

CYBER SECURITY & AI IN BANKING

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A STRATEGIC EVOLUTION IN BANKING

The Information Security Committee of the UAE Banks Federation discusses how AI can be a force for good

As digital transformation accelerates across various industries, artificial intelligence (AI) emerges as an indispensable ally, revolutionising cyber security to protect financial institutions and maintain customer trust in the banking sector.

AI's growing importance in cyber security stems from its abilities in enhancing threat detection, mitigating risks, and automating response mechanisms. Traditional cyber security systems, often reliant on static rules or historical data, are not optimised to keep pace with the adaptive tactics of modern cyber criminals. AI, however, offers dynamic capabilities, including advanced machine learning and predictive analytics to counteract these evolving threats.

By identifying anomalies, flagging suspicious activities, and enabling real-time responses, AI ensures that banks remain resilient in an era of rising digital complexity. Furthermore, AI's integration into fraud detection systems has transformed the way financial institutions safeguard sensitive data and transactions. AI-powered tools analyse behavioural patterns and transactional contexts to detect and prevent fraudulent activities with unprecedented precision.

In the case of the UAE, Central Bank has been introducing pioneering initiatives that underscore the strategic importance of cyber security. Notably, the Financial Infrastructure Transformation (FIT) Programme is a comprehensive effort to modernise the UAE's financial

systems, incorporating AI technologies to enhance operational efficiency, bolster data security, and create a future-ready ecosystem.

Addressing cyber security challenges

While AI offers significant advantages in combating cyber risks, it also presents new challenges. Cyber criminals are increasingly deploying AI-powered tools, such as deepfake technology and adaptive malware, to bypass traditional defences. This necessitates continuous innovation and vigilance within the banking sector.

Additionally, the ethical governance of AI is a pressing issue. Ensuring transparency, addressing biases in data models, and fostering accountability are paramount

to maximise the benefits of AI while minimising its risks. These considerations are central to the UAE's approach, as outlined in its National AI Guidelines promoting fairness and inclusivity.

Being the representative voice of UAE banks, the UAE Banks Federation (UBF) has been working in close collaboration with the Central Bank of the UAE (CBUAE) and has taken proactive measures to address the cyber security challenges that are facing financial institutions. For example, the launch of Tasharuk, the nation's first Information Sharing and Analysis Centre (ISAC) Platform, is a prime example. This platform leverages AI-driven insights to enable real-



Jamal Saleh
Director General of the UAE Banks Federation (UBF)

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time sharing of cyber threat intelligence among member banks, fostering a collaborative defence network against emerging threats.

UBF has responded by organising large-scale simulated cyber-attack exercises annually, the largest of their kind in the Middle East and North Africa. Conducted in partnership with entities such as the UAE Cyber Security Council, CBUAE, and local law enforcement, these exercises provide critical insights into detecting and mitigating sophisticated attacks.

Beyond security: Empowering customers and driving sustainability

The integration of AI in cyber security aligns with the broader efforts to enhance customer empowerment and sustainability in banking. By leveraging AI, banks can offer personalised products and services, granting customers greater control over their financial data and improving user experiences.

Simultaneously, the banking sector is advancing environmental, social, and governance (ESG) principles. AI is being used to assess the sustainability impact of financing activities, enabling banks to support businesses that prioritise sustainable practices. These efforts reflect the UAE's vision of a balanced approach to innovation -

one that safeguards both technological as well as societal progress.

The convergence of AI and cyber security is no longer a choice but a necessity for the banking sector. The visionary policies of the Central Bank of the UAE and the proactive initiatives of UBF have created a strong foundation for a secure and resilient financial ecosystem in the UAE.

However, the road ahead will require sustained collaboration among all stakeholders, ongoing investment in AI innovation, and commitment to raising public awareness about cyber risks. Customers, too, play a critical role by remaining vigilant and adopting secure practices in their digital banking interactions.

As AI continues to evolve, so will the cyber threats it seeks to combat. By prioritising ethical governance, fostering partnerships, and staying ahead of adversarial trends, the UAE is poised to lead the global banking sector into a new era of resilience and trust.

Through these efforts, the UAE is not only protecting its financial institutions but is also setting a global benchmark for leveraging AI to drive innovation, security, and sustainability. Together, we can ensure that the future of banking remains secure, inclusive, and forward-looking. And we at UBF are committed to remaining a key integral part of this quest.

