among 2,096 U.S. adults ages 18 and older, of whom 1,952 are account holders with a bank.

PARTNER EXPERTISE

Banks and insurers also acknowledge that they will not be able to go it alone if they are to achieve the optimum benefits of Gen AI, as part of that budget is being earmarked for third-party AI partnerships. Interestingly, an overwhelming 93% of the bankers said their organizations plan to partner with AI technology providers within the next 6-12 months to support their Gen AI strategies.

This paper aims to show where Gen AI can make the biggest differences for finance firms and how it can be deployed and integrated to enhance existing IT infrastructure. But it is also designed to show how we work with expert technology partners like Google Cloud to enrich the discussions around the benefits (and risks) of using Gen AI and to stimulate better informed debate within banking boardrooms.

It is one of the reasons we recently expanded our “preferred partner” relationship with Google Cloud to offer the Google Cloud Gen AI Use Case Discovery Workshop. This is a service from SoftServe that provides clients with the tools to pursue Google Cloud Gen AI technologies and increase their value proposition in the market. But more on that later.

WHAT IS GENERATIVE AI?

From the start, Gen AI enables users to quickly generate new content based on a variety of inputs. These inputs can include text, images, sounds, animation, code, or other types of data. It uses neural networks to identify patterns and structures within the existing datasets to generate that content.

In essence, Gen AI automates different learning approaches. These enable organisations to quickly deploy large amounts of data to create foundation models that can be used as a base for AI systems.

These foundation models, says Google Cloud, can multi-task and perform out-of-the-box tasks, including summarization, Q&A, classification, and much more. Plus, with minimal training required, foundation models can be adapted for targeted use cases with very little example data.

Gen AI works by using an ML model to learn the patterns and relationships in a dataset of human created content. It then uses the learned patterns to create new content. The most common way to train a Gen AI model is to use unsupervised learning — the model is given a set of human created content and corresponding labels. It then learns to generate content that is similar to the human created content and labelled with the same labels — but in a fraction of the time.



EXCITEMENT BUILDS

“

Gen AI isn't just a new technology buzzword — it has the potential to revolutionize the way we live, work, bank, and invest,"

said Zac Maufe, global head of regulated industries at Google Cloud.

“

This recent research reinforces what we've been seeing in the banking industry in recent months, which is that Gen AI can represent a massive productivity and operational efficiency opportunity. Gen AI can also help create hyper-personalized digital experiences that consumers are demanding, as the next generation of banking consumers become more comfortable with the technology."

Banking executives said additional benefits from Gen AI will be better data analysis and predictive analysis (45%), and improved fraud detection and security (44%). More accurate card fraud detection was also the top answer among a third of consumers for potential improvements.

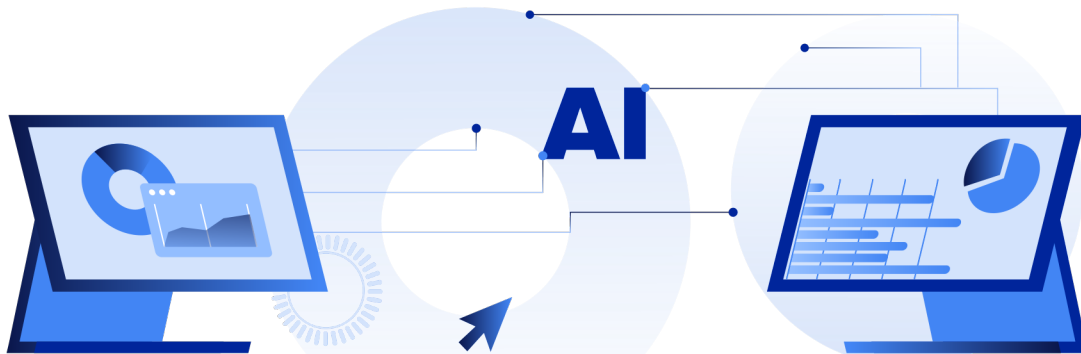
STREAMLINE WORKFLOWS

Ultimately, Gen AI becomes a powerful tool that streamlines the workflow of creatives, engineers, researchers, scientists, and more, with use cases that span all industries and individuals. And it can be easier to deploy than many expect.

