THE NAIO PULSE

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A PUBLICATION OF THE NATIONAL AI OFFICE, MALAYSIA

About the NAIO Pulse

Welcome to The NAIO 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 NAIO Pulse is your adaptable guide to navigating—and shaping—the next frontier of trustworthy, transformative AI.

INSIGHTS

NATIONAL AI TREND - TRANSPORTATION AND AI

From smarter traffic management and seamless multimodal transport to autonomous ride-hailing and AI-enhanced infrastructure, cities worldwide are using artificial intelligence to make mobility safer, more efficient, and more resilient.

www.ai.gov.my

contactus@ai.gov.my

NAIO TURNS 1 ! : A YEAR OF PROGRESS IN AI

It has been a year of focused progress delivering seven national milestones, strengthening governance, accelerating sectoral adoption, and expanding talent development, laying the foundation for AI Nation 2030. As we move into the Implementation Phase from 2026 onwards, the momentum continues toward a trusted, innovative, and future-ready AI ecosystem.

See inside page >

NAIO TURNS 1!

ONE YEAR. ONE VISION. ONE MISSION.

NAIO marks its first anniversary with a year of focused progress that strengthened Malaysia's AI readiness. Seven national deliverables were completed, especially setting the strategic groundwork for the AI Nation 2030 (National AI Action Plan 2026-2030) , stronger governance and ethics, sectoral adoption and nationwide talent development. Malaysia also elevated its thought leadership and regional voice through the ASEAN AI Malaysia Summit and international collaborations.

As we enter the Implementation and Delivery Phase of AI Nation from 2026 onwards, Malaysia steps forward with renewed confidence and collective strength.

Thank you to all who have walked this journey with us.

Together, we continue shaping Malaysia's AI future — AI Nation 2030.

Watch the NAIO 1st Anniversary video at :
https://www.linkedin.com/feed/update/urn:li:activity:7405077841802911744

NATIONAL AI TREND - TRANSPORTATION

GLOBAL TRENDS

AI is reshaping mobility systems worldwide, making them safer, smarter, and more efficient. Cities are increasingly using real-time traffic optimisation powered by sensors and machine learning to reduce congestion and emissions. In Hangzhou, China, Alibaba's City Brain platform processes data from over 1,000 cameras and GPS probes to retime traffic lights and dispatch tow trucks dynamically.

Multimodal demand forecasting is also integrating buses, rail, and ride-hailing into seamless transport systems. In Singapore, GovTech and the Land Transport Authority (LTA) simulate more than four million daily bus trips using smart-card and GPS data, enabling planners to test new routes and timetables before launch.

AI-driven safety analytics are identifying accident hotspots and predicting risks, while autonomous mobility pilots and ride-sharing optimisation are redefining how people move through cities. In Phoenix, USA, Waymo One's driverless ride-hailing fleet now completes over 50,000 public trips each week. At the infrastructure level, smart highways, adaptive traffic lights, and AI-enhanced logistics hubs are strengthening transport networks, making them more resilient, efficient, and citizen-focused.

MALAYSIA CURRENT LANDSCAPE

Malaysia has begun adopting AI in transportation through several targeted pilot initiatives. A key milestone is the AI-powered traffic intelligence system in Petaling Jaya, covering PJ Sentral, SS2, and the LDP corridor. By leveraging neural networks, advanced analytics, and 5G connectivity, the system generates real-time insights to optimise traffic signals and enhance road safety. Research using genetic algorithms for metro planning in Selangor has also shown promise in improving long-term transit network design.

While adoption is still progressing step by step, ongoing deployments are expanding beyond initial pilots. Strengthening interoperability across mobility datasets, ensuring consistent rollout in both urban and rural settings, and updating regulatory frameworks remain important enablers for nationwide scale.

AI AND THE FUTURE OF TRANSPORTATION: SMARTER, SAFER, AND MORE PERSONALISED JOURNEYS

BY:
AFIQ RAHIM
PRASARANA MALAYSIA BERHAD – GROUP DIGITAL DIVISION

Every day, millions of Malaysians rely on public transport to get to work, school, and home. As Malaysia's largest public transport operator, Prasarana Malaysia Berhad (Prasarana) is looking ahead to a future where these journeys become smoother, safer, and more personal, thanks to the power of artificial intelligence (AI).

AI is no longer just a buzzword. It is quickly becoming a practical, everyday tool that helps transport providers run better and helps commuters travel with confidence. From predicting delays before they happen to keeping stations safer, AI is quietly shaping a better travel experience for everyone.

