DAIO Defense AI Observatory

Balanced and Pragmatic Steps Toward Defence Self-Reliance

Defence AI in Malaysia

Adam Leong Kok Wey

DAIO Study 26|40

Ein Projekt im Rahmen von

dtec.bw
Zentrum für Digitalisierungs- und Technologieforschung der Bundeswehr

Finanziert von der Europäischen Union
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About the Defense AI Observatory

The Defense AI Observatory (DAIO) at the Helmut Schmidt University in Hamburg monitors and analyzes the use of artificial intelligence by armed forces. DAIO comprises three interrelated work streams:

- Culture, concept development, and organizational transformation in the context of military innovation
- Current and future conflict pictures, conflict dynamics, and operational experience, especially related to the use of emerging technologies
- Defense industrial dynamics with a particular focus on the impact of emerging technologies on the nature and character of techno-industrial ecosystems

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1 Summary

Malaysia is one of the fastest growing economies in Southeast Asia with a stable and peaceful domestic context. It has been located at the geostrategically important location at the centre of East and West crossroads of sea trade for centuries. The importance of the legendary Malacca port in the 14th and 15th centuries underscored the historical legacy of Malaysia as the central entrepot of the world then. Today, Malaysia, with its location in the middle of Indo Pacific geopolitical competition, is poised to take advantage of various opportunities to build better trade ties and boost sustainable domestic economic growth while managing and mitigating strategic risks with its deft practice of a neutral foreign policy stance operationalized with its selective alignment strategy.

Malaysia has a defensive stance in its defence policy, and its defence strategy and capability building supports this policy thrust. The Malaysian Armed Forces (MAF) asset acquisitions and operational concepts are defensive in nature. Malaysia also promotes a Whole-of-Government-Whole-of-Society (WOGOS) approach to secure and defend its national interests. This approach supports the supremacy of civilian control over the MAF and reflects Malaysia's stable democratic system pegged on its constitutional monarchy. Malaysia's history, geography and demography fundamentally influence how Malaysia plans its defence.

Malaysia's defence AI development is still in its infancy. The Malaysian government has pushed for wider AI use in all government sectors and has enticed foreign AI powerhouses to set up their bases in Malaysia. This strong push by the government will inadvertently lead to technology spillovers in building an indigenous defence AI industry to support the MAF. However, not much detailed information has been released by the MAF on how it plans to acquire and utilize defence AI apart from published open-source information including official Malaysian government policy documents and press statements by senior government and MAF officers as well as a few politicians. It is also not known how much budgetary funds will be appropriated for defence AI as the MAF's annual budget is expected to remain at roughly 1% of Malaysia's GDP. This indicates challenging financial constraints on how much defence AI will be integrated in MAF's Future Force in view of budgetary limitations. Defence AI adaption in the MAF at the moment occurs through its platform acquisitions with associated AI technologies and not via a dedicated defence AI technology pipeline.

The Malaysian government is expected to drive AI as a key research and development area to serve as a catalyst for future economic growth. The use of AI has been promoted at schools and universities as well as in specialized tertiary AI programs. These initiatives will build the necessary human capital to promote indigenous AI industry as an important economic sector as well as developing localized AI products. Defence AI is integrated at a moderate speed within the MAF as evident in various defence centric policies and it is a strong indication that defence AI will be adopted at larger scale in the future. Defence AI technologies are expected to be incorporated in ongoing defence procurement and future capability building plans but no detailed outline on the acquisition of dedicated defence AI tools has been publicly announced yet.