Google Cloud's Vertex AI offering can interact with, customize, and embed foundation models into bank applications, without requiring ML experience. It enables users to access foundation models on Model Garden, tune models via a simple UI on Generative AI Studio or use models in a data science notebook. Its Vertex AI Search and Conversation tools offer developers the fastest way to build Gen AI powered search engines and chatbots, while its Duet AI serves as an always-on collaborator that helps users of all skill levels where they need it.

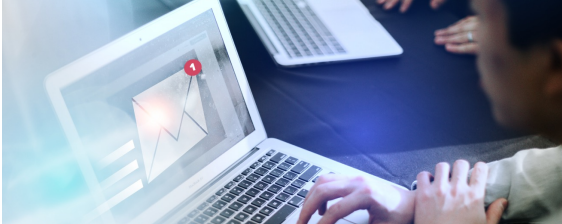
In financial services there have so far been three main areas of focus for Gen AI deployment. These are smarter customer experience to underpin customer acquisition and retention strategies, portfolio management optimization and more sophisticated controls over Anti Money Laundering (AML) and other transaction security activity.

But we know the benefits can be far wider, from front to back office in banks and insurers as the automation and ML improvements driven by Gen AI boost operational efficiency and cut costs. Faster and better-informed decision making also ensures more accurate risk management and credit analysis to give greater confidence to customers, regulators, and shareholders.



USE CASES

So, let's take a closer look at some of the specific areas where banks are looking to deploy Gen AI capabilities. Forty-seven percent of bank executives in Google Cloud's survey said they are in the proof-of-concept stage of Gen AI implementation, while 35% say they are piloting and testing use-cases. According to these respondents, Gen AI is being integrated in the following specific ways:



Generating content to boost employee productivity, such as email responses, documents, and presentations (57%)

Helping create marketing content/campaigns like adverts, offers, social media, etc. (55%)



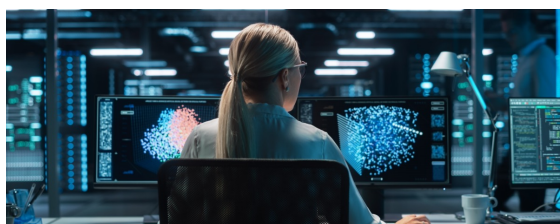
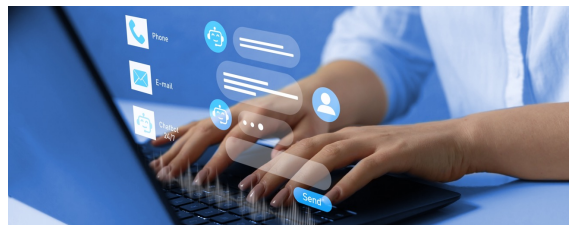
Assisting in code creation for IT applications and software (50%)

Summarizing complex data, such as financial reports or prospectus' (49%)



Summarizing capital market research for client briefings and faster decision making (49%)

Enhancing chatbots and virtual personal assistants for customer interactions (48%)



Predictive modelling of risk scenarios (40%)

DIGITAL ASSISTANTS

In our own client engagements, we have seen a significant interest by finance firms in the deployment of virtual digital assistants to help their customers navigate the complex world of financial terminology, products, and services. It can then become a personal, trusted guide on the journey to financial success that eliminates frustration and uncertainty on the way.

These Gen AI-driven digital avatars are able to leverage the mountains of data banks and insurers already hold about their clients to create a tailored personal profile. This helps them smoothly complete obligatory onboarding and due diligence and rules covering advice to existing clients. It also lays the foundations for risk appetite and financial goals that can then define the level of assistance needed to manage personal finances.

Interest has been further heightened as the latest iterations of these avatars can be customized to not only match different ethnic and cultural appearances, but also engage with hundreds of clients in multiple languages simultaneously and 24/7. This means clients need no longer wait to speak to a financial advisor or customer support operator, nor do they need to type out questions of answers.

ADDRESSING RISKS

Aside from the potential benefits of Gen AI, there has also been considerable discussion about possible risks. However, senior Google Cloud executives discussed in a recent paper how these threats can be mitigated, saying “We are optimistic about Gen AI’s potential to improve the banking sector for both banks and their customers and believe that it can be done in a responsible manner.”

