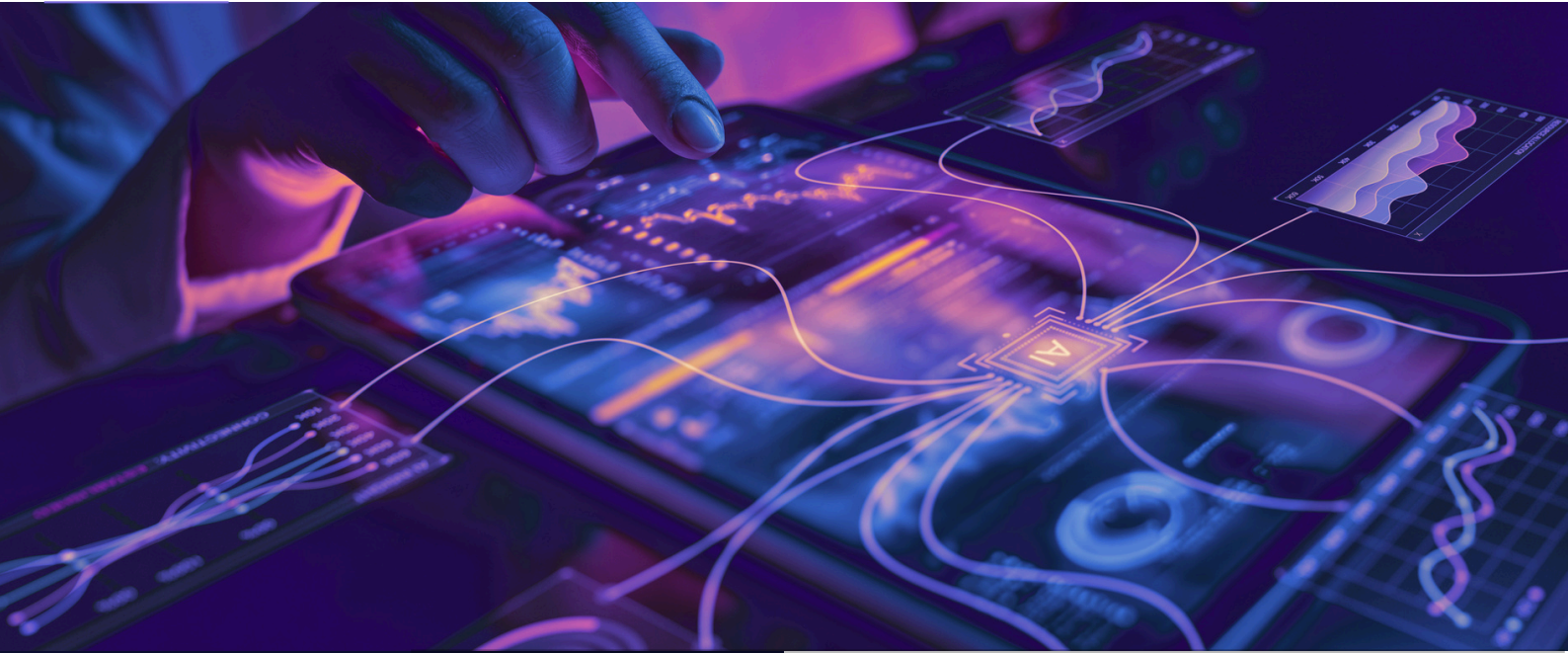


THE N A I O P U L S E

JUNE 2026 ISSUE

A PUBLICATION OF THE NATIONAL AI OFFICE, MALAYSIA



About the N A I O Pulse

Welcome to the N A I O Pulse, a living stream of insights from Malaysia's National AI Office (NAIO). Each release captures the heartbeat of artificial-intelligence policy and innovation. Whether you're a policymaker, industry leader, researcher, or simply curious, the N A I O Pulse is your adaptable guide to navigating—and shaping—the next frontier of trustworthy, transformative AI.

INSIGHTS

AI IN FINANCE

AI is transforming financial services by improving fraud detection, risk management, customer service, credit scoring, and personalised banking. Banks and fintech companies are adopting AI tools such as chatbots, predictive analytics, and regulatory solutions to enhance efficiency and security.

[See inside page >](#)



LEADING THE AI NATION JOURNEY: PUBLIC SERVANTS AS CATALYSTS OF TRANSFORMATION

The GovInsider Live MY.AI Day 2026 brought together public sector leaders and digital practitioners to discuss responsible AI adoption and Malaysia's AI transformation. As a community partner, NAIO highlighted the importance of empowering public servants to drive AI innovation and deliver better outcomes for citizens.

[See inside page >](#)

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MALAYSIA: ARTIFICIAL INTELLIGENCE IN THE FINANCIAL SECTOR



Malaysia's financial sector has been one of the early adopters of digitalisation and AI, supported by Bank Negara Malaysia (BNM)'s policies on digital banking and fintech. Several developments stand out:

- **Digital Banks:** Five digital banking licenses issued by BNM are pushing incumbents and new players to adopt **AI-driven credit scoring and alternative data models** to serve the underbanked and SMEs.
- **Fraud & Risk Management:** Malaysian banks are increasingly using **AI for fraud detection and cybersecurity monitoring**, aligning with global AML standards.
- **Fintech Ecosystem:** A vibrant fintech startup ecosystem (e.g., Axiata Digital, Curlec, Jirnexu) is embedding AI into payments, lending, and wealth management.
- **Big Tech Support:** Partnerships with Microsoft, AWS, and Google Cloud provide AI-as-a-service tools for banks, insurers, and capital market players, lowering the barrier for AI adoption.
- **Capital Markets:** Bursa Malaysia has been exploring **AI-powered market surveillance tools** to detect irregular trading patterns and improve market integrity.

