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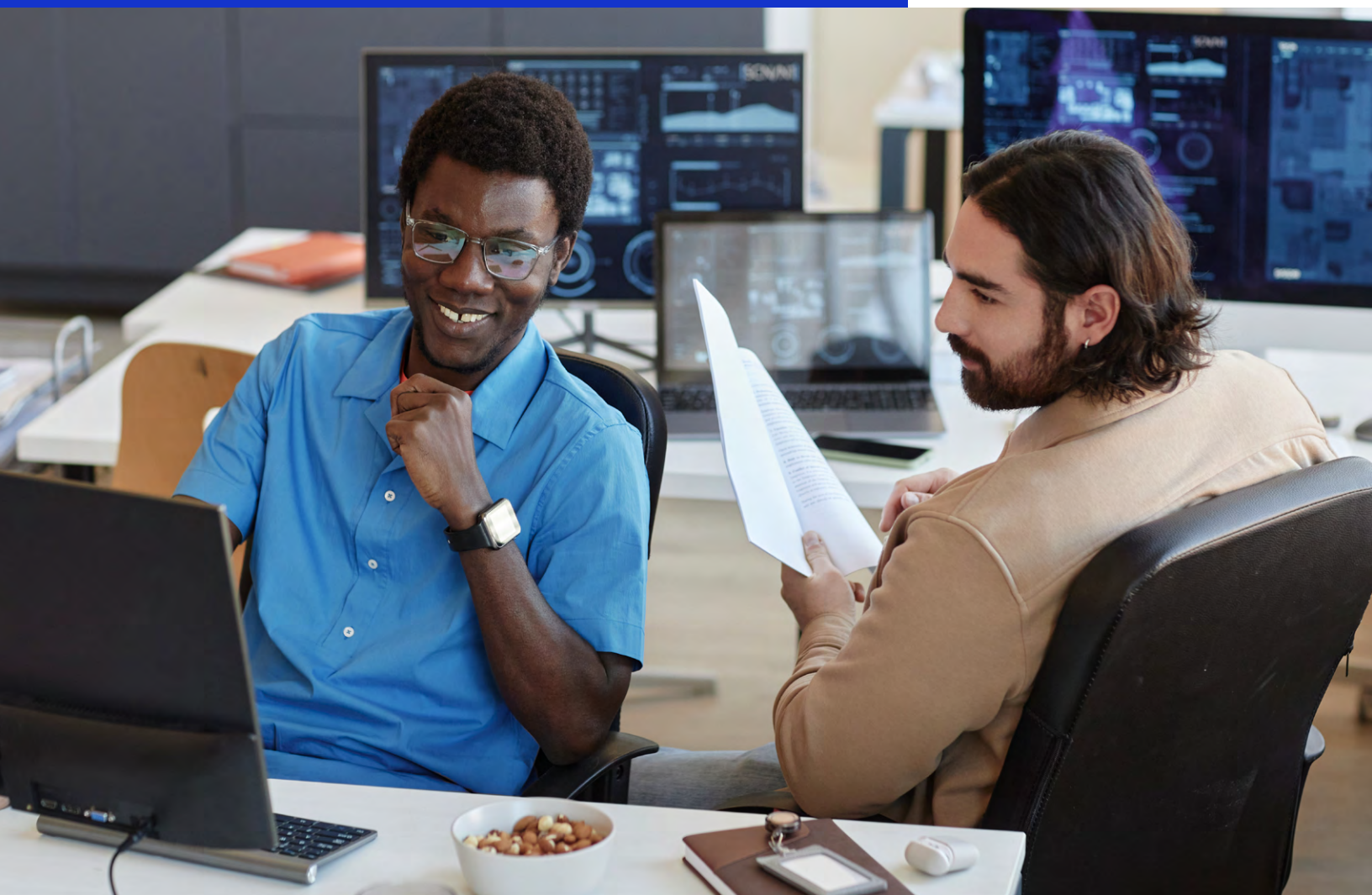
Visa Consulting & Analytics (VCA)