AI STRENGTHENS THE UAE'S CYBER SECURITY, BUT ALSO BRINGS NEW THREATS

Banks in the UAE are using artificial intelligence (AI) to strengthen their defences against cybercrime while simultaneously bracing for new threats posed by AI-powered attacks



Fraud in the financial sector totalled \$485.6 billion in 2023, according to Nasdaq's 2024 Global Financial Crime Report. That's part of \$3.1 trillion in illicit funds that flowed through the global financial system last year. Adena Friedman, Nasdaq's Chair and CEO, said, "Financial crime exploits the most vulnerable members of our society and underpins many of the world's most destructive crimes."

With most banking transactions taking place digitally, cyber security remains a significant concern for the global banking sector. The majority of industry CEOs (81%) say cyber crime and cyber insecurity will have an impact on their organisation's growth in the next three years. That's according to KPMG's 2024 Banking CEO Outlook, which covered banks with more than \$10 billion in annual

The country's financial institutions will be among those ringing in 2025 with an AI-powered anomaly detection service that proactively identifies and defends against cyber crime. This means that every time someone makes

an international banking transaction, an algorithm will be able to detect whether it is fraud or not. The capability uses pseudonymised data from billions of banking transactions to spot and flag suspicious activity, so banks can respond in real time. It has

been developed by Swift, the default messaging network for international payments that is used by more than 11,500 banks around the world. Its rollout follows a successful pilot that involved financial institutions in the Middle East and other regions.

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revenue across 11 markets.

"Cyber attacks [in banking] are increasing, and tactics are becoming much more sophisticated, with malware serving as a prime example of the growing threat," said Sujatha S Iyer, Head of AI Security at the software company ManageEngine. "Malware is becoming increasingly sophisticated, allowing it to bypass traditional anti-malware defences. With regulatory guidelines becoming more stringent, it becomes essential for banks to detect threats early.

"A proactive approach, leveraging AI for threat detection and response, is becoming crucial to safeguard against evolving cyber risks and ensure compliance with ever-tightening security regulations."

The overall UAE cyber security market is expected to be worth \$1.07 billion by 2029, growing at a CAGR of 12.72% over the next five years, according to Mordor Intelligence. The research firm estimates the size of the UAE cyber security market at \$0.59 billion in 2024.

The rapid digitalisation of the UAE economy in the wake of the coronavirus pandemic and with the adoption of AI systems has opened new cyberattack gateways with digital criminal activity increasing across the country, Mordor said.

Earlier this year, UAE Cyber security Council Chairman Dr Mohammed Al Kuwaiti highlighted how hackers use AI to probe critical infrastructure for vulnerabilities. Speaking to the state news agency WAM, Dr Al Kuwaiti warned that cyber attacks targeting the UAE's financial sector pose risks to national security but said existing cybersecurity defences are effectively countering these threats.

Set up in November 2020, the council is developing three new policies to support the country's cyber security



Sujatha S Iyer
Head of AI Security,
ManageEngine

system while strengthening the nation's position as a global hub for advanced technology and AI, Dr Al Kuwaiti said.

Since 2017, the UAE Banks Federation's Tasharuk platform has enabled the sector to share information about incidents and details of internal investigations into cyber

attacks, so partner banks can use the information to detect and protect against similar threats. Customer data is not shared on the platform.

In February, the UBF hosted Cyber Wargaming 2024 to help partner banks develop appropriate fraud prevention solutions and keep pace with legislative and regulatory changes to maintain customer confidence. Simulated cyber attacks tested the resilience of banks' cyber security teams and identified areas for improvement.

"The organisation of these cyber security workshops confirms UBF's commitment to prioritise the security of the banking system and information security," said Jamal Saleh, Director-General of UBF. "We do this under the direct supervision of Central Bank of the UAE, which is keen to develop the necessary regulatory frameworks and technologies to keep up with the latest developments and provide customers with the best services in a reliable banking environment."

More recently, the Dubai Electronic Security Center (DESC) launched the Dubai AI Security Policy, aimed at using AI to bolster confidence in AI solutions and technologies, promote their growth and development, and mitigate electronic security risks. The policy aligns with the UAE's National Strategy for Artificial Intelligence 2031, with the goal of developing an integrated system that exploits

AI for economic growth. It also supports Dubai's roadmap to enhance residents' quality of life using AI, Yousuf Al Shaibani, DESC CEO said.

Banks in the UAE and the GCC have avoided major financial losses from cyber attacks over the past two years, according to S&P Global Ratings. Strong profitability, capitalisation, and regulatory initiatives provide a financial buffer against cyber threats. Across the global banking industry there was a 34.3% probability that a particular bank would be the target of a cyberattack as of year-end 2023, S&P said, quoting cyber security specialist Guidewire.