FUTURE DIRECTION



PERDANA PUTRA

In the soon to be released National AI Action Plan 2026-2030, financial services are identified as a strategic sectoral impact engine. The plan envisions:

- AI-powered financial inclusion: Leveraging alternative datasets (e.g., telco usage, e-wallet patterns) to expand credit access for MSMEs and underserved communities.
- Risk & Governance Frameworks: Embedding AI ethics and transparency in credit scoring, fraud detection, and robo-advisory services.
- Public-Private Partnerships: Close collaboration between BNM, NAIIO, fintech startups, and global tech players to co-develop sovereign-ready, responsible AI solutions.
- Cross-Sector Innovation: Integration of financial AI tools with other sectors (e.g., agriculture loans using crop data, health insurance pricing using predictive analytics).

Malaysia aims not only to adopt AI for efficiency, but also to differentiate itself by building trustworthy, inclusive, and sovereign AI-enabled financial services that serve both domestic needs and regional ASEAN markets.

AI IN FINANCE LANDSCAPE

Artificial Intelligence is reshaping global financial services by enabling fraud detection, algorithmic trading, risk management, credit scoring, and personalised banking. Major banks and fintechs are deploying AI chatbots for customer service - such as Bangkok Bank's TTO1 and BI's LISA. Major banks and fintechs have also deployed natural language models for regulatory compliance, and predictive analytics to forecast market volatility. AI is also central to anti-money laundering (AML) systems, identifying suspicious transactions at scale.



This has been accompanied by strong momentum in the adoption of cloud computing technologies - examples include UOB, VietABank, TMB and CBI. Market leaders go further - Several prominent SEA banks such as DBS and SCB have begun to explore entering the metaverse through partnerships with global Metaverse platform 'The Sandbox' to create a virtual HQs & bank fronts

At the same time, regulatory authorities worldwide (e.g., EU, Singapore, UK) are setting ethical and supervisory frameworks to ensure AI adoption in finance is transparent, explainable, and fair.

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS



Artificial Intelligence (AI), including Generative AI (GenAI), is transforming the financial services industry by improving efficiency, decision-making, risk management, and customer experience. AI-powered solutions are now being adopted across banking, investment, wealth management, accounting, treasury, tax operations, and financial planning to deliver smarter and more personalised services.

From fraud detection and automated processes, to personalised financial advice and predictive analytics, AI is helping financial institutions enhance operations, strengthen compliance, and support better decision-making.

This section presents a curated set of AI use cases in financial services, highlighting applications across banking, investment management, risk management, and financial operations.

AI IN BANKING AND INSURANCE

- Artificial Intelligence (AI), especially Generative AI or GenAI, is transforming banking by improving operations, risk management and customer service. It helps banks detect fraud, assess credit more accurately and personalise services. For example, Bank of America uses AI for tailored recommendations. AI also strengthens cybersecurity and reduces costs by automating tasks such as loan processing!
- Artificial Intelligence (AI) is transforming banking by improving efficiency, decision-making and personalisation through the use of big data. It enables proactive fraud detection, more accurate credit risk assessment and highly personalised customer services, including chatbots and targeted marketing. AI also supports predictive analytics for forecasting and strengthens regulatory compliance by automating reporting processes, allowing banks to gain a complete view of customers and deliver smarter, faster services.²

1. https://www.ey.com/en_gr/insights/financial-services/how-artificial-intelligence-is-reshaping-the-financial-services-industry

2. <https://www.deloitte.com/content/dam/assets-zone/ng/en/docs/services/risk-advisory/2023/ng-how-artificial-intelligence-is-Transforming-the-Financial-Services-Industry.pdf>

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS

AI ON WEALTH MANAGEMENT

- Artificial Intelligence (AI) is transforming wealth management by boosting efficiency and performance, with a majority of firms reporting higher profits or lower costs and nearly half of employees seeing productivity gains. It enables personalised services and allows professionals to focus on higher-value tasks, with over 40% of firms adopting or planning to adopt agentic AI. However, concerns over job displacement and over-reliance persist, leading 88% of firms to invest in AI training, while only 32% of wealth managers believe clients trust their use of AI, highlighting ongoing risks around bias, transparency and reputation.¹



- Generative AI (GenAI) is driving a major transformation in wealth management by moving beyond automation to deliver intelligent insights, personalised strategies and new content creation. It empowers financial advisors by automating administrative tasks, enhancing productivity and supporting better decision-making through real-time insights and simulations. At the same time, it improves client experience with tailored investment strategies, advanced reporting and seamless self-service tools like e-KYC. GenAI also supports business growth by enabling targeted marketing, custom content generation and increased client acquisition, while boosting operational efficiency through automated compliance reviews and regulatory support. However, as these use cases are still evolving, firms must strengthen risk governance frameworks to address issues like bias, hallucinations and lack of explainability, while ensuring transparency to maintain client trust.²

¹ https://www.ey.com/en_lu/insights/ai/is-it-possible-for-wealth-managers-to-embrace-ai-while-managing-the-risks

² https://www.ey.com/en_us/insights/financial-services/generative-ai-transforming-wealth-and-asset-management

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS



AI ON ASSET MANAGEMENT

- According to McKinsey, AI has a transformative impact on asset management, with the potential to affect 25% to 40% of a firm's total cost base, offering a 'leapfrog opportunity' to improve productivity and reinvent business models. Efficiency gains are seen across key areas, including 20% in technology and software development, 9% in client-facing roles, 8% in investment management and 5% in risk and compliance. Beyond cost savings, AI supports revenue growth through optimised portfolio construction and targeted client strategies, while also reducing operational risks via automated compliance and knowledge retention. This shift requires major organisational changes, including a focus on AI literacy, new operating models and unified data strategies, ultimately turning AI into a competitive advantage and driver of sustainable growth.¹
- The CFA Institute highlights that artificial intelligence (AI) and machine learning are transforming the investment management landscape — from data analysis and portfolio construction to trading and compliance. AI-driven tools such as clustering and reinforcement learning help improve portfolio diversification, optimise rebalancing, and support better investment decisions. AI models, including Support Vector Machines (SVMs) and Long Short-Term Memory (LSTM) networks, are also helping investors identify market trends and generate insights by analysing different types of data, including financial information, news, and market sentiment. Beyond investments, AI is enhancing risk management through anomaly detection and risk monitoring, while improving trading processes through smarter execution and strategy optimisation. AI is also supporting operational efficiency and regulatory compliance through applications such as document summarisation and real-time monitoring. These developments highlight AI's growing impact on the future of investment management.²

¹ <https://www.mckinsey.com/industries/financial-services/our-insights/how-ai-could-reshape-the-economics-of-the-asset-management-industry>.