Transforming payments with generative AI technologies

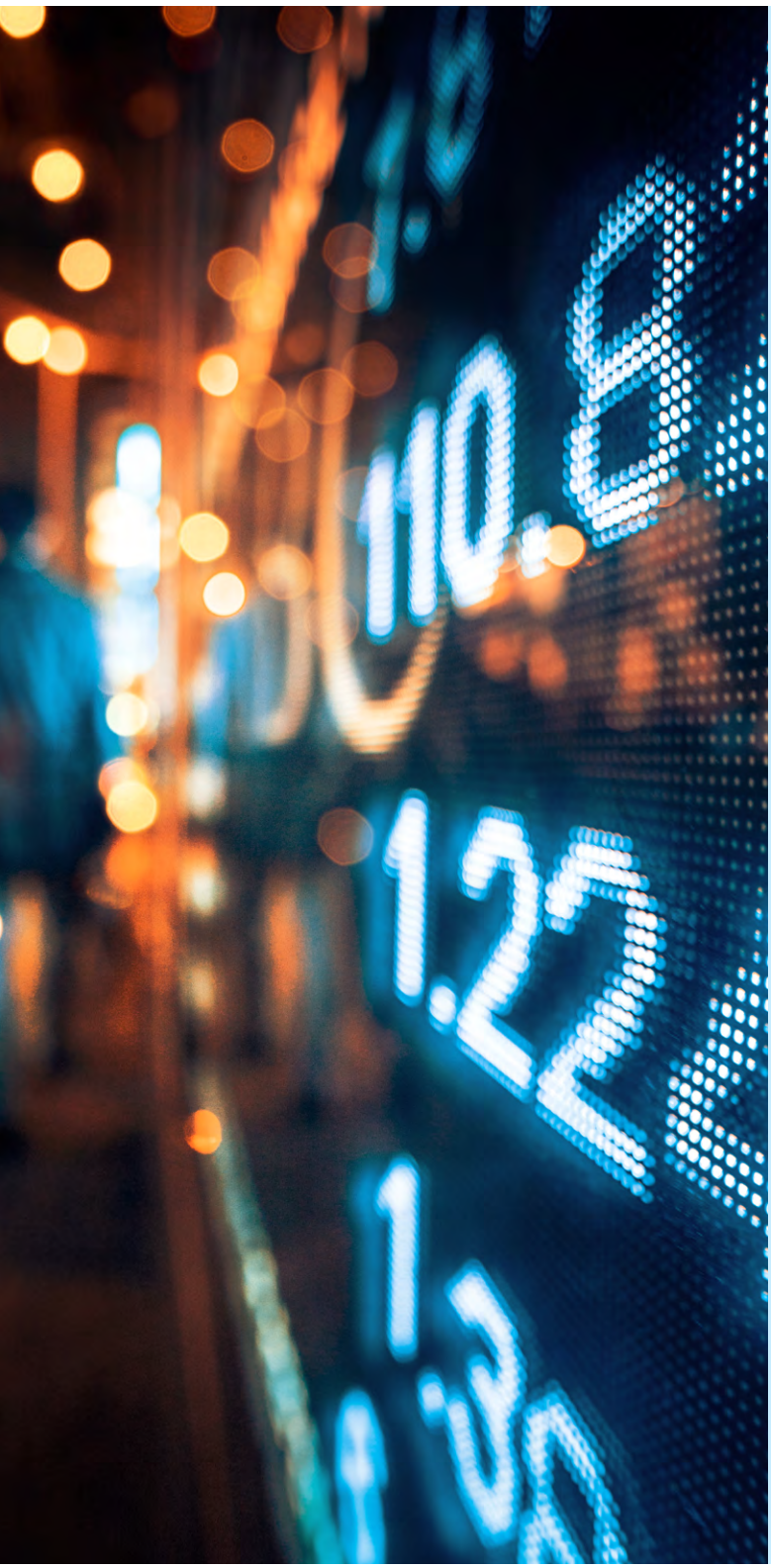
How GenAI is changing the payments game



Generative Artificial Intelligence (GenAI) is no longer just a futuristic concept. It is here, is becoming increasingly common, and is set to radically transform how we interact with technology in all areas. Payments is no exception.

GenAI is already reshaping the payments landscape by streamlining operations, enhancing fraud detection, and enabling hyper-personalized customer experiences. Looking ahead, it has the potential to transform how we handle money through its role in agentic commerce, where AI transacts autonomously on our behalf, acting as the decision-making engine behind autonomous digital agents.

In this deep dive into **What's influencing payments in 2025: 10 recommendations on business strategy**, the Visa Consulting & Analytics (VCA) team investigate GenAI, how it is shaking up payments, its economic impact, and what the future may hold for this revolutionary technology. Whether you're a merchant, fintech, or a financial institution (FI), this is your guide to understanding GenAI in payments and how it may be relevant to your organization.



How GenAI is already transforming payments

As GenAI continues to evolve, its impact is being felt across every link of the payments value chain. Many companies, including FIs are experimenting with the technology to enhance their services, improve security, and offer more personalized experiences.

By mapping the payments value chain and applying a GenAI lens, we can identify the areas where use cases are being developed today and predict where disruption is likely to drive further innovation.

Some existing and emerging use cases in the payments value chain

Product Development

AI can innovate new banking products by analyzing current market trends, customer behaviors and competitor offerings to suggest product development strategies.

Examples: Customer testing, Concept design, Market/customer research

Product Management

Utilizing AI to better adjust product pricing to optimize consumer product appeal and ensure constant compliance with changing regulations.

Examples: Dynamic pricing, Real-time personalization, Data-driven experimentation and analytics

Customer Sales

AI is currently being used to improve customer sales with improved lead generations and personalized product offers and cross-selling.

Examples: Personalized sales offers, Dynamic messaging and marketing, Product recommendations and cross selling

Customer Onboarding

AI is currently being used to improve onboarding with hyper-personalized comms.

Examples: Pre-fill data automation, Hyper-personalized onboarding comms, KYC optimization

Customer Portfolio Management

AI can identify different customer segments within a bank's portfolio, and targe them with personalised product recommendations based on behavioural predictions.

Examples: Activation, Usage, Retention

Transaction Flow

AI is used to achieve efficiency in internal operations and processes.

Examples: Compliance automation, Documentation updates, Contract management automation

Transaction Presentment

AI and GenAI are being used to provide customers with visual and more actionable insights over their spend with improved analytics, categorization, and tips.

Examples: Real-time transaction analysis, Personal finance management, Triggers and insights

Fraud Risk Management

AI constantly needs to adapt to ever evolving threats and with genAI increasingly used in complex attacks there is an increased need to develop AI tools to combat AI.

Examples: Authorization & fraud detection and prevention, False positive fraud management, Scenario analysis

Customer Service

AI powered chatbots and virtual assistants can be used to answer customer questions, provide instant response to account queries, while gen AI developments offer hyper-personalized answers to queries.