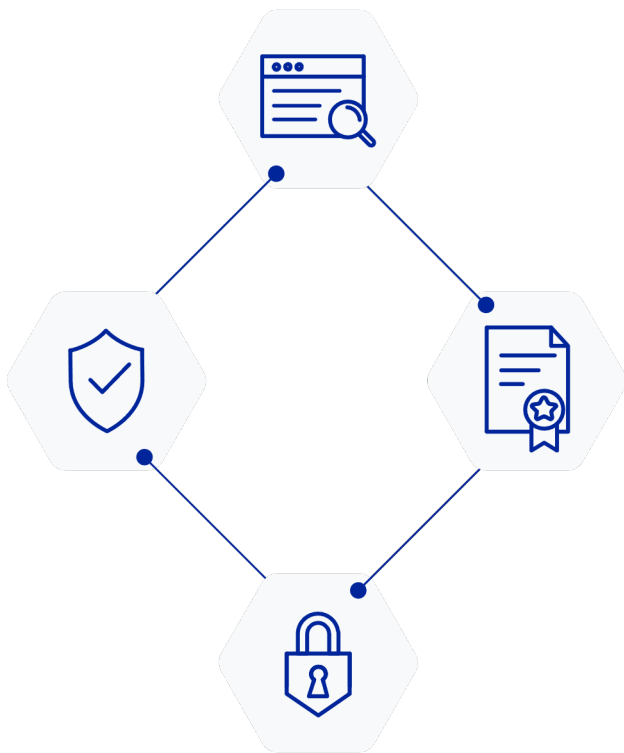
They acknowledge there’s work to be done to ensure that this innovation is developed and applied appropriately. But this provides an opportunity to lay the groundwork and discuss — as an industry — what the building blocks for responsible Gen AI should look like within the banking sector.

Much of those concerns about Gen AI’s accuracy and security are particularly acute when talking about its use in regulated industries, such as the banking system. In finance, any type of error can have a ripple effect, and can leave institutions open to new scrutiny from customers and regulators. So, they emphasise that it’s worth taking the extra time now to avoid a path that increases the likelihood of these negative outcomes and be prepared for any new regulations.



BUILDING BLOCKS

Google Cloud pinpoints four areas, or “critical building blocks” that need to be established to ensure Gen AI can herald a safer and more efficient finance system for everyone involved. These are “explainability,” “regulation,” “privacy,” and “security.”



We will look at each in more detail, but the four key takeaways of those pillars they define as:

- 01 Explainability** – A risk-based approach will be critical in determining how and when to use Gen AI.
- 02 Regulation** – Gen AI will be at the top of the regulatory agenda until existing frameworks adapt or new ones are established.
- 03 Privacy** – Gen AI doesn’t change foundational commitments to privacy and control.
- 04 Security** – The industry needs to be aware of the security threats Gen AI can open, but also the ways it can help mitigate potential vulnerabilities.

Before looking more closely at those four, it is important to understand the risks of Gen AI which mean that banks and technology providers can — and must — work together to mitigate rather than simply accept those risks. That’s an essential prerequisite to ensure the incredible opportunities Gen AI offers, such as enhanced productivity, immense time savings, improved customer experiences, and enhanced responsiveness to regulatory and compliance demands, occur. If followed, Gen AI will produce a safer and more efficient banking system for everyone involved.

EXPLAINABILITY

Imagine being an analyst conducting research or a compliance officer looking for trends among suspicious activities. You need answers that are not just backed up by evidence, but evidence that is easily retrievable and can be proven to be accurate. This requires a combination of AI and human intelligence, along with a well-thought-out risk-based approach to Gen AI usage.

The good news is that great strides have been made towards what we refer to as AI explainability.

New Gen AI tools can direct a large model — whether it be a large language model (LLM) or multimodal LM — toward a specific corpus of data and, as part of the process, show its work and its rationale. This means that for every judgment or assessment produced, models can footnote or directly link back to a piece of supporting data.

Of course, no one should take Gen AI's explanations as gospel, especially when it comes to something as critical as banking. Even explainable models require human verification. The process for this verification should be part of a robust risk management process around the use of Gen AI.

But, for all the promise of the technology, Gen AI may not be appropriate for all situations, and banks should conduct a risk-based analysis to determine when it is a good fit and when it's not. Like any tool, it's safest and most effective when used by the right people in the right situation.