² <https://rpc.cfainstitute.org/themes/technology/ai-in-asset-management>.

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS

AI IN FINANCIAL RISK MANAGEMENT

- An article by International Business Machines Corporation highlights how artificial intelligence (AI) is transforming financial risk management by improving operational efficiency, enhancing client engagement, and strengthening compliance systems. AI is creating significant value in areas such as fraud detection and cybersecurity by enabling real-time threat detection and more effective risk management. In areas such as Know Your Customer (KYC) and Anti-Money Laundering (AML), AI helps financial institutions process large volumes of data, identify unusual patterns, and support proactive investigations into financial crime. To ensure safe and reliable AI adoption, organisations are also focusing on stronger risk controls, stress testing, and compliance frameworks to improve AI oversight, manage regulatory risks, and ensure responsible implementation.¹
- According to Deloitte, AI is transforming financial risk management by making risk processes more dynamic, frequent and data-driven while improving efficiency and decision-making. However, AI also introduces challenges such as algorithmic bias, 'black box' models, rapid error scaling and cybersecurity risks, requiring stronger governance, fairness policies and explainability measures. Its adoption is also reshaping organisational culture through greater collaboration, sandbox testing and demand for technical talent, while increasing regulatory pressure for transparency, accountability and oversight of AI systems and third-party models.²
- A report by KPMG highlights how artificial intelligence (AI) is transforming financial risk management by enabling treasury and risk functions to become more proactive, efficient, and forward-looking. Through machine learning and predictive analytics, AI helps organisations identify potential risks earlier, automate routine processes, improve decision-making, and strengthen regulatory compliance. Its applications cover areas such as credit, market, fraud, operational, and liquidity risks by analysing large volumes of data and detecting emerging patterns in real time. However, the adoption of AI also brings challenges, including explainability limitations, data quality dependency, over-reliance on automated decisions, and ethical considerations surrounding privacy and evolving regulations such as the EU AI Act.³

¹ <https://www.ibm.com/thought-leadership/institute-business-value/en-us/report/banking-in-ai-era>

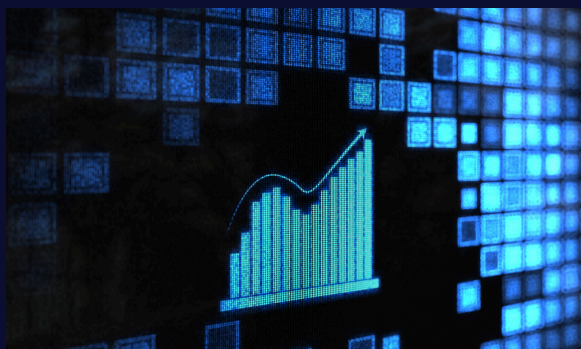
² <https://www.deloitte.com/content/dam/assets-shared/legacy/docs/perspectives/2022/deloitte-gx-ai-and-risk-management.pdf>

³ <https://kpmg.com/de/en/insights/digital-transformation/artificial-intelligence/the-use-of-artificial-intelligence-in-risk-management.html>

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS

AI IN FINANCIAL PLANNING

- Artificial Intelligence (AI) is transforming financial planning by enabling more efficient, data-driven and personalised financial services. AI automates routine tasks such as data entry, portfolio rebalancing, report generation and regulatory compliance, allowing financial planners to focus more on strategic advice and client relationships. Through predictive analytics and machine learning, AI enhances investment decision-making, risk management, fraud detection and portfolio optimisation, while also delivering tailored financial plans and real-time client support through chatbots and virtual assistants. Despite these advancements, AI is designed to complement rather than replace human financial planners, who remain essential for providing empathy, ethical oversight and trust, while firms continue to address challenges related to data privacy, algorithmic bias and the need for continuous learning.¹



- In the article “The Power of Dynamic Steering in Financial Planning,” AI and machine learning are used to enhance financial planning through dynamic steering, making forecasting faster, more accurate and less biased. AI supports predictive modeling by combining internal and external data, such as consumer spending patterns, while enabling rapid ‘what-if’ scenario planning and real-time strategy adjustments. Generative AI also helps uncover deeper insights through variance and root-cause analysis, while AI-driven operational planning improves demand forecasting, labor planning and procurement efficiency. In addition, automated data infrastructures streamline financial analysis and iteration. According to the article, AI can make planning cycles 30% faster, improve forecast accuracy by 20% to 40% and increase finance productivity by up to 30%.²

¹<https://ireap.naifa.org/blog/the-future-of-financial-planning-with-the-use-of-artificial-intelligence>

²<https://www.bcg.com/publications/2024/power-of-dynamic-steering-in-financial-planning>

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS



AI IN ACCOUNTING

- From this article, studies show that AI reallocates about 8.5% of accountants' time from data entry to tasks like communication and quality assurance, while firms using AI complete monthly financial statements an average of 7.5 days faster and achieve a 12% increase in general ledger detail. AI also improves productivity by supporting more clients simultaneously and providing decision support through confidence-based recommendations. However, human expertise remains essential for creative judgment, forecasting and contextual understanding, making AI most effective as a tool that augments rather than replaces accountants, while increasing the need for AI literacy and strong oversight.¹
- According to the 2025 Intuit QuickBooks Accountant Technology Report, AI adoption in accounting is rapidly growing, with 46% of accounting professionals using AI daily and 88% using it to improve client value delivery. Additionally, 93% of accountants leverage AI to support their roles as strategic business advisors, while 64% of firms plan to invest further in AI and 82% either use or intend to develop proprietary AI systems. The report also highlights strong professional acceptance, with 62% describing themselves as 'AI evangelists' and 81% wanting to expand AI usage further. However, challenges remain, including client resistance to change (51%) and skill or organisational gaps (39% each), which may slow full adoption.²