Here's how AI is making a real difference, and how Prasarana is bringing these innovations to life.

AI AND THE FUTURE OF TRANSPORTATION: SMARTER, SAFER, AND MORE PERSONALISED JOURNEYS

1. PREDICTIVE AND EFFICIENT OPERATIONS

Behind every good journey is a system that works smoothly. AI helps transport operators plan smarter by reading real-time data and adjusting services on the go. It can spot potential delays, optimise routes, and help buses and trains run more efficiently.

For commuters, this means fewer long waits at bus stops, smoother connections, and more predictable travel.

At Prasarana, a new AI Speed Optimisation model is currently being tested for our bus operations, analysing real-time telemetry data to recommend optimal driving speeds, reduce bus bunching, and improve overall punctuality.

It's a small change, but one that results in a big difference for passengers who want a dependable journey, every time.

AI AND THE FUTURE OF TRANSPORTATION: SMARTER, SAFER, AND MORE PERSONALISED JOURNEYS

2. ENHANCED SAFETY AND SECURITY

Feeling safe is a crucial part of any journey. With AI, safety becomes more proactive and responsive.

AI-powered surveillance tools can identify unusual behaviour, spot potential hazards, and alert staff instantly. This allows teams to act faster and keep both stations and trains safer.

Prasarana is also upgrading its entire rail CCTV network into an AI-powered monitoring system, enhancing the way safety is managed across stations and trains. The enhanced
system will detect unsafe behaviour, identify weapons, and monitor women-only coaches to ensure passengers feel protected.

Beyond that, Prasarana is exploring the use of smart cameras with emotion-recognition capabilities. A technology that may one day help frontline staff understand when passengers are confused, frustrated, or uncomfortable, allowing for better on-ground support.

AI AND THE FUTURE OF TRANSPORTATION: SMARTER, SAFER, AND MORE PERSONALISED JOURNEYS

3. PERSONALISED PASSENGER EXPERIENCE

AI isn't just about machines. It's about people. It helps create a travel experience that feels more personal and more intuitive.

With data-driven insights, operators can design services around the actual needs of passengers. And for commuters, AI provides clearer, real-time information that helps them plan their day with ease.

One upcoming initiative is Prasarana's real-time crowd monitoring system, which will show how full each train coach is even before the train arrives. Commuters can choose where to queue, avoid crowded coaches, and enjoy a more comfortable ride, especially during peak hours.

TOWARDS A CONNECTED, HUMAN-CENTRED MOBILITY FUTURE

AI, together with IoT and 5G connectivity, is helping shape a future where public transport becomes more than just a way to get from point A to point B. It becomes a service that understands people, anticipates needs, and responds with care.

Prasarana's early AI initiatives across bus and rail are only the beginning. As the organisation continues to innovate, Malaysia's public transport system is on track to become smarter, safer, and most importantly, more human-centred.