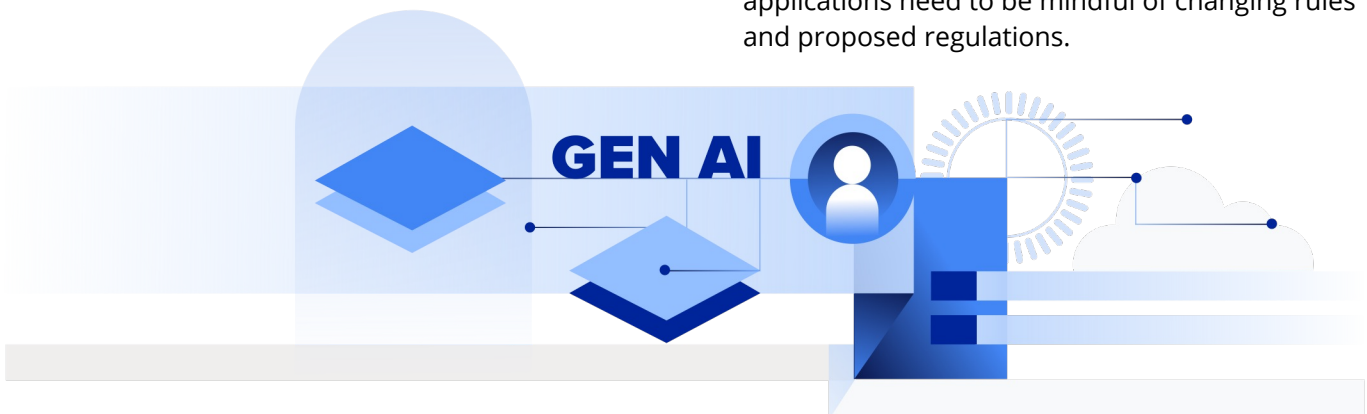
REGULATION

Many now agree AI will be critical to our economic future, enabling current and future generations to live in a more prosperous, healthy, secure, and sustainable world. But, in order to keep it safe, governments, the private sector, educational institutions, and other stakeholders must work together to capitalize on AI's benefits and mitigate any risks.

If not developed and deployed responsibly, AI systems could amplify societal issues. Tackling these challenges will again require a multi-stakeholder approach to governance. Some of these challenges will be more appropriately addressed by standards and shared best practices, while others will require regulation — for example, requiring high-risk AI systems to undergo expert risk assessments tailored to specific applications.

Many countries and international organizations have already begun to act — the OECD has created its AI Policy Observatory and Classification Framework, the UK has advanced a pro-innovation approach to AI regulation, and Europe is progressing work on its AI Act. Similarly, Singapore has released its AI Verify framework, Brazil has introduced AI bills, and Canada has introduced the AI and Data Act. In the United States, NIST has published an AI Risk Management Framework.

Understanding the future role of Gen AI within banking would be challenging enough if regulations were fairly clear, but there is still a great deal of uncertainty. As a result, those creating models and applications need to be mindful of changing rules and proposed regulations.



LEGAL FRAMEWORK

Google Cloud and ourselves work with policymakers to promote an enabling legal framework for AI innovation that can support our banking customers. This includes advancing regulation and policies that help support AI innovation and responsible deployment. Further, we encourage policymakers to adopt or maintain proportional privacy laws that protect personal information and enable trusted data flows across national borders.

For the past few years, federal financial regulatory agencies around the world have been gathering insight on financial institutions' use of AI and how they can update existing Model Risk Management (MRM) guidance for any type of AI.

Some challenges can be addressed through regulation, ensuring that AI technologies are developed and deployed in line with responsible industry practices and international standards. Others will require fundamental research to better understand AI's benefits and risks, and how to manage them, and developing and deploying new technical innovations in areas like interpretability. But others may require new groups, organizations, and institutions.

Sectoral regulators will also be best positioned to update existing oversight and enforcement regimes to apply to AI systems. This includes how existing rules apply to the use of AI, and how to demonstrate compliance of an AI system with existing regulations. In the EU, for example, there are already enabling mechanisms to instruct regulatory agencies to issue regular reports identifying capacity gaps that make it difficult both for covered entities to comply with regulations and for regulators to conduct effective oversight.

PRIVACY

Data is vital to the growth of Gen AI because LLMs require massive amounts of it to learn. But data can often be tied to individuals and their unique behaviours or be proprietary, internal data. The access to that data is one of the most paramount concerns as banks deploy Gen AI.