¹ <https://mitsloan.mit.edu/ideas-made-to-matter/how-generative-ai-can-make-accountants-more-productive>

² <https://www.firmofthefuture.com/news/accountant-tech-survey-2025/>

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS

AI IN TREASURY MANAGEMENT

- The article from the U.S. Bank explains that AI is transforming treasury management from a cost center into a strategic business partner by automating repetitive tasks, improving decision-making and enhancing risk management. AI increases efficiency through automated reconciliation, payment processing and intelligent customer service, while predictive analytics improves cash forecasting and fraud prevention. It also supports better payment recommendations and faster sanctions screening. Looking ahead, generative AI is expected to help design customised treasury solutions and create higher-level roles, as human expertise remains essential for training and overseeing AI systems.¹
- The article from J.P. Morgan explains how AI and machine learning are transforming treasury management from a reactive process into a predictive and proactive function. By analysing real-time and historical data, AI improves cash flow forecasting, optimises cash utilization, enhances liquidity visibility and enables smarter payment decisions while reducing fraud and errors. These technologies also shift treasury into a more strategic role by automating routine tasks, allowing teams to focus on scenario planning, investment strategies and business growth. Rather than replacing employees, AI is designed to enhance human decision-making and strengthen the treasury's role across the organisation.²
- The article from KPMG explains that treasury management is shifting from rule-based automation to AI systems that can independently analyse risks and automate tasks such as liquidity forecasting, fraud detection, bank statement reconciliation and virtual treasury assistance. AI is expected to reduce manual work across front, middle and back-office functions while increasing the need for technical skills such as data stewardship and AI governance. However, successful implementation depends on strong data quality, centralized data systems, gradual adoption and continued human oversight to ensure decisions remain accurate and compliant.³

1. <http://usbank.com/corporate-and-commercial-banking/insights/payments-hub/trends/treasury-management-ai.html>

2. <https://developer.payments.jpmorgan.com/blog/ai-ml/rethinking-treasury-ai-apjs>

3. <https://kpmg.com/de/en/insights/digital-transformation/artificial-intelligence-treasury.html>

AI IN FINANCE: SELECTED USE CASES FROM GLOBAL DEPLOYMENTS



AI IN TAX OPERATIONS AND REPORTING

- AI and generative AI are transforming tax operations by automating routine tasks, improving reporting accuracy and enabling real-time insights that enhance strategic decision-making. AI increases productivity through automated tax classification, VAT determination, tax provisioning, audit support and intelligent query handling, while also integrating tax systems more closely with broader financial platforms. Beyond operational efficiency, AI is shifting tax departments from reactive compliance functions toward strategic advisory roles focused on scenario planning, risk analysis and collaboration with business leadership, giving organisations a stronger competitive advantage.¹
- The article from the International Growth Center (IGC) explains that AI and machine learning are transforming tax administration from manual and reactive processes into automated, predictive and proactive systems. AI strengthens fraud detection, risk scoring and predictive analysis by identifying complex tax evasion patterns and forecasting the impact of policy changes. It also improves taxpayer services through virtual assistants, automated form filling and simplified compliance processes. Internally, AI drives organisational changes by creating specialised data and AI teams, improving knowledge management and embedding AI across workflows as digital maturity increases. In addition, AI supports strategic tax policy design through scenario modeling and legal analysis, enabling faster and more effective policy evaluation.²

¹https://www.ey.com/en_us/insights/tax/transforming-tax-accounting-with-ai

²https://www.theigc.org/sites/default/files/2026-01/Harnessing-AI-and-Data-for-Tax-Administration_0.pdf

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AGENTIC AI IN FINANCIAL SERVICES: A PLAYBOOK FOR TRANSFORMATION



By: PwC

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Agentic AI is changing financial services by automating complex workflows, strengthening data governance and enabling secure, compliant AI adoption at scale. This playbook outlines the foundations needed to deploy it responsibly.

Financial services organisations are operating in a period of profound transformation. Macroeconomic uncertainty, rising compliance demands, increasing fraud risk, shifting customer expectations and a rapidly ageing workforce are all reshaping how banks, insurers and capital markets firms must operate. At the same time, regulatory frameworks are accelerating the need for transparent, secure and well-governed technology adoption.

Against this backdrop, many financial institutions are turning to agentic AI to strengthen resilience, accelerate key processes, transform the customer experience, and unlock new opportunities for growth.

WHAT AGENTIC AI ENABLES

Agentic AI represents a step change from traditional analytics, automation and generative AI. Rather than completing isolated tasks, agents can reason, act and orchestrate multistep processes with minimal human intervention—accessing data, executing workflows and adapting to new conditions. When deployed responsibly, this enables financial institutions to improve efficiency and accuracy while maintaining essential human oversight for high-stake decisions.

AGENTIC AI IN FINANCIAL SERVICES: A PLAYBOOK FOR TRANSFORMATION



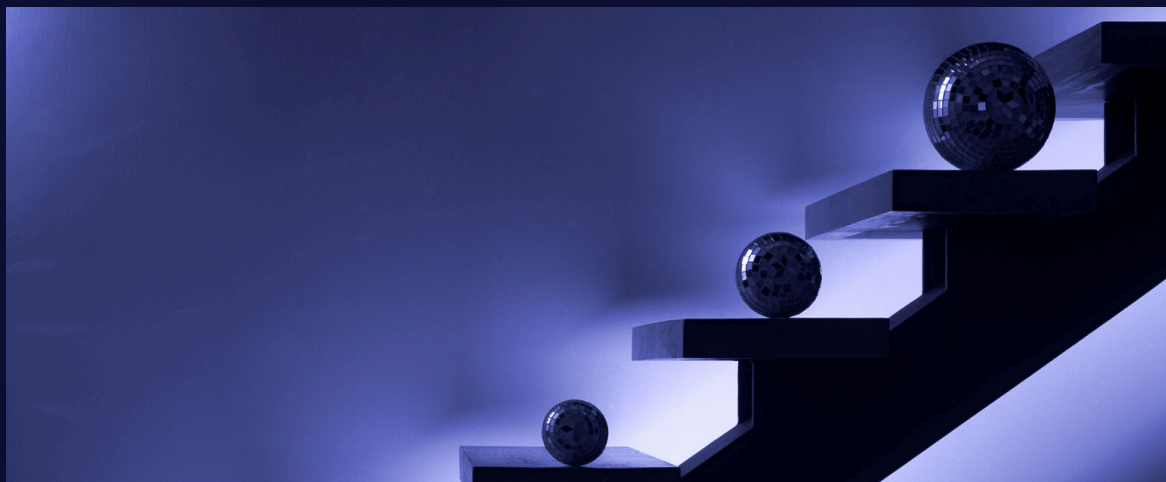
BUSINESS VALUE ACROSS FINANCIAL SERVICES