While their efforts appear to be paying off, UAE banks will need to remain vigilant as threats become more sophisticated. AI is being widely used to create deepfakes, which hackers apply to replicate human voices or videos and bypass security protocols. Thanks to tools available on the dark net, a clandestine area of the internet, a one-minute deepfake video costs as little as \$300, research from IT security company Kaspersky shows.

In October, the National Bank of Kuwait, which also operates in the UAE, put out fresh warnings against deepfake scams, sharing educational videos, text messages and tips across its communications platforms to raise awareness.

The sector also faces threats such as phishing and business email compromise (BEC).

Perhaps the costliest and most severe are ransomware. These attacks typically block access to critical systems or sensitive customer information, and banks must either pay a ransom or risk a data breach and potentially massive disruptions.

Last year, 65% of global financial services organisations were hit by ransomware, according to Sophos, a British software security company operating in the UAE. Recovering from such a ransomware attack costs \$2.58 million on average in 2024, an



John Shier
field CTO,
Sophos

increase on the \$2.23 million reported in 2023.

John Shier, Sophos' field Chief Technology Officer, said although AI stands to introduce new threats as large language models take over automated systems, the technology can also help banks strengthen their defences. Thanks to their speed,

scalability, generalisability and automation, AI technologies can improve cyber security in many ways.

"Without AI, rule-based systems need immense manual upkeep to handle the scale of modern threats," Shier said. "AI models can generalise by learning relationships between any number of potentially hundreds of features, while human analysts cannot write such complex rules."

AI can also help monitor transactions in real time, which is what Swift is banking on. The technology can analyse consumers' behaviour patterns and alert officers to deviations. Then, the innovation inherent in AI systems enables them to adapt to new types of crimes as they emerge. Finally, AI systems can also improve the privacy of consumer data, reducing risks of breaches and identity theft.

"For banks in the UAE, AI can enhance security by processing large volumes of data to identify phishing, ransomware, and BEC attacks swiftly," Shier said. "For combating deep fake voice cloning and AI-driven social engineering, AI-based detection systems are constantly improving to counteract better generative models. Real-time fraud detection has long been powered by techniques like predictive analytics and anomaly detection, and their widespread use in the financial sector is a testament to their efficacy in reducing financial losses."

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INSIDE THE UAE'S AI-DRIVEN BANKING INNOVATIONS

From chatbots to personalised offers, the financial landscape is changing at pace

By Keith J Fernandez

Banks across the UAE are racing to capitalise on the promise of artificial intelligence (AI), launching new products and streamlining their operations, all supported by an evolving regulatory framework designed to capitalise on emerging technology for economic benefit.

Perhaps the most visible expression of this shift is Eva, the voice-based virtual chatbot from Emirates NBD that has answered customers' questions since 2016. The bank also sees applications for AI in wealth management and fraud analysis.

Others, such as First Abu Dhabi Bank (FAB), use AI and blockchain to analyse financial data and improve the banking experience. Earlier this year, FAB announced the creation of an AI Innovation Hub for financial services with Microsoft, to focus on innovation, sustainability and other operational aspects. Also in the capital, Abu Dhabi Islamic Bank uses natural language processing and machine learning to automate financial crime compliance screening with a view to improving financial integrity.

Elsewhere, RAKBANK has teamed with tech firms DataRobot and e& enterprise leveraged machine learning to engage current and prospective customers with hyper-personalised offers and communication.

Meanwhile, Mashreq Bank uses advanced analytics and AI to help front-line relationship managers do their jobs better, following the launch of a digital studio for corporate clients. Customers using its app can ask a virtual assistant for instant support and transaction management, while anyone who wants to open an account can do so digitally with a quick face scan that validates their biometrics.

"AI is fundamentally reshaping the banking landscape, enabling seamless, intuitive, and hyper-personalised customer interactions while driving significant operational efficiencies," said Ahmed Abdelaal, Group Chief Executive Officer, Mashreq.

"Our adoption of generative AI (gen AI) tools, including chatbots and advanced data analytics, has allowed us to automate routine processes, enhance fraud detection, and deliver tailored solutions that resonate with individual customer needs. These innovations not only reduce processing times but also elevate customer satisfaction and empower customers with faster, more personalised, and more secure financial experiences. By embedding AI into our corporate strategy, we ensure it drives both cost efficiency and customer loyalty," he added.

"Moving forward, we remain focused on addressing challenges like cyber security and interoperability, while fostering a culture of trust, transparency, and ethical AI usage to unlock the full potential of this transformative technology."