2 Thinking About Defence AI

Malaysia's approach and strategy to build defence capabilities and capacities with the help of artificial intelligence (AI) are rooted in its geopolitical context, strategic history and culture, national policies for defence and security as well as science and technology education and innovation. Malaysian leaders have regularly promoted the importance of harnessing the latest AI technologies for a broad spectrum of civilian and defence/security tasks. The Malaysian Ministry of Science, Technology, and Innovation (MOSTI) launched the Malaysian National Artificial Intelligence Roadmap 2021-2025 (AI-RMAP) in August 2022. This provided the first framework of policy initiatives to integrate AI into the different sectors of the economy. Using AI is meant to position Malaysia as a leading high-technology nation that harnesses AI for productivity gains and to advance its economic competitiveness.[1] Consequently, Malaysia's AI approach is rooted in a Whole-of-Government-and-Society (WOGOS) not only in defence or security-centric understanding. Spill-offs from AI research and development (R&D) will be used for defence AI as stipulated in Malaysia's Midterm Review of the Defence White Paper and the National Defence Industry Policy, both launched in 2025.

Due to Malaysia's strategic history and geopolitical context, Malaysia places strong emphasis on the Association of Southeast Asian Nations (ASEAN) to manage regional security and defence issues. As a result, Malaysia supports ASEAN platforms related to cyber such as the ASEAN Cybersecurity Centre and the Cyber Defence Network and Expert Working Group on Cybersecurity of the ASEAN Defence Ministers Meeting (ADMM. This led to the adoption of the ASEAN Guide on AI Governance and Ethics in 2024, followed by the formation of the ASEAN Working Group on AI Governance (WG-AI) to lead and coordinate regional AI initiatives and discussions.[2]

Malaysia sees defence AI as an important element to be harnessed in enhancing Malaysia's defensive posture and a key driver in the building of MAF's Future Force plan. Defence AI will function as a force multiplier to support both offensive and defensive combat measures as well as intelligence analysis and swift and will-informed decision-making. Nonetheless, AI itself poses some security risks and Malaysia is cautiously building and adopting defence AI while mitigating potential AI hazards along the way.

1 "Malaysia's National Artificial Intelligence (AI) Roadmap 2021-2025."
2 ASEAN Guide on AI Governance and Ethics.

2.1 Strategic Culture and Malaysia's Approach to Defence AI

Malaysia has a unique strategic culture driven by its strategic history, politics, special characteristics of its constitutional monarchy, geographical location and influence of the geopolitical games of major powers in its geostrategic backyard. The Southeast Asia region, in which Malaysia is centrally located, also has its fair share of regional suspicions, tensions and occasional flare up of armed conflicts. Despite the presence of geopolitical frictions, the region has generally remained stable and peaceful since the formation of ASEAN in 1967. These regional dynamics and Malaysia's own strategic context drive Malaysia's strategic culture and it influence on its foreign policies and defence posture, which impacts its defence strategy and the assets it acquires including AI systems and tools.

The geostrategic context requires Malaysia to walk a thin line amid diverse interests of its neighbouring partners. This is one of the main reasons why Malaysia develops a risk-cautious approach to AI and other emerging technologies and requires strict human command and control as well as ethical regulation of AI. It also implies that Malaysia is exploring the use of AI in combination with other technologies, for example to advance its sensing and surveillance capabilities, but is wary of using AI directly in weapon systems.

Malaysia's Historical Strategic Context

Since its independence in 1957, Malaya had been dubbed a "mini-Cold War warrior" allied to Western powers. Malaya, at that point, still had close defence ties with her ex-colonial master, Great Britain, via its Anglo-Malayan Defence Agreement (AMDA) (1957–1970) and indirect security ties with the United States, and was vehemently anti-communist.[3] It was still fighting a bitter communist insurgency internally (the Malayan Emergency ended in 1960). Malaya, as a young and small state, had been courted to join the Southeast Asia Treaty Organization (SEATO), an organization initiated to contain both Soviet Union and Chinese influence in the Southeast Asia region during the early days of the Cold War. However, Malaya refused to join SEATO, as it was not yet ready to commit itself to a formal anti-communist military pact and wanted to avoid upsetting some of its closest regional neighbouring states.[4] Although Malaysia did not join SEATO, the British had continued to station its Far East Strategic Reserve military force in Malaya, which could be mobilized in support of SEATO operations. These combinations of official and informal close ties with the West brought unwanted attention on Malaya from communist powers and their allies.