Examples: Human-like GenAI chatbots, FAQ translators, Customer sentiment analysis

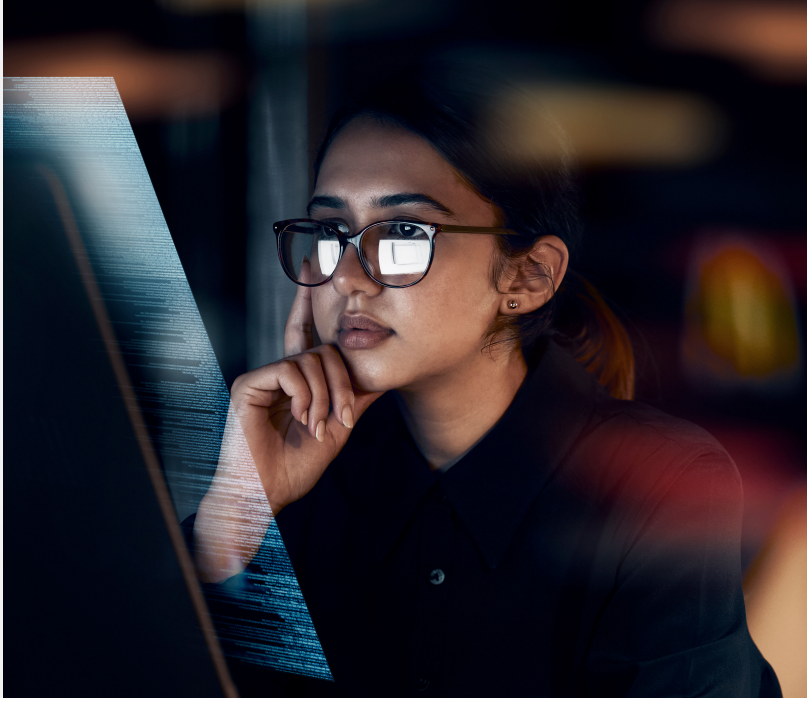
Disputes & Chargebacks

AI to automatically handle and settle disputes and chargeback claims.

Examples: GenAI to support dispute agents, Serial dispute prediction, Scheme rules support agent

Source: Visa Consulting & Analytics analysis

At leading organizations, GenAI has moved well beyond the planning stage; it is already being deployed across a variety of use cases, most of which generate returns through cost savings. In financial services, the initial focus has also been on internal operations, but new applications now include customer onboarding, fraud detection and prevention, and product recommendation and cross-selling.



Some early and indicative examples from across the payments ecosystem

Early use case
#1

Operational efficiency

Typically, FIs are adopting a low-risk approach to GenAI adoption, by starting with internal efficiency use cases and gradually moving to customer-facing applications.

Primarily, this is to reduce the risk of dealing with privacy concerns (which are more acute in markets, like Europe, where there is a strong focus on GDPR-like regulations), as well as reputational risks.

A typical application is automated document analysis, such as the automated generation of compliance documentation, policy updates, contract management, etc.

EXAMPLES

Itaú Unibanco, Brazil's largest banking institution built a GenAI-enabled intelligent document processing solution, with a view to reducing operational friction, and lowering cost-to-serve. Incorporating 12 proprietary AI models, its tangible benefits have included faster onboarding and accelerated time to market.[1]

Euroclear, the Belgium-based financial infrastructure group, has developed a 'legal co-pilot' that assists with regulatory research by turning legal questions into prompts and providing concise, natural language responses. It can be likened to a junior researcher that aids in navigating regulatory information, significantly reducing the time lawyers spend on research.[2]

1. Itaú Unibanco, Intelligent Document Processing (IDP) as a Platform at Itaú Unibanco, 2025: https://www.linkedin.com/pulse/intelligent-document-processing-idp-platform-ita%C3%BA-de-almeida-okino-zyxkf/
2. The Banking Scene, Generative AI in Benelux Banking, 2024: https://thebankingscene.com/resources/generative-ai-in-benelux-banking-white-paper-2

Early use case
#2

Customer onboarding

GenAI has significant potential to reduce onboarding times and costs by increasing the speed of identity verification and limiting the need for human intervention.

EXAMPLES

Airwallex, a Singapore-based payments and financial platform, uses a GenAI-enabled onboarding tool that reduced the occurrence of false positives by 50 percent and increased the number of customers that pass through onboarding without the need for human intervention by 20 percent.[3]

Worldline, the France-based payment processor updated investors on its proprietary GenAI tool in 2024, saying that it would be accelerating its development. Among the use cases it highlighted was using GenAI to improve merchant onboarding.[4]

Early use case
#3

Fraud detection and prevention

By analyzing transaction patterns in real time, GenAI can be far more adept than traditional rules-based techniques in spotting anomalies and flagging potentially fraudulent activity.