AI FOR MENTAL WELL-BEING: SUPPORTING MALAYSIANS THROUGH SMARTER DIGITAL TOOLS

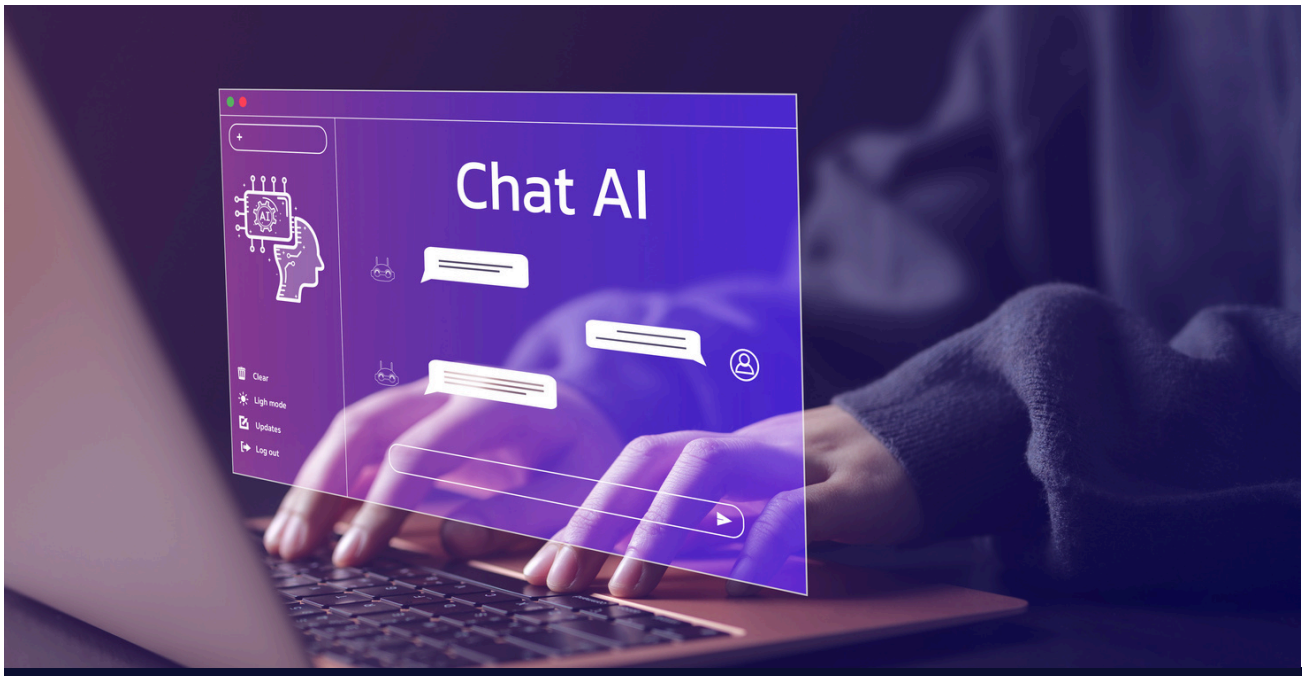
BY:
DR JACK NG KOK WAH

Dr. Jack Ng Kok Wah is a Senior Lecturer at Multimedia University, Cyberjaya, with 30 years of industry experience, an HRDF-accredited trainer, focusing on artificial intelligence in marketing, healthcare, and digital innovation, and using his research to create practical solutions that benefit people and businesses.

Artificial Intelligence (AI) is increasingly recognised as a helpful tool in improving mental well-being, especially as more people experience stress, burnout, and emotional challenges in their daily lives. Around the world, AI is being used to support early detection of mental health issues, offer personalised guidance, and make mental health resources more accessible. While AI is not a replacement for mental health professionals, it can complement existing services and expand support to communities that may not have easy access to counselling or psychological care.

AI has shown early potential in spotting the first signs of emotional stress through behaviour patterns that are sometimes not obvious to individuals. Modern AI systems can analyse changes in daily routines, speech tone, writing patterns, or even sleep habits to detect emotional shifts. These systems do not diagnose illnesses on their own; rather, they help identify when someone may be under increasing pressure or starting to struggle emotionally.

AI FOR MENTAL WELL-BEING: SUPPORTING MALAYSIANS THROUGH SMARTER DIGITAL TOOLS



Early detection is crucial because it allows intervention before stress turns into a more serious condition. For Malaysia, such technology can be particularly helpful in schools, workplaces, and community health programmes. A simple digital check-in tool powered by AI could help teachers, employers, or health workers understand general emotional trends and identify when additional support might be needed.

Another growing area is the use of AI chatbots for emotional support. These digital assistants provide a safe and private space for people to talk about their worries. They are available around the clock, do not judge, and offer immediate responses. This makes them appeal to groups such as teenagers, young adults, and individuals who may feel uncomfortable sharing their feelings with others.

Research shows that AI chatbots can guide users through simple calming exercises, teach coping skills, and help them process everyday stress. Although chatbots are not suitable for severe mental health crises, they can provide meaningful first-line support and encourage users to seek professional help when necessary. For Malaysia, these tools can be especially beneficial for individuals in remote or underserved areas where mental health professionals are limited.

AI FOR MENTAL WELL-BEING: SUPPORTING MALAYSIANS THROUGH SMARTER DIGITAL TOOLS

AI also supports therapists and counsellors by helping them understand their clients better. Some AI systems can track emotional patterns over time, analyse mood changes, and summarise progress between sessions. This allows counsellors to focus more on personalised care rather than administrative or repetitive tasks. In advanced settings, AI is being used together with virtual reality (VR) to create safe environments where individuals can practice facing certain fears or anxieties.

For example, VR-based exposure therapy guided by AI can help people gradually overcome phobias or stress-inducing situations in a controlled, safe manner. These integrations show that AI does not replace human professionals; instead, it strengthens their work through better insights and more effective tools.