So how to thread the needle? Is there a way to feed models with enough data to be accurate without undercutting critical data protections?

The answer lies in transparency. In conjunction with proper data governance practices, privacy design principles, architectures with privacy safeguards, existing tools can help anonymize, mask, or obfuscate sensitive data, feeding into those systems and models. In enterprise Gen AI implementations, banks maintain control over where their data is stored and how or if it is used.

When fine tuning the data, the banks' data remains in their own instance, whereas the LLM is "frozen." The learning and fine tuning of the model with the bank's data is stored in the adaptive layer in its instance. It is not used to train Google's own or other models without permission. In other words, the bank's fine-tuned data is the bank's data.



SECURITY

For all industries, but particularly within financial services, Gen AI security needs to be air-tight to prevent data leakage and interference from nefarious actors.

Dialogue on multiple levels is necessary to establish reasonable expectations and clear up any potential misconceptions about the risks that Gen AI models pose. Identifying and engaging with key stakeholders in the cloud and cybersecurity space will facilitate better security requirements. The industry therefore has a responsibility and a constructive role to play in fostering dialogue with various government institutions.

Central to this issue is the difference between consumer LLMs and enterprise LLMs. In the case of the former, once proprietary data or intellectual property is uploaded into an external model, retrieving, or gating that information is exceptionally difficult. Conversely, with enterprise LLMs developed internally, this risk is minimized because the data is contained within the enterprise responsible for it.

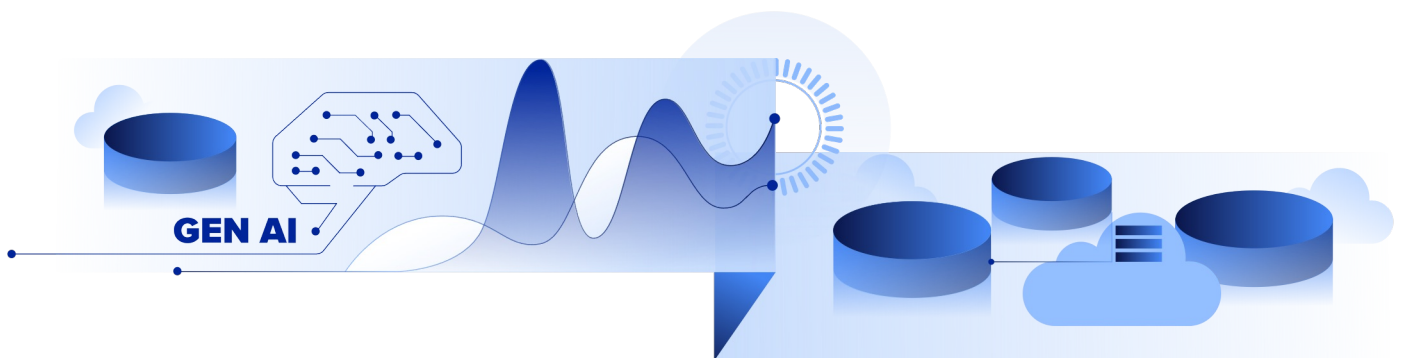
Looking ahead, Gen AI is likely to develop unanticipated capabilities that may affect a bank's cybersecurity posture. These will inevitably be double-edged, both in terms of facilitating attacks and defending against them. Knowing the nature of the models and tools will only assist in bolstering defences.

DATA FLUIDITY

As we have seen, at the heart of any Gen AI strategy for a financial institution will be data, as it is how these datasets are used that will determine the success of any initiative. According to a recent report by Evident Insights data in finance firms has historically been siloed across multiple products and data systems. The challenge then is the work to create common datasets which will be a key development in moving towards an AI-friendly architecture.

This can be tackled in a variety of ways. Evident notes that JPMorgan Chase has its Fusion platform, Capital One works with data management vendor Snowflake, while Morgan Stanley is working with Microsoft to enhance this. This is not simply a question of porting information but also aligning definitions, standards, governance and working through gritty details like unique IDs and data formatting.

The win from having fluid, interchangeable data is potentially huge, but the pain of getting there is absolute and real. Banks will also buy in data to enrich their content — consumer behaviour or credit-monitoring information, for example — and there is also likely to be an increased deployment of synthetic data to help build stronger models. This means that there has already been a fair amount of internal bank operational innovation to get data structured and managed.