EXAMPLES

Visa has developed Visa Account Attack Intelligence (VAAI), a tool that uses generative AI components to identify and score enumeration attacks. The VAAI Score helps to reduce fraud and operational losses by assigning each transaction with a risk score in real time to detect and prevent enumeration attacks in card-not-present transactions.[5] In the face of sophisticated application fraud risks, Visa has also enhanced its capabilities by integrating Featurespace's real-time AI into its fraud prevention and risk-scoring offerings. This enhancement provides real-time detection of sophisticated fraud attacks, ensuring businesses stay safe without adding friction to the user experience.[6]

Fiserv, the US-based payment solutions player, says it is exploring GenAI, including an application for checking customer phone calls and other communications for signs of fraud in a customer's speech patterns. Fiserv also reports that it is building GenAI tools to predict how customers are going to perform over time, enabling better financial planning and decision-making.[7]

3. Fintech Intel, Airwallex to improve customer onboarding with AI, 2023: https://fintech-intel.com/regtech/airwallex-to-improve-customer-onboarding-with-ai-tool/
4. CONCRYT, How Payments Giants Are Harnessing AI to fuel growth, 2024: https://concryt.io/blog/how-payments-giants-are-harnessing-ai-to-fuel-growth
5. Visa, Visa Announces Generative AI-Powered Fraud Solution to Combat Account Attacks, 2024: https://usa.visa.com/about-visa/newsroom/press-releases.releaseId.20661.html
6. Visa, Visa Completes Acquisition of Featurespace, 2024: https://www.visa.co.uk/about-visa/newsroom/press-releases.3361605.html
7. CONCRYT, How Payments Giants Are Harnessing AI to fuel growth, 2024: https://concryt.io/blog/how-payments-giants-are-harnessing-ai-to-fuel-growth

Early use case
#4

Customer experience – personalized offers, messaging, and campaigns

Building on traditional and predictive AI analysis of customer behavior, GenAI can formulate and offer tailored payment solutions, customized loyalty programs, and even personalized credit offers.

EXAMPLES

Klarna, the Sweden-based payments and buy-now-pay-later company, is reported to have run 30 marking campaigns during 2024 where GenAI was used to generate ideas, write copy and create images. As well as enabling the company to cut marketing spend by 12%, the GenAI-enabled campaigns were found to be more effective.[8]

PayPal has developed an Advanced Offers platform to provide hyper-personalized shopping recommendations and discount offers. Recommendations are based on what customers have previously bought across the internet, down to the stock keeping unit. It is reported that the platform has the potential to use AI to organize and analyze data from US$500bn worth of transactions globally, enabling ultra-precise targeting and more opportunities to earn rewards.[9]

Early use case
#5

Customer experience – virtual assistants

GenAI chatbots that support customer service or sales queries that mimic human-like interactions and can be enriched with sentiment analysis are becoming popular. These virtual assistants can handle customer inquiries 24/7, providing instant support and freeing up human agents for more complex tasks.

EXAMPLES

Commerzbank of Germany is one of the first European banks to have developed a virtual customer assistant, combining GenAI and avatar technologies in a customer application. Named Ava, the assistant enables the execution of transactions directly within the dialogue, including ordering a new payment card, blocking or unblocking a payment card, or changing credit limits.[10]

BBVA, one of the largest banks in Spain, recently BBVA has revamped its personal virtual assistant, adding GenAI-powered account and card management features. The assistant, called Blue, has improved abilities to interact with customers using natural language, provide tailored information on their finances, and perform some of the most common account and card transactions.[11]

8. Adweek, 30 Gen AI Campaigns Later, Klarna Cuts Annual Marketing Spend by 12%, 2025: https://www.adweek.com/media/klarna-marketing-costs-gen-ai/
9. PayPal, PayPal and Venmo Unveil Six New Innovations to Revolutionize Commerce, 2024: https://newsroom.paypal-corp.com/2024-01-25-PayPal-and-Venmo-Unveil-Six-New-Innovations-to-Revolutionize-Commerce
10. Commerzbank, Commerzbank launches AI-based Banking Avatar, 2025: https://www.commerzbank.de/group/newsroom/press-releases/avatar.html
11. Finextra, BBVA virtual assistant gets AI-powered account and card management features, 2025: https://www.finextra.com/newsarticle/45513/bbva-virtual-assistant-gets-ai-powered-account-and-card-management-features

Early use case
#6

Regulatory reporting and compliance automation

GenAI is being used to automate and enhance regulatory reporting, ensuring banks and payment providers remain compliant with evolving local and cross-border regulations. By parsing regulatory documents, extracting obligations, and generating tailored compliance reports, GenAI reduces manual errors, accelerates reporting cycles, and allows for proactive risk management—especially important in dynamic regulatory environments.

EXAMPLES

Standard Chartered Bank of Singapore has partnered with Singapore-based RegTech firm Silent Eight to deploy AI-driven solutions that automate compliance investigations and regulatory reporting. GenAI models are used to parse investigation data and generate reports for compliance teams.[12]

DBS leverages AI and natural language processing to automate the review and submission of regulatory documents, significantly reducing turnaround times for compliance reporting.[13]

Early use case
#7

Financial literacy and customer education

Banks and FinTechs in some regions are deploying GenAI-powered chatbots and content engines to provide tailored financial education and literacy programs. These solutions generate personalized learning modules, answer customer queries in local languages, and simulate financial scenarios, thus helping bridge the knowledge gap among underbanked populations and first-time digital banking users.