By taking over complex workflows from start to finish, agentic AI reduces cycle times from days to minutes, minimises manual effort and errors, and enables specialists to focus on activities that require more judgement. It also embeds controls and audit trails directly into operations, helping institutions to stay compliant and preserve critical expertise as their workforces age.

The impact of agentic AI is already visible across the industry. In banking, the most immediate value is emerging in financial crime, regulatory compliance, customer engagement and lending. Agentic AI is also having a significant impact in the insurance industry, transforming underwriting, claims, customer service and workforce sustainability. Capital markets organisations are leveraging agentic AI for high value analytical and operational activities like analysis and scenario modeling. And in private equity and investment operations, agents accelerate due diligence, surface operational risks across portfolios and enhance client advisory with real-time, personalised insights.

The challenge is not a lack of opportunities, but rather selecting and scaling those initiatives that deliver enterprise-wide impact. Prioritisation should focus on capabilities that strengthen core value chains, connect previously siloed activities and create reusable foundations for enterprise-wide transformation.

AGENTIC AI IN FINANCIAL SERVICES: A PLAYBOOK FOR TRANSFORMATION



A SEVEN-STEP JOURNEY TO AGENTIC AI VALUE

The main challenge for institutions is not finding use cases, but selecting and scaling the initiatives that will deliver enterprise-wide impact. To progress from early experimentation to a scalable model, industry leaders recommend a focused seven-step journey:

1. Prioritise value chain impact
2. Raise AI fluency and confidence
3. Establish your operating model and CoE
4. Create a modern, scalable tech foundation
5. Address data security, privacy and compliance
6. Embed trust and responsible AI
7. Connect with the right partners

Read more here: <https://www.pwc.com/gx/en/services/alliances/microsoft/agnostic-ai-financial-services.html>

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THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT



BY:

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VICE PRESIDENT, SMB KYC OPERATIONS STRATEGY & READINESS

In the rapidly evolving landscape of software development, the quest for efficiency, quality, and accelerated delivery has led to the integration of Artificial Intelligence (AI) into virtually every stage of the testing lifecycle. Test management, a critical component ensuring the robustness and reliability of software products, is no exception. AI is not just augmenting traditional testing methodologies; it is fundamentally transforming them, offering unprecedented opportunities for optimisation, insight, and innovation.

TRADITIONAL TEST MANAGEMENT LIFECYCLE: THE "AS-IS" STATE

Before the widespread adoption of AI, test management followed a structured and often sequential lifecycle designed to systematically validate software functionality and performance. While effective, this traditional approach faced inherent challenges, particularly with increasing software complexity and demands for quicker releases. Key phases typically included but not limited to are:

- **Unit Testing:** Developers test individual units or components of code in isolation to ensure they function as designed. This is the first level of testing, usually automated.
- **Integration Testing:** After unit testing, individual software modules are combined and tested as a group to ensure they interact as expected.
- **System Integration Testing (SIT):** This comprehensive phase involves testing the entire integrated system to verify that all components work together as a cohesive whole, often in an environment that reflects production. SIT focuses on end-to-end business flows, data integrity, and system performance. Challenges included identifying integration points, managing test data across multiple systems, and coordinating testing efforts among diverse units.

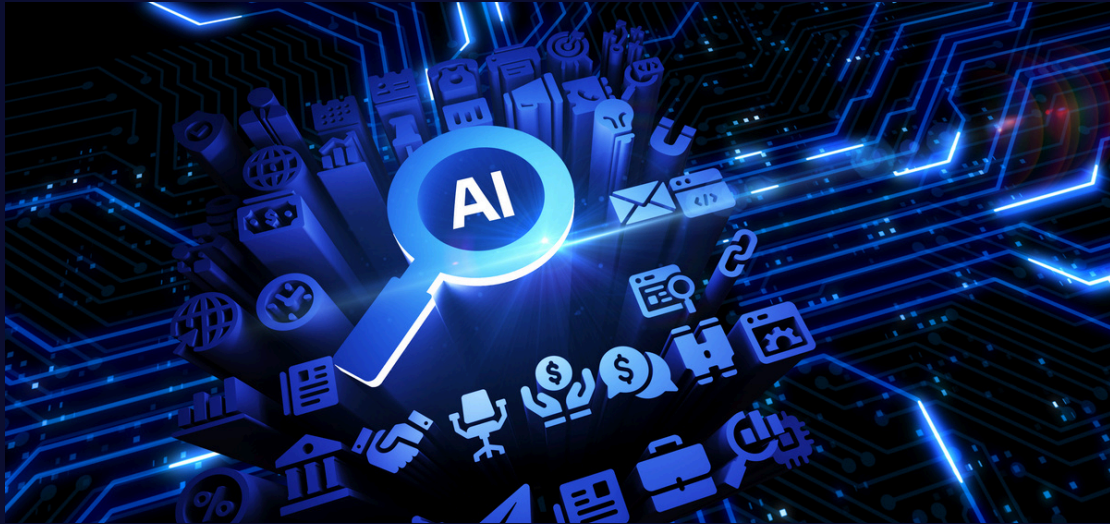
THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT

- **User Acceptance Testing (UAT):** This crucial phase involves end-users or clients validating the software against their business requirements in a realistic production-like environment. UAT ensures the software meets business needs and is fit for purpose. Historically, UAT could be time-consuming, subjective, and prone to scope creep, with manual execution and feedback collection. Additionally, obtaining end-users who are already filled with their day-to-day BAU increases the resource challenge faced.
- **Performance and Volume Testing (PVT):** This non-functional testing type assesses how a system reacts under a particular workload. It evaluates system stability, scalability, and responsiveness under various load conditions (e.g., peak user traffic, large data volumes). Manual or script-based PVT could be resource-intensive, difficult to simulate realistic load patterns, and challenging to analyse performance bottlenecks effectively.
- **Regression Testing:** This involves re-running existing test cases to ensure that recent code changes or additions have not adversely affected existing functionalities. Without automation, regression testing could be incredibly time-consuming and costly, often leading to a backlog of tests that were rarely fully executed.