In November, the UAE placed fifth worldwide and first in the Middle East on a ranking of 36 countries from the Stanford Institute for Human-Centred AI. The analysis looked at more than 40 different AI metrics, including investment, infrastructure and research.

Adopting AI has been integral to UAE policy for nearly two decades, when the nation invested in US chipmaker GlobalFoundries, AI Minister Omar Sultan Al Olama said at the Gitex trade show in October. In 2017, the first AI strategy led to the creation of smart systems in what quickly became a digital-forward economy. Three years later, the National Strategy for AI 2031 identified finance as one of four mature sectors – alongside resources, construction and retail trade – where the technology will deliver the largest economic gains. Accordingly, government and semi-government institutions are working to create an ecosystem for growing AI businesses. A new AI Campus was inaugurated at the Dubai International Financial Centre this May, aiming to attract more than 500 companies in AI, financial technology and other sectors.

"Adopting AI is essential for GCC economies to diversify beyond oil dependency, enhance efficiency, and stimulate innovation across various sectors," said Vishu Singhal, Data Consulting Partner at the consulting firm Artefact MENA.

"Embracing AI presents a significant opportunity for GCC economies to transition into a knowledge-based future. By investing in education and training, fostering innovation ecosystems, and developing clear regulatory frameworks, the region can fully harness AI's potential while mitigating associated risks. Collaboration between government, industry, and academia will be crucial to ensuring that AI adoption leads to inclusive and sustainable growth," he added.

Gen AI alone, one of AI's many sub-technologies, could add between \$2.6 trillion and \$4.4 trillion to the global economy per year, McKinsey research estimates. In banking and finance, gen AI could add between \$200 billion and \$340 billion in value annually, about 2.8-4.7% of total industry revenues, the consultancy said. The biggest gain will come from increased productivity.

In the GCC, AI could create as much as \$150 billion in value, about 9% of the bloc's combined GDP, McKinsey said. The firm



has been supporting Emirates NBD's digital transformation journey to becoming an AI-driven organisation. Over the course of the collaboration, the bank developed more than 100 advanced analytics models and hired over 70 analytics professionals to support the new processes. With analytics integrated into its operations, bank staff can make quicker decisions and create hyper-personalised customer experiences.

But adopting AI isn't without its challenges.

Yacin Mahieddine, Partner in the Global Financial Services practice at Arthur D. Little, says UAE banks face implementation issues around data quality, governance and privacy, adapting to compliance requirements in an evolving regulatory landscape, and talent shortages because skilled AI professionals who can develop and deploy advanced use cases are hard to find.

"To overcome these challenges, investments in AI talent acquisition, training, and partnerships with AI solution providers will be critical.

Furthermore, integrating innovative AI solutions with legacy systems will require a structured approach emphasising governance and scalability," he said.

Ethical AI frameworks and enhanced data protection protocols will become more important going forward. The UAE Central Bank (UAECB) already mandates rigorous testing of AI systems to ensure transparency and accountability. Several regulatory sandboxes govern the use of emerging technologies.

In November, the UAECB opened an Innovation Hub at the Emirates Institute of Finance to train 10,000 banking professionals in AI through a collaboration with Microsoft.

Challenges notwithstanding, AI's potential will see UAE banks continue to leverage the technology, Mahieddine says. On the back end, banks will use AI solutions to reduce operational costs, enhance customer experiences and combat fraud, while front-end applications will take the form of chatbots for customer



support and credit scoring augmented with social media data.

"The future holds further integration of AI into

personalised banking services, addressing diverse customer needs with tailored solutions," Mahieddine said.

THE POTENTIAL OF AI UNLOCKED

Dubai AI Week will bring together global thought leaders to zero-in on opportunities and challenges and find the key to progress

Global AI experts, thought leaders and decision-makers are set to come together in Dubai for a week-long series of conferences, initiatives and exhibitions to explore advancements, share insights, and address real-world challenges.

Dubai AI Week has been announced by Sheikh Hamdan bin Mohammed, Crown Prince of Dubai, Deputy Prime Minister and Minister of Defence, reports news agency WAM. The first-of-its-kind initiative aligns with the Dubai Universal Blueprint for Artificial Intelligence.

In its inaugural edition – taking place from April 21-25, 2025 – Dubai AI Week will feature a diverse range of events with extensive global participation. The initiative will showcase key events, including the AI Retreat, Dubai Assembly for Generative AI, Global Prompt Engineering Championship, Machines Can See Summit, and the Dubai AI Festival.

Sheikh Hamdan said: "Under the leadership of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President

and Prime Minister of the UAE and Ruler of Dubai, we are creating an integrated ecosystem that is shaping the future of AI and solidifying Dubai's position as a global hub for AI innovation. AI is integral to future advancements, and Dubai stands as a platform where experts and innovators can come together to unlock its vast potential."