EXAMPLES

Philippines-based bank RCBC has developed an app called DiskarTech that deploys AI-driven chatbots to deliver financial advice, explain banking concepts in Tagalog and other local dialects, and guide users through digital transactions, supporting government-backed financial inclusion initiatives.[14]

Tencent's WeBank employs AI-powered virtual assistants and GenAI interfaces to automate customer service, answer user queries, and support financial literacy efforts. These technologies have significantly improved engagement and self-service rates, with over 98 percent of customer interactions handled online.[15]

12. Standard Chartered, We've partnered with Regulatory Technology firm Silent Eight, 2018: https://www.sc.com/en/press-release/weve-partnered-with-regulatory-technology-firm-silent-eight/
13. DBS, Responsible AI in banking: Gaining a competitive edge, 2025: https://www.dbs.com/artificial-intelligence-machine-learning/artificial-intelligence/responsible-ai-in-banking-gaining-a-competitive-edge.html
14. Fintech News Philippines, RCBC AI-backed DiskarTech App Amasses Over 5 Million Downloads, 2023: https://fintechnews.ph/60587/digital-banking-news-philippines/rcbc-ai-backed-diskartech-app-amasses-over-5-million-downloads/
15. McKinsey & Company, Making financial services available to the masses through AI, 2022: https://www.mckinsey.com/industries/financial-services/our-insights/making-financial-services-available-to-the-masses-through-ai

Early use case
#8

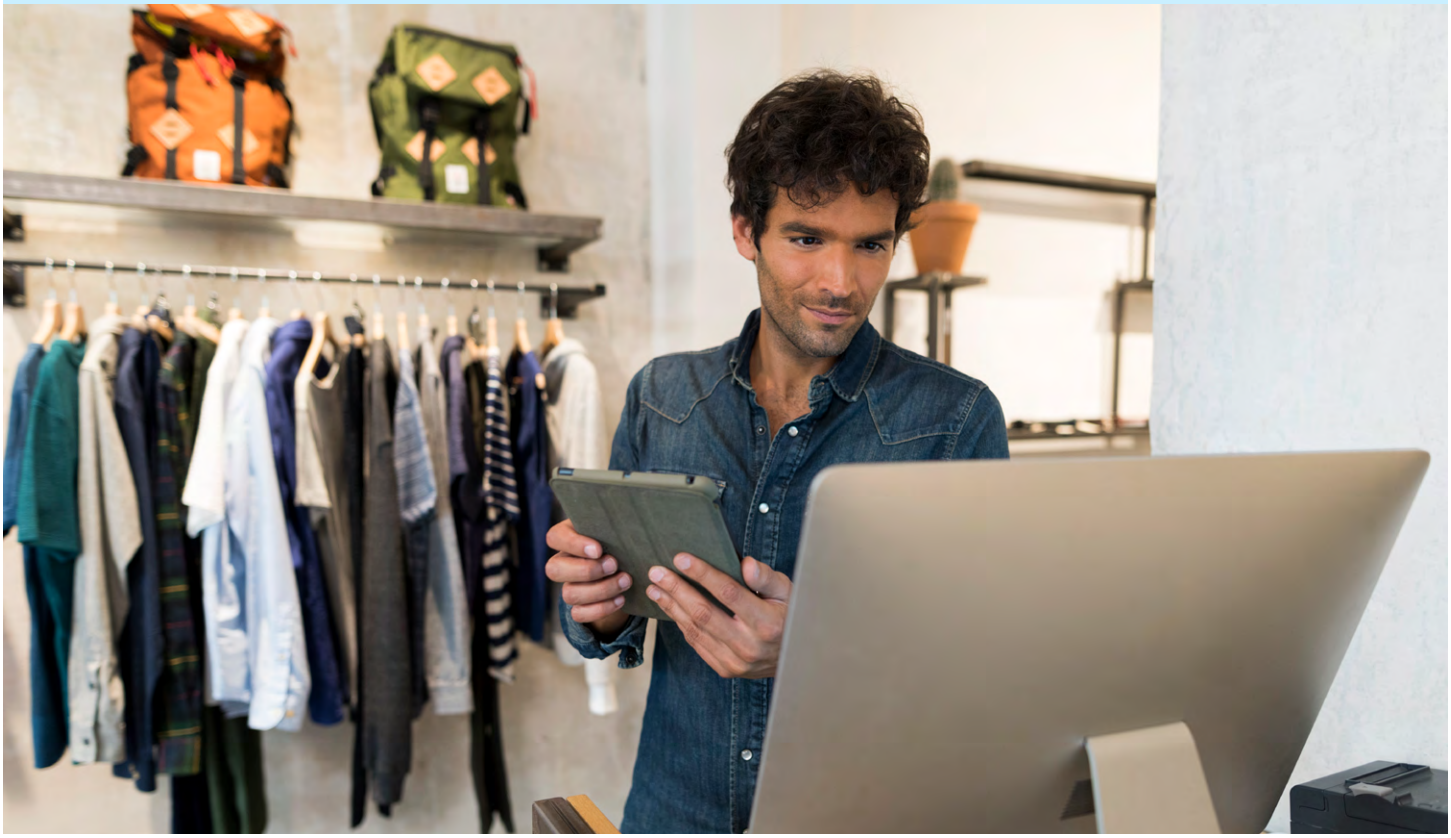
SME credit underwriting using alternative data

In markets where small and medium-sized businesses (SMEs) often lack traditional credit histories, GenAI is used to analyze alternative data sources such as e-commerce sales, mobile wallet transactions, and utility payments for underwriting decisions. This expands access to credit for underserved businesses, a persistent challenge in many economies around the world.