In this traditional model, test design, execution, and analysis were predominantly manual processes. This often resulted in:

- **High Costs and Time Consumption:** Manual efforts for large test suites were expensive and slow.
 - **Limited Coverage:** It was challenging to achieve exhaustive test coverage, leaving potential gaps.
 - **Late Defect Detection:** Defects were often found later in the cycle (e.g., UAT), making them more expensive to fix.
 - **Maintenance Burden:** Test scripts, especially for UI automation, required constant updates due to application changes.
 - **Lack of Predictive Insights:** Testing was largely reactive, identifying issues after they occurred rather than predicting them.
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THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT



EVOLUTION OF TEST MANAGEMENT WITH AI

The advent of AI brings several key advancements, fundamentally reshaping test management landscape:

1. **Enhanced Test Case Generation:** AI algorithms can analyse historical data, code changes, and requirements to intelligently generate relevant test cases, significantly improving test coverage and reducing the manual workload involved in test design.
2. **Intelligent Test Prioritisation:** Machine learning models can predict which test cases are most likely to raise critical defects based on factors like code churn, complexity, and historical failure rates, allowing teams to focus their efforts where they matter most.
3. **Automated Defect Prediction:** By analysing patterns within the code, requirements, and past defect data, AI can predict potential defect-prone areas even before testing begins, enabling proactive quality assurance.
4. **Self-Healing Test Automation:** AI-powered tools can adapt to minor UI changes in applications under test, automatically updating locators and scripts. This drastically reduces the maintenance needs associated with traditional test automation frameworks.
5. **Smarter Test Execution and Analysis:** AI assists in optimising test execution schedules, identifying redundant tests, and providing deeper insights into test results, including root cause analysis for failures.

THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT

CURRENT TRENDS AND DEVELOPMENTS IN THE MARKET

The market for AI-powered test management solutions is growing, driven by the increasing complexity of software systems and the demand for quicker release cycles. Several key trends are evident:

- **Predictive Analytics for Quality:** Organisations are increasingly leveraging AI to shift from reactive defect detection to proactive defect prevention. Tools offer dashboards and insights that highlight risk areas in the code and suggest targeted testing strategies
- **Generative AI for Test Data and Oracles:** Beyond test case generation, generative AI emerges to create realistic and diverse test data, as well as to assist in building "test oracles" – a mechanism to determine if a test passed or failed correctly.
- **AI-Driven Visual Testing:** AI is being used to detect visual regressions and UI anomalies, ensuring that not just functionality, but also the user experience, remains consistent across different releases and devices.
- **Integration with DevOps Pipelines:** AI test management solutions are increasingly integrated into CI/CD pipelines, providing continuous feedback loops and enabling intelligent gatekeeping for releases.
- **Low-Code/No-Code Test Automation Platforms:** AI is being embedded into low-code and no-code platforms, making sophisticated test automation accessible to a broader range of users, including business analysts and manual testers. These platforms often use AI to interpret user actions and generate test scripts without human intervention.



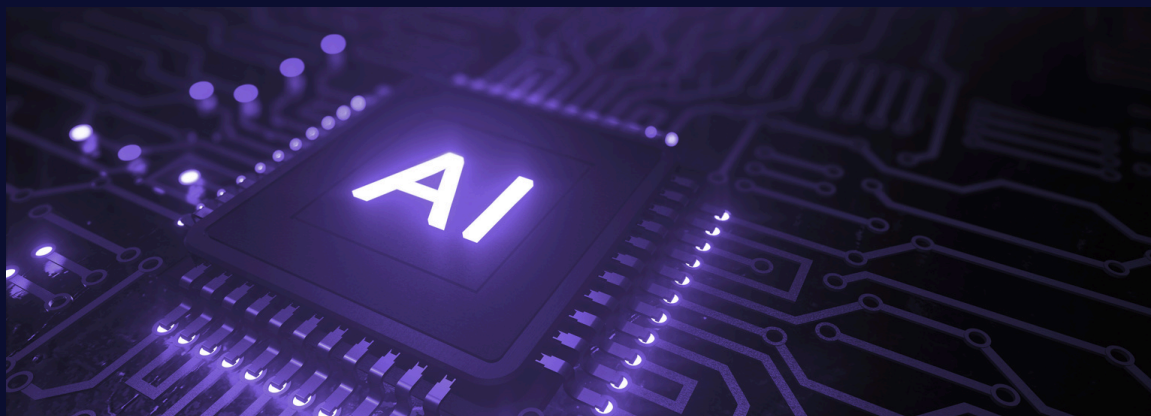
THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT

AI IN BANKING SECTOR TEST MANAGEMENT

The banking industry, characterised by highly regulated environments, complex legacy systems, stringent security requirements, and a constant need for innovation, presents unique challenges and opportunities for AI in test management.