3 "Five Power Defence Arrangements."
4 "Southeast Asia Treaty Organization (SEATO), 1954."

When Malaysia was formed in 1963, consisting of Malaya, Sabah, Sarawak, and Singapore, it was strongly opposed by the ruler of Indonesia, Sukarno, who was supported by Indonesian communists. Sukarno was against the formation of Malaysia, as it was deemed a British strategic move to contain Indonesia's geo-political ambitions in the region (the Philippines also opposed the formation of Malaysia, but apart from breaking off diplomatic relations did not resort to the use of military means) and to contain the spread of communism. Sukarno launched a *Ganyang Malaysia* or "crush Malaysia" campaign attempting to disrupt Malaysia's formation, initially using political, economic, and propaganda means, and later an undeclared war known as the *Konfrontasi* (Confrontation).[5] The Indonesia - Malaysia undeclared war lasted until 1966, when Indonesia, under its new leader Suharto (who had replaced Sukarno at the end of 1965 in the midst of a failed coup), suffering serious military setbacks, and without much international support for its cause, decided to explore diplomatic options in ending the *Konfrontasi*. Both Indonesia and Malaysia held peace talks, leading to the conclusion of the undeclared war with the signing of a peace treaty.[6]

The end of the *Konfrontasi* led to the formation of ASEAN in 1967.[7] It was initially formed as a regional organization to reconcile relations among three of its five pioneer members, namely Malaysia, Indonesia, and the Philippines, and serve as an important confidence-building measure. After learning lessons from the *Konfrontasi* and as a member of the newly formed ASEAN, Malaysia appeared to have shifted its foreign policy stance to neutrality and nonalignment. Malaysia realized that being too open against communism had resulted in Indonesian communists influencing Sukarno to intervene in Malaysia, which inadvertently led to the *Konfrontasi*. China, being a major communist power in the region at that time, had also openly opposed the formation of Malaysia by degrading it as a product of neo-colonialism manufactured single-handed by U.S. and British imperialism.[8]

The Vietnam War stalemate, the political and military setbacks suffered by the U.S., and the suspicions that the U.S. was becoming frustrated with the war and might pull out from its military commitment in Southeast Asia worried Malaysia. The announcement of the Nixon Doctrine at the end of 1969 vindicated fears in the region of being abandoned by the U.S. To secure itself from intervention by ideological powers and without a credible and powerful security ally in the region, Malaysia knew that it had to change its foreign policy posture and embarked on a new set of foreign affairs strategies that promoted itself as nonaligned in its foreign relations. Malaysia also actively sought to change the geopolitical dynamics

5 "Indonesia–Malaysia Confrontation."
6 Leong, "How 'Konfrontasi' Reshaped Southeast Asian Regional Politics."
7 "The Founding of ASEAN."
8 Leong, "A small state's foreign affairs strategy: Making sense of Malaysia's strategic response to the South China Sea debacle," pp. 392-399.

of the Southeast Asia region via ASEAN to portray the region as being neutral. By focusing on ASEAN's core principle of non-intervention in each other's internal affairs, mutual respect, and equidistance from both communist and Western powers, Malaysia hoped to buttress the region from threats of intervention by either power that may lead to proxy wars breaking out (at that point a number of proxy wars were being fought in parts of Africa, South America, and Asia).[9]

Malaysia joined the Non-Aligned Movement (NAM) in 1971 and officially declared that it was a non-aligned state during these precarious days of bipolar ideological rivalries.[10] Demonstrating its new nonalignment posture, Malaysia opened a diplomatic relationship with the Soviet Union in 1968, and later with China in 1974, even though Malaysia was still fighting a second, internal communist insurgency allegedly supported by both China and the Soviet Union! Although successful in signalling that it was a non-aligned state in the region, Malaysia still maintains close defence ties with Great Britain and a few Commonwealth allies via the Five Power Defence Arrangements (FPDA) — a loose consultative defence arrangement consisting of the United Kingdom, Australia, New Zealand, Singapore, and Malaysia, which replaced the AMDA in 1971.[11] Some British and Australian troops continued to be based in Malaysia. An Integrated Air Defence System (IADS) commanded by a senior Royal Australian Air Force officer, covering both Malaysian and Singaporean airspace, was also set up in Malaysia under the auspices of FPDA. The FPDA also allowed Malaysia, the United Kingdom, and Australia to have close defence cooperation amidst shared strategic interests.