BIFURCATION

Three smaller banks moved into the top 10 of the latest Evident AI Index, now expanded to 50 banks, showing size is not the dominant factor many were expecting it to be in order to be successful in the deployment of AI capabilities. But there are increasing signs, according to Evident, that the leaders will pull away in the next year or two from the followers, with the gap widening as bifurcation occurs between the two groups becomes more obvious.

Capability and visibility are also two critical factors that are considered when assessing a bank's AI success, with transparency being an integral part of the latter. In many ways banks that keep their AI developments to themselves will need to open up their black boxes and articulate their AI investments and objectives to external stakeholders as well as internal if they want to be trusted.

This will also be a demonstration of the openness required to meet both regulatory compliance obligations and the ethical standards being expected by a wider range of vested interests.



PARTNERSHIP POWER

As Evident points out, in order to innovate, bank executives need to be able to imagine a different future, to drive internal debate, refashion priorities and attract more high-calibre recruits at all levels. Ideas will flow from internal and external research teams, open-source communities, market activity and start-up interactions. The more the bank can be in the flow of ideas the faster they can begin to deliver on the future that they want to see.

Given the complexities we have discussed around the adoption and implementation of Gen AI it is therefore little surprise that most banks (and many other industries) have opted to work with partners to ensure a safe and secure deployment of the new technology.

A key pillar of a successful Gen AI project is therefore implementation and integration. This enables an expert partner to bring together the hardware, software, and processing capabilities to deliver the desired business outcomes. It is effectively the glue that binds the process together.

Implementation enables AI technology experts like Google Cloud to focus on their skills of product development, while the service delivery partner works with clients to ensure successful integration and application. It bridges communications between teams, fills skills gaps, maintains industry compliance requirements and safety standards, and ensures delivery commitments are met.

Most importantly, it establishes a team with intimate knowledge and experience in working with financial institutions to produce smarter technology outcomes. This is crucial in the developing world of Gen AI and LLMs, where the appetite for the results often exceeds the skillsets to enable it. That talent pool widens by engaging with partners.

The Google Cloud AI workshops being developed by SoftServe are a clear example as to how one firm is working to help its customers.

According to Todd Lennox, SVP of Alliances & Partnerships at SoftServe,



“With our multi-disciplinary team, cross industry solutions, and state-of-the-art AI expertise, our expanded partnership with Google Cloud will amplify the possibilities for our clients and customers.”

The workshops are intended to cover planning expectations, use cases, recommended target solutions, implementation scope and road maps. It will also include project proposals with assets and templates, priming organizations for an effective pursuit of Gen AI technologies. Together, these actions are expected to reduce risk and accelerate time-to-market for Gen AI applications.

SoftServe’s alliance with Google Cloud has led to more 700 unique Google Cloud certified client resources. Since 2017 SoftServe has been a Premier Partner with Google Cloud, and has garnered five specializations and cultivated expertise in more than 35 areas, earning the status of Preferred Partner for Generative AI.

Working alongside each other we can ensure that financial institutions maximize the opportunities Gen AI offers for themselves and their customers, while safeguarding the data concerns of regulators, shareholders, and other interested parties. The future for finance firms with Gen AI will then be brighter, safer, more efficient, and more engaging for customers and employees.

WHY SOFTSERVE

SoftServe is a premier IT consulting and digital services provider. We expand the horizon of new technologies to solve today's complex business challenges and achieve meaningful outcomes for our clients. Our boundless curiosity drives us to explore and reimagine the art of the possible. Clients confidently rely on SoftServe to architect and execute mature and innovative capabilities, such as digital engineering, data and analytics, cloud, and AI/ML.

Our global reputation is gained from more than 30 years of experience delivering superior digital solutions at exceptional speed by top-tier engineering talent to enterprise industries, including high tech, financial services, healthcare, life sciences, retail, energy, and manufacturing.

Visit our [website](#), [blog](#), [LinkedIn](#), [Facebook](#), and [X \(Twitter\)](#) pages for more information.

Sources:

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[SoftServe Has Been Recognized as a Challenger by Gartner®](#) (softserveinc.com)

[SoftServe Expands Google Cloud Partnership in Generative AI](#) (softserveinc.com)

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