EXAMPLES

Ant Group's MYbank uses AI models to analyze real-time transaction data from Alibaba, Alipay, and other sources, enabling automated credit decisions for millions of Chinese and Southeast Asian SMEs, many of which have no formal credit history.[16]

Grab a leading superapp in Southeast Asia, uses AI (including GenAI components) to assess the creditworthiness of micro-entrepreneurs and drivers by analyzing ride history, customer ratings, and digital payment activity, facilitating access to loans.[17]



16. Ant Group, Leveraging AI, MYbank Enables Financing Services for 53 Million SMEs, 2024: https://www.antgroup.com/en/news-media/press-releases/1714473000000
17. Grab deploys agentic AI to empower merchants and driver partners, 2025: https://investors.grab.com/news-and-events/news-details/2025/Grab-deploys-agentic-AI-to-empower-merchants-and-driver-partners-2025-KuA890N398/

The potential economic impact of this transformation

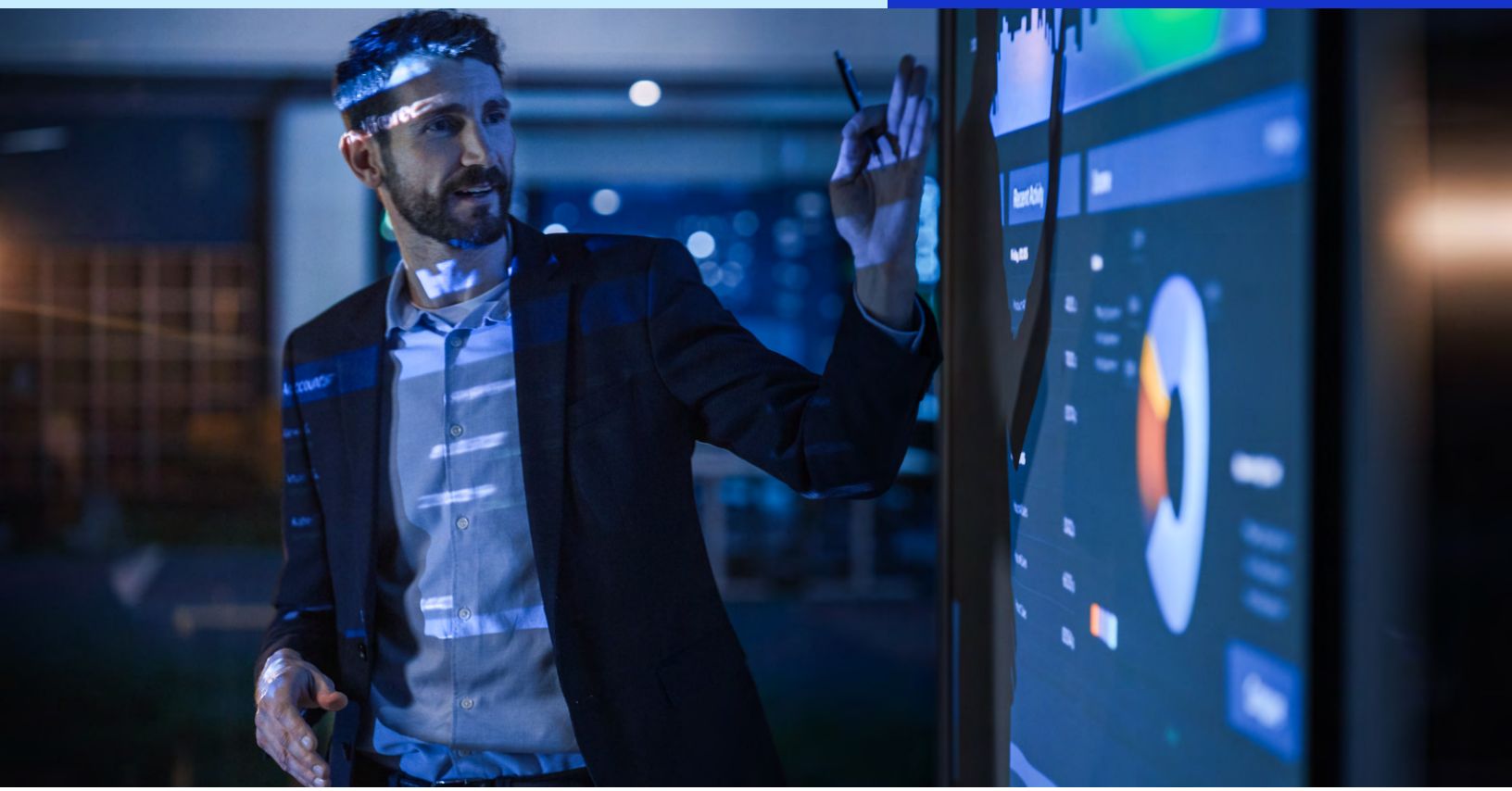
From boosting revenue to reducing costs, GenAI could deliver significant economic benefits for payment providers and the broader financial ecosystem.

From a revenue perspective, GenAI is unlocking innovative business models and value-added services such as personalized financial advice. It is also enhancing customer satisfaction by improving automated customer interactions and helping guide human agents towards customized solutions in real time. And, from a cost saving perspective, GenAI has the potential to improve productivity of payment players.

All in all, estimates suggest that, in terms of GDP impact, GenAI could add between

$2.6tn and $4.4tn

annually to the global economy.[18]



18. McKinsey & Company, The economic potential of generative AI: The next productivity frontier, 2024: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier

What's next?