He added: "Dubai has always been at the forefront of identifying AI's transformative opportunities and fostering strong public-private partnerships to drive investment in this critical field. With a clear and focused strategy, we aim to accelerate AI adoption to achieve our goals. Dubai AI Week will gather global experts to deliver solutions that benefit humanity, create new opportunities for progress, and establish best practices for AI innovation and application."

Dubai AI Week builds on the success of the inaugural AI Retreat, hosted by DFF in June 2024 as a main event under the Dubai Universal Blueprint for Artificial Intelligence. The 2025 AI Retreat will take place at the Museum of the Future,

bringing together over 1,000 global experts, policymakers, and industry leaders. Featuring four roundtable discussions, the retreat will explore global and local AI opportunities, outline strategies to expand AI applications across various sectors, and launch ten strategic AI initiatives.

The Dubai Assembly for Generative AI, hosted at AREA 2071, will bring together 1,800 participants, including ministers, officials, CEOs, decision-makers, experts, and global speakers. The assembly will feature 25 main sessions and 12 immersive experiences



led by major global tech companies, offering a dynamic platform to explore emerging AI technologies through discussions, exhibitions, and live demonstrations.

The Global Prompt Engineering Championship received 2,000 applications, with 40 finalists to be selected to showcase creative solutions evaluated by a panel of 12 experts. Taking place at the Museum of the Future and AREA 2071, the competition will focus on optimising AI solutions for speed, accuracy, and efficiency. A total prize pool of Dh1 million will be awarded

across four competition categories.

The Dubai AI Festival, held at Madinat Jumeirah, will attract 5,000 business leaders, 500 investors, and 100 exhibitors from 100 countries. Organised by the Dubai AI Campus in partnership with the Dubai International Financial Centre (DIFC), the festival will serve as a platform for global leaders to exchange ideas, form partnerships, and showcase groundbreaking AI projects.

The Machines Can See Summit, making its debut during Dubai AI Week, will welcome 5,000 visitors for its exhibitions, 850 participants, and 40 global experts and speakers. This event will bring together executives, researchers, and startups to foster collaboration and showcase advancements in machine vision technologies, a key area of AI innovation.

The Machines Can See 2025 Summit, organised by Polynome Events in collaboration with the Artificial Intelligence, Digital Economy and Remote Work Applications office-UAE, and DFF, will bring together 5,000

industry leaders, including 100 senior executives from top technology companies, 300 startups, and leading academic researchers. The event will offer opportunities for networking and growth, enabling organisations to strengthen their presence in the region's thriving AI ecosystem and attract top talent.

Dubai AI Week will also feature the launch of a comprehensive week-long programme in Dubai's schools, in collaboration with the Knowledge and Human Development Authority (KHDA). The initiative aims to educate students about Artificial Intelligence concepts and its future applications, inspiring them to actively participate in shaping the future of various industries.

Dubai AI Week is set to become a cornerstone event on the Dubai calendar, uniting global experts across a week of activations to showcase innovations, tackle sector challenges, and establish best practices for AI integration, further cementing Dubai's leadership in AI innovation. --WAM

CYBER SECURITY AND TRUST – CAN AI BE THE GAME-CHANGER FOR FINANCIAL INSTITUTIONS?

Ahmed Abdelaal, Group Chief Executive Officer, Mashreq, considers this key question

Trust is the foundation of banking, but in today's digital-first world, it is under constant threat. Financial institutions operate in an era where cybercriminals are relentless, customer expectations are skyrocketing, and competition is fierce. The question is no longer whether banks can keep up, it's whether they can lead. Artificial intelligence (AI) is proving to be the decisive force that allows us to do just that.

At Mashreq, we don't view AI as a buzzword or a trend. We see it as the backbone of modern banking. This technology enables us to not only protect our customers but also transform their experience, building trust in ways previously unimaginable. AI, when harnessed strategically, is not just a game-changer, it is the game itself.

Role of AI in cyber security

Banking is a high-stakes industry, and every interaction hinges on trust. Customers entrust us with their most sensitive data, and we must ensure it is impenetrable. Traditional methods of fraud detection and prevention are no longer sufficient. Static rules and reactive strategies cannot compete with the speed and sophistication of modern cyber threats.

This is where AI delivers.

At Mashreq, our Eagle Eye platform is a testament to what cutting-edge AI can achieve. It consolidates vast sets of transactional, non-transactional, and third-party data, integrating various risk detection engines. By leveraging advanced analytics, AI, and a robust tech stack, it presents risk outcomes through advanced visualisations and automates investigation narratives. This not only strengthens financial crime mitigation but also enhances productivity across our operations.