- **Regulatory Compliance and Risk Mitigation:** AI can analyse vast amounts of regulatory documentation to ensure that test cases cover all compliance requirements. Predictive analytics can identify areas of code most likely to introduce regulatory risks, allowing for targeted testing and early remediation. For instance, AI can help validate adherence to "Know Your Customer" (KYC) or Anti-Money Laundering (AML) regulations.
- **Fraud Detection and Security Testing:** AI-powered anomaly detection can be integrated into security testing, identifying subtle patterns indicative of potential fraud or cyber threats that might be missed by traditional methods. It can also generate diverse and sophisticated attack scenarios for penetration testing.
- **Legacy System Modernisation:** Many banks operate with complex legacy systems alongside modern platforms. AI can assist in understanding dependencies, identifying optimal test paths for new integrations, and reducing the risk associated with modernising.
- **Data Integrity and Reconciliation Testing:** Financial transactions demand absolute data accuracy. AI can automate reconciliation by testing across disparate systems and large datasets, quickly identifying discrepancies and ensuring financial data integrity, a task that would be incredibly laborious manually.
- **Personalised Customer Experience Testing:** With the rise of digital banking, AI can simulate diverse customer behaviours and preferences to test personalised banking experiences, ensuring seamless and secure interactions across various channels (mobile, web, ATM). This includes testing AI-driven chatbots or personalised financial advice tools.
- **High-Volume Transaction Testing:** AI is invaluable for performance and load testing banking applications that handle millions of transactions daily. It can intelligently generate realistic transaction volumes and patterns, pinpoint bottlenecks, and ensure system stability during peak loads.

THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT



USE CASES AND SUCCESS STORIES

The practical applications of AI in test management are yielding tangible benefits across various industries:

- **Financial Services:** A major financial institution used AI-driven test prioritisation to reduce its regression test suite execution time by 30% while maintaining the same defect detection rate. This allowed them to accelerate their monthly release cycles and respond faster to market changes.
- **E-commerce:** An online retail giant implemented AI for self-healing UI tests. This reduced the time spent on test script maintenance by 40%, freeing up testers to focus on exploratory testing and new feature validation, leading to quicker deployment of new features and promotions.
- **Healthcare:** A healthcare software provider utilised AI to analyse patient data and system logs, predicting potential performance bottlenecks and security vulnerabilities in their electronic health record (EHR) system, leading to more robust software and improved patient data privacy.
- **Automotive:** In the development of autonomous driving software, AI is crucial for generating vast and varied test scenarios that would be impossible to create manually, significantly improving the safety and reliability of the systems under complex real-world conditions.
- **Gaming Industry:** AI is employed to automate playtesting, identifying bugs, glitches, and performance issues across complex game environments much faster than human testers alone, ensuring a higher quality gaming experience for end-users.

Disclaimer: The examples above reflect general industry practices and outcomes observed in the market. They are illustrative in nature and do not represent specific implementations by named organisations.

THE TRANSFORMATIVE POWER OF AI IN TEST MANAGEMENT



CONCLUSION

AI is no longer a futuristic concept in test management; it is a present-day reality transforming how software quality is assured. By automating tedious tasks, providing intelligent insights, and enabling proactive defect prevention, AI empowers testing teams to deliver higher quality software faster and with greater confidence. This is particularly true in critical sectors like banking, where precision, security, and compliance are paramount. As AI technologies continue to mature, their integration into test management will only deepen, promising an even more efficient, intelligent, and resilient future for software development.

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The views, analyses, and opinions presented in this article are solely those of the author. They do not represent the official stance, policy direction, or endorsement of the National AI Office (NAIO) or the Ministry of Digital Malaysia.

NAIO UPDATES

The National AI Office (NAIO) extends our sincere appreciation to Sam Majid for his visionary leadership, unwavering dedication, and invaluable contributions in guiding us through our formative years and laying the foundations of Malaysia's artificial intelligence ecosystem.

Sam Majid's legacy will continue to inspire us towards a trusted, inclusive, and innovation-driven AI future.



NAIO UPDATES

LEADING THE AI NATION JOURNEY: PUBLIC SERVANTS AS CATALYSTS OF TRANSFORMATION

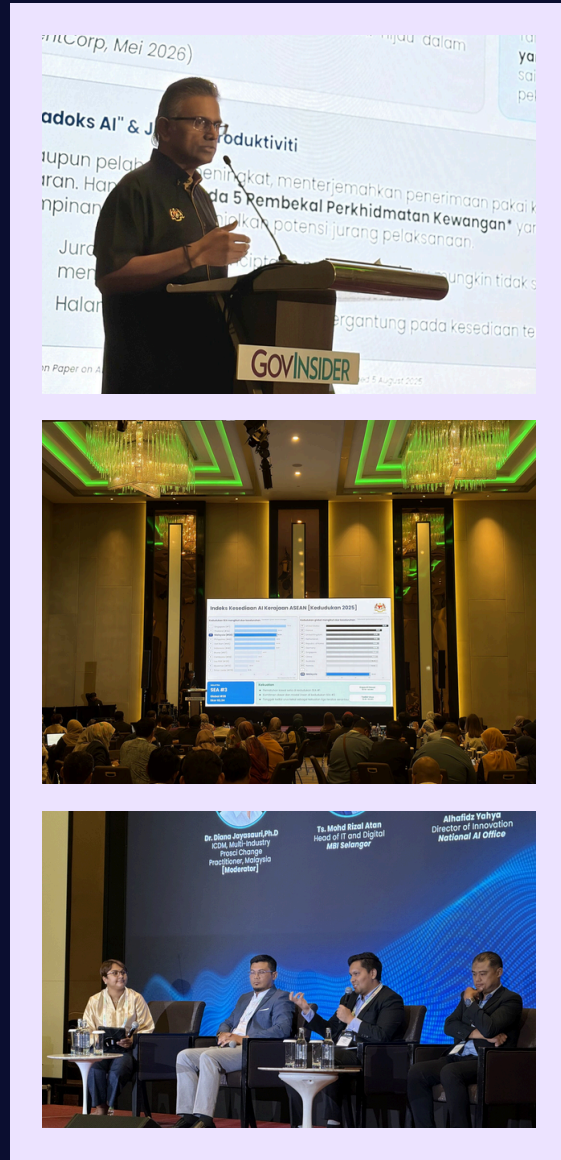
Malaysia's AI future will be built by its public servants and that was the central message at GovInsider Live MY.AI Day 2026, held on 16 June 2026. The event brought together policymakers, digital leaders and practitioners to explore how AI can be scaled responsibly across the public sector.