As AI becomes more common in mental health support, transparency is becoming increasingly important. Users want to know how AI systems make suggestions or detect certain patterns. Explainable AI (XAI) focuses on making technology easier to understand by showing why a certain recommendation or observation was made. This transparency builds trust and helps individuals feel more comfortable using digital mental health tools. For Malaysia, designing AI systems that are easy to understand, culturally appropriate, and available in local languages will be critical for high adoption and public confidence.

AI FOR MENTAL WELL-BEING: SUPPORTING MALAYSIANS THROUGH SMARTER DIGITAL TOOLS

Privacy and ethics remain top priorities, especially because mental health data is sensitive. AI systems often rely on personal information to function effectively, which means strong protection must be in place. Developers need to ensure secure data storage, proper user consent, and clear options for individuals to control their information.

Another ethical consideration is the need to avoid bias. If AI tools are trained using data from only one cultural or demographic group, their results may not be accurate for others. Therefore, Malaysian AI models must use diverse and inclusive data that reflects the country's multicultural background. This helps ensure fair, reliable, and effective support for all users.

These global findings point toward several meaningful opportunities for Malaysia. First, AI can help support youth mental health by identifying early signs of stress or emotional withdrawal. Today adolescents spend a large portion of their time online, and AI can gently analyse their digital habits to spot when they may need guidance.

Second, AI can be introduced to workplaces as part of employee wellness programmes, helping reduce burnout and improve productivity. Third, AI can make mental health support more accessible to rural areas through simple mobile-based tools or chatbots. Finally, AI can strengthen national mental health strategies by helping policymakers understand overall stress trends, identify communities in need of extra support, and design better outreach programmes.

AI FOR MENTAL WELL-BEING: SUPPORTING MALAYSIANS THROUGH SMARTER DIGITAL TOOLS

To move forward responsibly, Malaysia will need a practical and well-structured approach. This includes developing clear guidelines for mental-health-related AI tools, especially regarding safety, transparency, and data protection. Collaboration between AI experts, mental health professionals, educators, and policymakers will also be essential to create tools that are both technically strong and socially appropriate.

In addition, pilot projects should be implemented in selected schools, universities, clinics, and workplaces to test real-world effectiveness before nationwide launch. Public awareness campaigns are also important, as they help Malaysians understand how AI can provide support without replacing human care.

In conclusion, AI offers promising possibilities for strengthening mental well-being in Malaysia. Its ability to support early detection, provide personalised guidance, and increase access to emotional support makes it a helpful partner in addressing mental health challenges. However, successful implementation will require responsible design, strong privacy protections, and culturally sensitive development. With careful planning and collaboration, the National AI Office (NAIO) can play a pivotal role in guiding the use of AI for mental well-being, ensuring that technology truly serves the needs of Malaysians in a safe, practical, and inclusive way.

Disclaimer :
The views, analyses, and opinions presented in in this article are soley 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

ADVANCING REGIONAL INNOVATION AT ASEAN TECHNOLOGY COOPERATION AND DEVELOPMENT 2025

The National AI Office Malaysia (NAIO) participated in the ASEAN Technology Cooperation and Development 2025 roundtable forum, contributing to discussions on building safer and more resilient urban and transport infrastructure across the region.

Shamsul Izhan Majid (Sam Majid), Head of NAIO, represented Malaysia in Forum 3: Future Building & Safety Emergency Response, speaking on "ASEAN Critical Infrastructure: AI, AIoT, and Cybersecurity." The session explored how artificial intelligence, AIoT, and cybersecurity are transforming critical infrastructure, from ports and airports to transport terminals, enhancing operational efficiency, safety, and sustainability across ASEAN.

The forum also emphasised the importance of public–private collaboration in deploying digital twins, predictive analytics, and secure data ecosystems, highlighting strategies to build smarter, safer, and more connected cities.

Through platforms like the ASEAN Technology Cooperation and Development 2025, NAIO continues to champion regional collaboration, technology innovation, and the adoption of AI-driven solutions to strengthen ASEAN's critical infrastructure and digital resilience.

NAIO UPDATES

DRIVING BETTER GOVERNANCE FOR AI ADOPTION

The National AI Office (NAIO) continued to strengthen Malaysia's leadership in responsible artificial intelligence at the 5th Annual Governance, Risk and Compliance (GRC) Asia 2025 held in Kuala Lumpur, where Sam Majid was invited as a featured speaker.