Trust goes beyond security, it's about experience

Let us be clear, cyber security alone isn't enough. In today's banking landscape, trust is built through personalised, seamless experiences. Customers expect more, and they deserve more. AI enables us to deliver exactly that.

Every interaction at Mashreq is powered by AI, from chatbots that resolve issues instantly to personalised recommendations that feel tailor-made. Customers are no longer just numbers in a database, they are individuals whose unique needs are met with precision.

Take loyalty programmes, for example. AI-driven insights allow us to tailor rewards

based on real-time customer behaviour. It's not just about meeting expectations but about exceeding them. And when we do, trust isn't just maintained, it is elevated.

Innovation comes with responsibility

As a Group CEO, I firmly believe that with great innovation comes even greater responsibility. AI is an incredibly powerful tool, but its use must be transparent and ethical. Customers have a right to understand how decisions are made, which is why we prioritise explainable AI at Mashreq.

We have also ensured human oversight remains integral. Our Human-in-the-Loop approach guarantees that AI operates within well-defined boundaries, combining the efficiency of technology with the wisdom of human judgment.

We recognise the anxiety that technological advancements can create among employees. That's why we have invested heavily in upskilling our workforce, ensuring they view AI as an enabler, not a threat. A digitally empowered team is key to delivering the trust and empathy our customers value.

Our comprehensive learning

and development strategy identifies skills gaps and equips employees with the knowledge to thrive in an AI-driven workplace. From regular training to mentorship opportunities, we empower our teams to stay ahead of technological advancements.

AI is the future, but leadership is critical

We are leveraging AI to drive sustainable practices, enhance ESG goals, and strengthen our operational resilience. Cyber security threats will continue to evolve, but we are prepared. By combining AI-driven innovation with a relentless focus on customer trust, we are not just reacting to challenges, we are shaping the future of finance. Our resilience is bolstered by partnerships with fintech disruptors, allowing us to explore opportunities such as open banking and embedded finance. Furthermore, AI supports our ESG goals by reducing resource waste and enabling sustainable decision-making.

The road ahead

The banking industry stands at a crossroads. Institutions that fail to embrace AI risk obsolescence. Those that do must do so responsibly, balancing innovation with trust.



Ahmed Abdelaal
Group Chief Executive Officer, Mashreq

At Mashreq, we have made our choice. We are not just adopting AI; we are leading with it. From transforming cyber security to redefining customer experiences, AI is at the heart of everything we do.

The future of banking is clear, it is powered by AI, driven by trust, and guided by visionary leadership. At Mashreq, we are proud to set the standard.



GLOBAL LEADERS IN INNOVATION

AI is revolutionising banking in the UAE and Middle East

The banking sector in the UAE and the broader Middle East is undergoing a seismic transformation, driven by the integration of artificial intelligence (AI). No longer merely a futuristic concept, AI is now a cornerstone in strategies for cost reduction, customer experience enhancement, and market expansion. Regional banks are not just adopting AI; they're pioneering its deployment in ways that set benchmarks for innovation worldwide.

Why AI in banking?

Banks globally face rising operational costs, heightened competition, and increasingly tech-savvy customers. In the Middle East, these challenges are compounded by economic diversification agendas like the UAE's Vision 2030 and Saudi Arabia's Vision 2030, which demand that banks keep pace with rapid digitalisation. AI offers a solution that addresses these needs while aligning with regional priorities.

At its core, AI enables banks to optimise costs through automation, deliver hyper-personalised services, and pioneer products that redefine traditional banking. In an era where agility is paramount, AI's ability to streamline processes and analyse vast amounts of data is invaluable.

The cost-saving imperative

Operational efficiency remains a primary driver for AI adoption in Middle Eastern banks. From automating repetitive tasks to enhancing fraud detection, AI technologies are reducing reliance on manual processes. Chatbots, for example, are becoming commonplace for handling customer queries. These virtual assistants work 24/7, offering real-time support at a fraction of the cost of maintaining large customer service teams.

AI-powered risk management is another critical area. Advanced algorithms now predict loan defaults with greater accuracy, enabling banks to mitigate risks proactively. As a result, banks in the region can allocate capital more effectively, supporting sustainable growth while maintaining robust financial health.

According to a recent report by the International Data Corporation (IDC), Middle Eastern banks that adopt AI-driven automation can potentially save up to 25% of their operational costs by 2025. This focus on efficiency positions them well to remain competitive in an industry facing margin pressures.