This defence relationship is extremely important to Malaysia, as Australia has a formal security alliance with the U.S. through the ANZUS (Australia, New Zealand, United States) Treaty, which indirectly tied Malaysia's defence with the U.S. via Australia's commitment with the FPDA.[12] Australia reciprocally sees the importance of Malaysia's geographical location as a strategic buffer zone from security threats reaching Australia. Similarly, the United Kingdom's "special relationship" with the U.S., and its long-proven record of close collaboration in defence and security issues, augurs well strategically for Malaysia. The U.S. nexus for both of these FPDA members is important, as both the United Kingdom and Australia today lack adequate expeditionary military power to assist Malaysia. Although the FPDA is a loose consultative arrangement without formal alliance commitments, the perceived moral responsibilities of the United Kingdom and Australia, with their own defence ties with the U.S., to assist in the defence of Malaysia, had and will continue to deter would-be aggressors against Malaysia.

9 This paragraph builds on: Leong, "Malaysia's Seemingly Chaotic Foreign Policy Choices Make Strategic Sense."
10 "Non-Aligned Movement: The Uganda Chairmanship 2024-2027."
11 "Five Power Defence Arrangements."
12 "ANZUS Treaty."

Malaysia reshaped the strategic context of the region in the late 1960s and early 1970s by taking a lead role in forming ASEAN and joining NAM but still maintained discreet defence ties with Western powers. This indicated that Malaysia practiced dual strategies of selective alignment (instead of pure nonalignment) and strategic ambiguity. Selective alignment allows Malaysia to work closely with all parties for its own relative strategic advantage and spread its risks. Diversification of foreign relations is important for a small state, as it allows it to be more flexible, agile, robust, and to cope well with uncertainty—a key variable in strategy. Strategic ambiguity, a two-faced deception strategy, on the other hand, enabled Malaysia to appear to be working closely with all parties without being perceived as too biased to one side via its overtly publicized nonalignment foreign policy, but still keeping inconspicuous security ties with Western powers, which kept both allies and potential adversaries guessing whose side Malaysia is really with.

Malaysia's Contemporary Strategic Context

The Cold War history appears to be playing out again today in the region, with China's recent aggressive claims in the South China Sea and the U.S. moves to contain it. Malaysia is caught in a difficult position, as it is expected to choose sides. Malaysia, a small state - if measured by population size (32 million), GDP level (RM2trn [around USD500bn] in 2025),[13] and military power (total tri-service armed forces personnel at about 130,000) - when compared to both China and the U.S., has not much choice but to work closely with both parties for its economic survival as well as for its own security. Due to geographical proximity and phenomenal economic growth, China today is Malaysia's largest trading partner. Malaysia and the United States' bilateral trade in 2024 was valued at USD71bn and is Malaysia's third largest trading partner. Malaysia, however, has a close military relationship with the U.S., with frequent exchanges of military training, education, and joint exercises.[14]

The Malaysian armed forces received U.S. military aid during the Cold War, when the Malaysian armed forces were actively fighting an internal communist insurgency. Building on this long record of strategic cooperation, Malaysia has been wooed recently by the U.S. to play a more active and influential role in supporting the United States' grand strategy in pivoting back to the Asia–Pacific region. The United States aims to obtain Malaysia's backing in containing China in the South China Sea, as well as Malaysia's influence within ASEAN to gain support for U.S. strategic moves in the region.

13 "Gross Domestic Product."
14 Leong, "A small state's foreign affairs strategy: Making sense of Malaysia's strategic response to the South China Sea debacle."