Delivering a session titled "Translating AI Governance Guidelines into Practical Mechanisms: Supporting Trust, Accountability and Safe Deployment Across the Enterprise," Sam underscored the importance of converting national and global AI principles into actionable governance structures that organisations can operationalise.

His presentation highlighted several core priorities:

- Converting high-level AI principles into tangible controls that guide safe and ethical implementation
- Embedding accountability, fairness, and transparency into everyday AI workflows and decision-making
- Bridging the gap between compliance and innovation with governance that enables responsible scaling
- Enabling enterprise-wide trust in AI through consistent policies, oversight structures and risk mitigation tools

The session highlighted the importance of fostering trusted and responsible AI adoption, particularly as organisations implement AI across complex business and operational environments.

NAIO UPDATES

GROUNDING STANDARDS DEVELOPMENT IN SOCIETAL IMPACT

The AI Nation 2030, anchored by the National AI Action Plan (2026 to 2030), is aligned with RMK13's vision, one where AI is holistically integrated into socio-economic development, public administration, and everyday life. A Malaysia that also places trust at the centre of national AI transformation.

To realise this vision, standards are essential. They translate principles into practice, safeguard the public, and make AI adoption responsible and trustworthy.

The Ministry of Digital Malaysia, through the National AI Office, was represented by Darmain Segaran at the International AI Standards Summit held earlier this week in South Korea. Speaking alongside cross-sectoral global experts on the panel "Socio-Technical Insights for Designing and Governing AI", the session unpacked how socio-technical perspectives can redefine innovation, safety, and adoption in AI.

The discussion reinforced that effective governance requires more than algorithms — it requires understanding people, contexts, and societal impact. Panelists also explored how standards become powerful tools: they embed socio-technical priorities into real-world systems.

For more context on the discussions: https://www.linkedin.com/posts/national-ai-office-malaysia_naio-activity-7402962453506142208-OuFz?utm_source=share&utm_medium=member_desktop&rcm=ACoAAFVIXn4B6Ia4nZJZin6P9vp1U6woGsX7oTk

NAIO UPDATES

NAIO HIGHLIGHTS PARTNERSHIP WITH HONOR TO DRIVE MALAYSIA'S AI ECOSYSTEM

The National AI Office Malaysia (NAIO) was a supporting partner of the 2025 HONOR AI + Design Summit (APAC Edition), HONOR's flagship regional event hosted in Kuala Lumpur for the first time. Established in 2020, this initiative empowers youth in art and technology; and has to date attracted over 34,000 submissions from 40+ countries and 240+ universities.

The AI + Youth Empowerment Society (AYES), a multi-stakeholder initiative promoting AI literacy and digital skills among youth, was also launched at the event.

Through such partnerships, NAIO continues to position Malaysia as a future-ready AI nation, strengthen APAC collaboration in AI, and showcase Malaysia's growing role as an AI innovation hub complementing technology, creative, education, and sustainability.

NAIO UPDATES

BRINGING AI CLOSER TO THE COMMUNITY: NAIO AT RANCAKKAN MADANI BERSAMA MALAYSIAKU

NAIO joined the crowds at Dataran Putrajaya for Program Rancakkan MADANI Bersama Malaysiaku, where various ministries, agencies and partners came together to showcase initiatives supporting a future-ready Malaysia.

As part of the STEM & AI booth, NAIO contributed a simple yet meaningful touch, AI-generated sticker decals designed to spark conversations about AI and its impact on everyday life. Visitors of all ages stopped by to pick their favourite designs, each created using AI prompts turning the booth into a fun, interactive space for learning and creativity.

These community engagements form part of NAIO's ongoing effort to strengthen public understanding and readiness as Malaysia progresses toward becoming an AI Nation, a future where Malaysians are empowered with the knowledge and confidence to adopt AI responsibly and inclusively.

NAIO UPDATES

YOUR VOICE SHAPES THE FUTURE OF AI IN MALAYSIA

NAIO extends its deepest appreciation to all who participated in the public consultation for the AI Nation 2030, National AI Action Plan.

The response received has been highly encouraging, and the feedback provided was objective, thoughtful, and forward-looking. Your contributions have helped strengthen the foundation of the plan, refine its strategic priorities, and ensure that Malaysia's AI direction remains aligned with the needs of the *rakyat* and the future of the nation.

Thank you for your active participation and thoughtful input. The AI Nation 2030 will continue to be enhanced based on the voices and perspectives we have received from the public.

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.

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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