Pioneering products and experiences

Beyond cost savings, AI empowers banks to create innovative products that meet evolving customer expectations. In the UAE, where the tech-savvy millennial and Gen Z population forms a significant market segment, banks are using AI to deliver personalised financial solutions.

Take Emirates NBD, for example. Its AI-driven Liv digital bank tailors services to the lifestyle preferences of its users. From suggesting savings plans to offering location-based deals, the app uses machine learning to anticipate and cater to customer needs. These initiatives not only improve customer satisfaction but also attract younger demographics, ensuring banks stay relevant.

In Saudi Arabia, AI is enhancing Islamic banking products. Banks are leveraging natural language processing (NLP) to automate Shariah compliance checks, ensuring their products align with religious principles while accelerating time-to-market.

AI is also transforming wealth management. By analysing customer data, banks can provide

bespoke investment advice, empowering individuals to make smarter financial decisions. Such offerings resonate with the region's affluent customer base, reinforcing the Middle East as a hub for high-net-worth banking.

Expanding market share

AI is not just about retaining customers - it's about capturing new ones. In the hyper-competitive Middle Eastern banking landscape, AI enables institutions to differentiate themselves and gain market share.

Predictive analytics help banks to identify potential customers and tailor marketing efforts. For example, AI can analyse transaction patterns to suggest relevant credit products to small businesses, a critical sector in the UAE's economic diversification goals.

AI-driven financial inclusion efforts are another game-changer. With over 80% smartphone penetration in the region, digital-only banks powered by AI are reaching underserved populations, particularly in rural and remote areas. This focus on inclusion aligns with government agendas to modernise economies while presenting banks with a

lucrative, untapped market.

Challenges and the road ahead

Moreover, AI is empowering banks to make faster and more informed decisions, enabling them to respond dynamically to market shifts. Whether it's adjusting interest rates in real-time or launching new products based on emerging customer trends, AI equips banks with unparalleled agility.

The Middle East leads the way

Despite its promise, AI adoption in banking is not without hurdles. Regulatory compliance, data privacy concerns, and the cost of implementation remain significant challenges. The UAE Central Bank has taken proactive steps by issuing guidelines for AI in financial services, ensuring innovation progresses responsibly.

Another challenge is ensuring staff are equipped to leverage AI. Banks are investing in upskilling programmes to prepare their workforce for an AI-driven future. This human-AI collaboration is critical for maximising the technology's potential while maintaining a human touch in customer interactions.

The Middle East leads the way

The Middle East's embrace of AI in banking reflects the

region's forward-thinking ethos. Governments and financial institutions alike recognise that AI is not merely a tool - it's a catalyst for transformation.

For the UAE, with its position as a global financial hub, AI-driven banking innovation enhances its competitiveness on the world stage. For customers, it means better products, seamless experiences, and more personalised services. And for banks, it offers a roadmap to sustainable growth in an era of disruption.

As AI continues to evolve, the possibilities for the region's banking sector are boundless. The institutions that adapt quickly and strategically will not only save costs but also redefine the future of banking, setting standards that others will aspire to meet.

AI is reshaping banking in the UAE and the Middle East at an unprecedented pace. By slashing costs, creating groundbreaking products, and enabling market expansion, it positions regional banks as global leaders in innovation. The journey is just beginning, but the message is clear: those who invest in AI today are building the banking empire of tomorrow.

ON THE FRONT FOOT

The Cyber Wargaming event rallies troops to ensure cyber security teams are up to the challenge of safeguarding financial systems, providing secure banking for every customer



Staying ahead of potential threats to digital infrastructure is vital and an annual event attended by key figures in the banking and financial sector has been created to do just that.

Cyber Wargaming is organised under the supervision of the Central Bank of the UAE and the Cyber Security Council. It aims to protect the sector's digital infrastructure and provide a smooth and secure banking experience for all customers in the face of rapid technological development.

The event is characterised by specially designed simulated cyber-attacks. These help member banks' cyber security teams

to examine possible risks and identify strengths and gaps in their systems. Cyber security exercises improve knowledge of the techniques, methods and procedures used by attackers - and the factors that are the source of threats.

Cyber Wargaming is the largest event of its kind in the Middle East, attended by representatives from GCC central banks, leading UAE banks, financial and technology institutions, cyber security experts from the banking and financial sector, and strategic partners of the Federation.

AI AND CYBER SECURITY: TRANSFORMING BANKING IN THE UAE

ADIB leverages technology to protect its customers



In today's interconnected world, the banking sector faces a dual challenge: harnessing the transformative potential of Artificial Intelligence while combating increasingly sophisticated cyber threats. Abu Dhabi Islamic Bank is leveraging AI technologies to enhance security and define smarter, better ways to protect customer data.