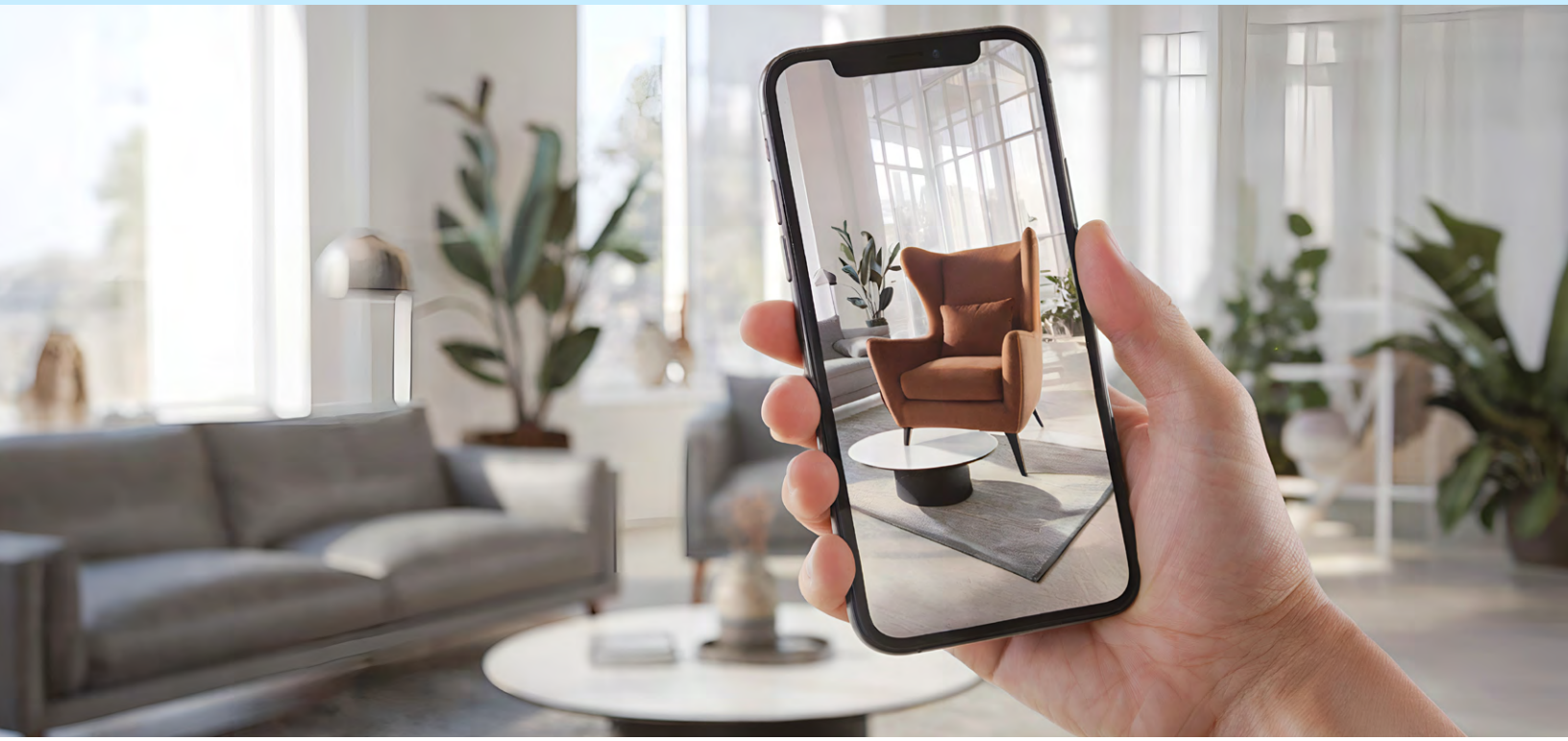
The future of GenAI in payments looks bright, and its most disruptive impact is likely to come from its evolution into the engine of Agentic AI, autonomous digital agents that can decide, act and transact on a user's behalf.

Today, GenAI adds value by generating content, analyzing data and boosting personalization, but it still depends on human prompts. Agentic AI embeds decision-making so trained agents can initiate actions, adapt to new information and optimize outcomes in real time, all within predefined guardrails. GenAI's talent for synthesizing unstructured data, grasping context and producing humanlike responses supplies the intelligence that lets these agents operate independently.

Organizations that invest now in robust data pipelines, ethical frameworks and scalable infrastructure will be best positioned to capitalize on this shift. In short, Agentic AI will not replace GenAI; it will amplify it, and GenAI readiness is the launchpad for the next wave of business value.

To seize the opportunity, firms must also address user concerns such as privacy, security, bias and regulatory compliance, and tackle technical requirements around integration, customer-experience design, authentication and consent.

If they do, GenAI could soon power hyper-personalized financial journeys, stronger fraud controls, blockchain-enabled smart contract payments, broader financial inclusion, streamlined compliance, real-time settlement, voice-driven commerce and immersive augmented reality checkouts.



Selecting a sound strategic response

To unlock the full value of GenAI, there are several strategic approaches that payment players can pursue. These include:

Response #1

Harness GenAI for operational efficiency and growth

Focus on utilizing GenAI to enhance operational efficiency, security, and customer experience, which could result in significant cost savings and revenue generation in the payments industry.

Response #2

Develop a robust data strategy

To fully realize the benefits of GenAI, organizations need a comprehensive data strategy, one that is sponsored by senior leaders and aligned to business strategy. This includes investing in data architecture, management, governance, and fostering a data-driven culture.

Response #3

Prioritize ethical AI practices

A growing emphasis on ethical AI necessitates that organizations protect customer data from fraud and cyberattacks. Helping to ensure transparency, fairness, and unbiased models is crucial to maintaining trust among customers and stakeholders.

Response #4

Implement strong governance frameworks

Payment providers must adopt robust governance frameworks, conduct regular audits, and address ethical concerns to help ensure responsible use of GenAI. This can help build trust and credibility in the payments ecosystem.