Nonetheless, Malaysia's response thus far, has been extremely cautious and frustrating for the U.S. Malaysia's influence in ASEAN, even though it is one of the founding members with close rapport with all ASEAN member states, is limited due to ASEAN's way of making decisions by consensus and a multitude of conflicting national interests between its members. Myanmar, Laos, and Cambodia are strong traditional allies of China. Myanmar, facing the Indian Ocean, has no strategic interest in the South China Sea, nor does Laos, being a landlocked country. These states also strongly rely on China's benevolence for both political and economic survival. The ASEAN members with strategic interests in the South China Sea are themselves perpetually locked in rivalry and competition over overlapping claims in the South China Sea. Recent Chinese assertions in the South China Sea directly threaten both Philippine and Vietnamese claims. as China's maritime activities were closer to these two states' territorial waters and their respective maritime claims than Malaysia's own maritime waters and claims.[15]

Several ASEAN members are also entangled in various border and territorial disputes between themselves and had occasionally fought minor armed clashes in some of these disputed areas despite the Treaty of Amity and Cooperation in Southeast Asia (TAC) which renounced the use of force and settlement of disputes by peaceful means. Cambodia and Thailand, Cambodia and Vietnam, Thailand and Myanmar, Brunei and Vietnam, Indonesia and Malaysia, Singapore and Malaysia, and the Philippines and Malaysia have unresolved border and territorial disputes. With so many conflicting national interests and rivalries between the ASEAN members, it is not surprising that ASEAN could not produce a strong joint statement condemning China's aggressive actions in the South China Sea. Any proposed regional defence AI development will be hampered by these continuous strategic rivalries. Nonetheless, there are numerous ASEAN initiatives to address non-traditional security issues emanating from cyber and AI domains. This illustrates that that ASEAN member states are willing to collectively deal with cyber and AI-assisted criminal activities but cautious in building AI defence commitments.

Although there appears to be some contemporary interest among Malaysia's population in its foreign policies, the Malaysian domestic political environment continues to have little influence on foreign affairs, and foreign policy decision making continues to reside with the ruling political elite.

15 Ibid.

2.2 Core Policy Paradigms

Given Malaysia's geostrategic context and its strategic culture the country has come to embrace two core policy paradigms that shape its foreign and defence policy. Total Defence and the WOGOS approach respond to the complex security landscape that the armed forces need to deal with. In addition, a neutral and selective foreign policy is meant to help Malaysia steering through regional flash-points while ensuring its strategic flexibility. Both paradigms also shape Malaysia's approach to defence AI as the country avoids binding itself to only one strategic technology partner and wants to reduce dependence on foreign technology suppliers by slowly growing an indigenous digital technology base.

Total Defence(HANRUH) and WOGOS

Pertahanan Menyeluruh (HANRUH) or Total Defence is a Malaysian government policy formulated in 1986 to gel the people with the nation's defence where every-one in the society has a role to play in defending the country. HANRUH takes a leave from the successful security and development program conducted in 1974 as part of a wider counter-insurgency campaign in Sarawak known as RASCOM (Rejang Security Command). HANRUH has 5 pillars which are national vigilance, solidarity and unity of the community, public vigilance, economic fortitude and psychological resilience. HANRUH is envisioned to include all members of society, government ministries and agencies, private sector, security and enforcement units, and the Malaysian Armed Forces to defend Malaysia against all security risks which include both military and non-military threats. HANRUH, however, has not been implement-ed properly since its inception. Malaysia's DWP and the recently launched 2026 Defence Strategic Plan emphasize the need to revitalize HANRUH. HANRUH in its latest iteration has included cybersecurity resilience as one of its pillars and it is expected that AI will be part and parcel within the cybersecurity realm.[16]