As a community partner of the event, the National AI Office (#NAIO) was proud to participate in this important conversation.

Delivering the keynote on Malaysia's AI 2030 Vision and Public Sector Priorities, Mr. Ma. Sivanesan, Deputy Secretary-General (Digital Development), Ministry of Digital, inspired public servants to embrace AI not merely as a technology, but as a force for public good.

He encouraged participants to build confidence in AI adoption, reimagine how government serves citizens, and become active contributors in Malaysia's journey towards AI Nation 2030. His message was clear: the success of AI Nation will not be determined by technology alone, but by the willingness of public servants to lead change, innovate responsibly, and harness AI to deliver better outcomes for the rakyat.

Read more: [Leading the AI Nation Journey: Public Servants as Catalysts of Transformation](#)



NAIO UPDATES



ADVANCING MALAYSIA'S AI-POWERED CREATIVE FUTURE

The National AI Office (#NAIO) was honoured to support CTRL+Create: Ride Your Imaginations, an initiative by Alibaba Cloud Malaysia that brought together technology, creativity, and innovation to explore the transformative potential of AI in content creation.

The event featured the launch of HappyHorse, Alibaba Cloud's latest generative AI video creation tool, enabling creators to transform ideas into engaging visual content through text prompts, reference images, and creative inputs.

The programme also culminated in the grand finale of KaryaWAN, a creative initiative showcasing how AI and emerging technologies can unlock new possibilities in storytelling, empower creators, and inspire innovative approaches to digital content development. NAIO was privileged to contribute as part of the judging panel.

NAIO remains committed to supporting initiatives that showcase emerging AI capabilities, and encourage the exploration of new ideas and applications enabled by AI.

By bringing together technology providers, creative communities, and industry stakeholders, programmes such as these help drive innovation, foster collaboration, and advance the creation of responsible digital content.

NAIO UPDATES



THE AI FOR WOMEN EXECUTIVE ROUNDTABLE: AUGMENTED INTELLIGENCE FOR BUSINESS LEADERS

The National AI Office (#NAIO) is pleased to share that our Manager of AI Talent, Fatin Atikah Abd Razak, was invited to participate in the Women in AI Executive Roundtable.

The roundtable convened leaders from across industries to exchange perspectives on the evolving role of artificial intelligence in shaping businesses, leadership, and the future workforce. Discussions centred on how organisations can harness AI responsibly while empowering talent, fostering innovation, and ensuring inclusive growth.

Representing NAIO, Fatin shared Malaysia's ongoing efforts in strengthening the nation's AI talent ecosystem and highlighted the importance of cross-sector collaboration in preparing a future-ready workforce equipped with AI capabilities.

As Malaysia advances its national AI agenda, NAIO remains committed to working alongside industry, academia and the broader ecosystem to accelerate AI adoption, develop future-ready talent, and ensure AI delivers meaningful impact for businesses and society.

We extend our appreciation to the organisers for bringing together an inspiring community of leaders to drive conversations that will shape the future of AI.

NAIO UPDATES



TOWARDS A TRUSTED AND RESPONSIBLE AI FUTURE

The National AI Office (#NAIO) participated in the GovXcellence Summit Malaysia 2026 held at Crowne Plaza Kuala Lumpur City Centre, bringing together public sector leaders, policymakers and technology innovators to discuss digital governance and the future of AI adoption.

During the session titled “Malaysia’s Journey Toward AI-Enabled Governance – Strengthening Digital Public Infrastructure Through AI”, Reza Ali, Director, AI Policy of NAIO shared insights on Malaysia’s policy direction and governance approach in supporting responsible AI development.

The session highlighted a 5-year National AI Action Plan commencing 2026 which outlines Malaysia’s strategy to accelerate AI adoption, strengthen ecosystem capabilities, and support collaboration across government, industry, academia and society.

Reza also highlighted key components shaping Malaysia’s AI governance landscape including:

- ◆ MY-AI Standards

A national platform that helps organisations understand and apply AI standards more systematically, translating AI governance principles into practical implementation

- ◆ Towards a National Artificial Intelligence Governance Bill

A principle-based framework to guide the safe and responsible use of AI, focusing on human dignity, transparency, accountability, security and responsible data stewardship.

Read more : [Towards a Trusted and Responsible AI Future](#)

NAIO UPDATES



STRENGTHENING MALAYSIA'S AI GOVERNANCE LANDSCAPE

As AI adoption continues to expand, effective governance is important to ensure emerging technologies are developed and deployed responsibly while supporting innovation.

On 11 June 2026, the National AI Office (#NAIO) participated in a regional discussion in Kuala Lumpur, organised by Tech for Good Institute (TFGI) and Social & Economic Research Initiative (SERI), involving policymakers, industry leaders, and researchers to exchange views on Malaysia's evolving AI governance landscape.

Representing the National AI Office (NAIO), Darmain Segaran, Manager of AI Policy, shared insights on Malaysia's approach towards strengthening responsible AI development and adoption.

The discussion explored the role of AI governance in building a trusted ecosystem — balancing innovation, safety, accountability, and competitiveness as Malaysia advances its AI agenda.

Read more: [Strengthening Malaysia's AI Governance Landscape](#)

Call for contributors

NAIO is looking for writers to contribute to the conversation on AI through this publication.

Authors who are interested in submitting an article for the NAIO Pulse should send a title and short summary to the "Editorial Office" (contact us@ai.gov.my) outlining the scope of their proposed article and accompanied by a short profile of the writer.

Accepted proposals will be notified *via* email with submission guidelines attached. Topics should be within the scope of the NAIO Pulse's coverage and address current issues.



The National AI Office (NAIO) upholds responsible and transparent AI practices across communications, media, and creative content. Where AI tools are used, materials continue to undergo human oversight, editorial review, and reasonable verification processes in support of integrity and public trust.

Thank you for being a valued part of the NAIO Community. If you have any question or feedback, please do not hesitate to reach out to (contactus@ai.gov.my)

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