AI-driven tools enable faster and more accurate fraud detection by analysing data in real time to identify and neutralise potential threats. ADIB's ACE Command Centre and Security Operations Centre utilise data predictive analytics to find fraud trends and improve customer experience. ADIB adopts the latest technologies using blockchain, such as the UAE Trade Connect platform, to secure trade finance transactions and reduce fraud risks.

Recognising the importance of customer engagement, ADIB launched its "Check Before You Click" campaign as part of Cyber Security and Data Privacy Month. This initiative

underscores a critical message: never trust unfamiliar links, attachments, or connections without verifying their authenticity. By empowering customers with knowledge and practical advice, ADIB extends its cyber security efforts beyond technology to ensure its customers have a safe banking experience.

ADIB closely aligns with the UAE's National Artificial Intelligence Strategy 2031, which envisions the country as a global leader in AI innovation. For banks, this strategy provides a framework for technological innovation and prioritises modern cyber security measures to elevate customer trust in AI technologies.

ADIB's approach highlights a commitment to blending innovation with customer-centricity. By combining advanced technologies and customer awareness, the bank is leading a secure AI-powered banking experience and co-building a resilient financial ecosystem that fits the UAE's aspirations for technological and economic leadership.

SECURING THE FUTURE OF PAYMENTS, ONE TRANSACTION AT A TIME

Charles Lobo, Regional Risk Officer for Central and Eastern Europe, Middle East and Africa at Visa, highlights the value of trust

In today's interconnected world, the digital economy thrives on trust. Every time a consumer taps their card or clicks 'buy now', they're placing their faith in a system to protect their finances. As a global leader in payments, Visa understands this trust is paramount, which is why we are investing heavily in cutting-edge Artificial Intelligence (AI) to safeguard the future of commerce.

Our journey with AI began in 1993, making us pioneers in applying neural networks for real-time fraud analytics. This forward-thinking approach has given us a significant advantage: data. Data is our superpower. Processing over 20 billion raw events daily, we possess 60% more data than our competitors combined, giving us unparalleled insights into emerging threats.

Our strategic \$3 billion investment in AI and data infrastructure over the past decade has prevented an estimated \$40 billion in fraudulent transactions in the past year alone, enabling us to identify and neutralise threats with unprecedented speed and accuracy.

AI is not just a buzzword for us; it's the engine driving our security strategy. We leverage

hundreds of AI models across over 100 products, constantly learning and adapting to the ever-shifting landscape of cyber threats. With Visa's network spanning over 200 countries, partnering with 14,500 financial institutions, and more than 130 million merchants worldwide, maintaining that trust requires constant vigilance. These models analyse up to 500 unique risk factors in just 300 milliseconds - faster than you can blink - allowing us to detect and prevent criminal activity before it impacts our clients and partners.

Speed is critical in the fight against fraud. Every month, we block an average of 90 million attacks on our APIs and applications, 340 million bot attacks, and 11 million phishing attempts. This proactive approach has dramatically increased our fraud detection rates from 62% to an impressive 97% - and we continue to strive towards our goal of 100% security.

While some may view AI with apprehension, we see it as an essential tool for good. Just as fraudsters leverage AI to develop sophisticated attacks, we use it to build even stronger defences. Our AI and deep learning capabilities address long-standing challenges for all

stakeholders in the payments ecosystem - buyers, sellers and financial institutions. We're not just reacting to threats, we're anticipating them - a critical strategy to stay one step ahead of bad actors.

Our commitment to security extends beyond our own network. Recognising the need for universal protection, we've expanded our advanced solutions, Visa Advanced Authorisation (VAA) and Visa Risk Manager (VRM), to support non-Visa card payments. VAA provides real-time risk scores for every transaction, while VRM empowers issuers to optimise authorisations by combining real-time insights with custom risk strategies. These network-agnostic solutions provide a consolidated platform for mitigating risk across the payments landscape.

In a world where digital threats are constantly evolving, complacency is not an option. Visa remains steadfast in our commitment to leveraging the power of AI to build a more secure future for everyone - because it is only through continuous innovation and collaboration that we can ensure that trust remains the bedrock of the digital economy.



Charles Lobo
Regional Risk Officer for Central and Eastern Europe, Middle East and Africa at Visa



VISA

**\$ 3.3 billion
invested**

**in the last decade on AI
and data infrastructure
to enable secure transactions
and proactive
fraud prevention.**