Response #5

Support ecosystem collaboration

Increased collaboration among payment providers, technology companies, regulators, and other stakeholders is essential. Working together can drive innovation, establish industry standards, and address challenges, ultimately accelerating the adoption of GenAI and creating a safe, inclusive payments ecosystem.

Response #6

Learn from the real-life experience of others

While GenAI has had a positive, transformative impact for many payment players, its implementation hasn't always been a success, especially in customer service and support. It's therefore important to keep a close watch on market activity to identify best practice and avoid potential pitfalls.

Response #7

Consider build vs. buy approaches

Organizations should decide whether to build or buy GenAI. Building in-house gives full customization and differentiation but requires major talent, infrastructure and R&D investment. Buying vendor solutions speeds launch and lowers upfront costs, though with less flexibility. A hybrid model by customizing vendor tools balances both.

Response #8

Develop a GenAI-ready talent strategy

The success of GenAI initiatives depends heavily on having the right talent in place. Organizations should invest in building cross-functional teams that blend data science, ML/AI and prompt engineering, and GenAI-savvy product management. In addition, they should consider upskilling current staff, recruit specialized experts, and foster continuous learning to keep innovation moving.

How Visa can help accelerate your GenAI journey

VCA blends strategy, digital, marketing, and data-science expertise with your team to turn GenAI ideas into measurable results. We can help you:

Explore

Define a GenAI vision, target business goals, and assess technical and organizational readiness.

Identify opportunities

Scan market trends, spot high-value use cases, rank them, and map a partnership roadmap.

Design use cases

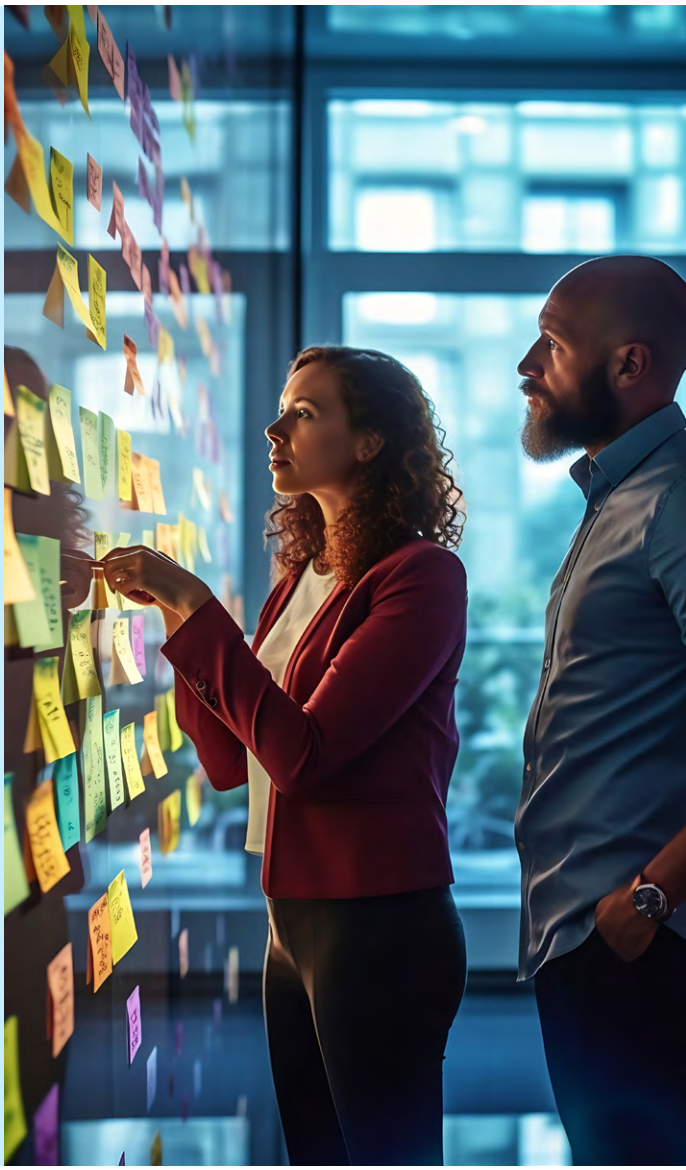
Run discovery workshops, prototype solutions, and pilot projects from portfolio optimization and personalized offers to advanced fraud and AML controls.

Build capabilities

Utlize Visa data, AI-lab resources, training, and guidance on new roles, workflows, and team structures.

Test, learn, deploy

Launch pilots, build MVPs, scale successful solutions, and select the right partners.



As your GenAI initiatives progress, you can draw on Visa Intelligent Commerce. Visa Intelligent Commerce brings a suite of integrated APIs and a commercial partner program to AI platforms, enabling developers to deploy Visa's AI commerce capabilities securely and at scale including AI-ready cards, AI-powered personalization and simple and secure AI payments.

About Visa Consulting & Analytics

VCA is a team of thousands of payments consultants, digital marketing specialists, data scientists, and economists across six continents.

The combination of our deep payments consulting expertise, our economic intelligence, and our breadth of data allows us to identify actionable insights and recommendations that drive better business decisions.

- Our consultants are experts in strategy, product, portfolio management, risk, digital and more with decades of experience in the payments industry.
- Our data scientists are experts in statistics, advanced analytics, and machine learning, with exclusive access to insights from VisaNet, one of the largest payment networks in the world.
- Our economists understand economic conditions impacting consumer spending and provide unique and timely insights into global spending trends.

To get started, reach out to your Account Executive directly. Learn more about the team, resources, and our data-backed insights on Visa.com/VCA, and follow the team on LinkedIn.

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