However, HANRUH is embedded in a larger and broader national security concept known as Whole-of-Government-Whole-of-Society (WOGOS), first introduced by MINDEF in its 2020 DWP and has been used widely in numerous speeches by both the Prime Minister and Minister of Defence. This is in response to the increas-ingly complex Malaysian security context. Traditional military threats now intersect with non-traditional challenges such as pandemics, climate-induced disasters, cyber-attacks, disinformation, critical infrastructure failures and socio-economic vulnerabilities. No single ministry, agency or security actor can manage these risks in isolation. Recognizing this, Malaysia has adopted the WOGOS approach as a key principle in various policy documents,

16 Ibid., pp. 56-62.

Despite this policy recognition, WOGOS remains more a slogan than an operational reality. Cooperation among federal and state agencies, the private sector, civil society organizations and local communities is often ad hoc, personality-driven and project-based. Fragmented planning, overlapping mandates and limited information-sharing continue to undermine a coordinated response to national security risks. At the same time, fiscal constraints demand that Malaysia do "more with less", making cross-sector collaboration and shared resources a strategic necessity rather than a policy option. AI systems are expected to facilitate these plans as a cost-effective means to improve some of MINDEF and MAF staff working processes.

Neutral and Selective Alignment Foreign Policy

Amid intensifying great power rivalry and regional flashpoints such as the July 2025 Thailand–Cambodia border skirmish,[17] Malaysia is asserting itself as a credible and proactive middle power. Its chairmanship of ASEAN in 2025 has reaffirmed its long-standing foreign policy strategy of *selective alignment* - a pragmatic approach that allows Malaysia to build bridges between rival powers while championing ASEAN's relevance in an increasingly polarized global order. Through a principled and agile diplomatic strategy, Malaysia has positioned itself not only as a stabilizing regional force but also as a convener of inclusive dialogue and multilateral cooperation.[18]

Malaysia's leadership was further demonstrated during the 58th ASEAN Foreign Ministers' Meeting (AMM-58), held from 8 to 11 July 2025 in Kuala Lumpur. Against a backdrop of geopolitical uncertainty, the meeting advanced key regional discussions on the South China Sea, the internal crisis in Myanmar, and global economic disruptions such as escalating tariffs imposed by the United States.

Malaysia's selective alignment strategy enables it to maintain constructive ties with all major powers while avoiding rigid alliances. As a middle power, this approach enhances Malaysia's credibility, allowing it to engage across geopolitical divides with strategic flexibility. The strength of selective alignment lies in its strategic ambidexterity. Malaysia is not bound by binary choices and can build cooperative ties with diverse partners even amid global uncertainty. This approach proved effective during the Cold War, when Malaysia maintained strong economic and defence relations with Western powers while simultaneously engaging the Soviet Union and becoming the first ASEAN member to establish diplomatic ties with China in 1974.[19] Today, that same policy posture enables Malaysia to navigate complex

17 This simmering conflict erupted into a four-day confrontation in the Emerald Triangle. In its role as ASEAN Chair, Malaysia swiftly emerged as a key diplomatic actor that helped mediate a ceasefire on 28 July 2025.
18 Leong, "Is the South China Sea fracturing ASEAN?"
19 This is the author's assessment of Malaysia's foreign policy strategy. See: Leong, "Bridging Powers, managing tensions"

dynamics involving Washington, Beijing, and Moscow. Its long-standing defence relationships with the United Kingdom, Australia, and New Zealand - sustained through the Five Power Defence Arrangements (FPDA) and indirectly connected to the United States via the Bilateral Training and Consultative Group (BITACG), coexist alongside active bilateral ties with China and Russia.[20]

Malaysia's selective alignment foreign policy strategy offers a compelling model for middle power diplomacy in the Indo-Pacific. By mediating conflicts, managing tensions, and building inclusive coalitions, Malaysia is strengthening its international standing and reinforcing ASEAN's strategic relevance while safeguarding its own national interests. As its ASEAN chairmanship continues, Malaysia's role as a bridging power is set to grow - offering the region a steady hand amid a volatile and divided global landscape.

2.3 Capstone Documents

Several capstone documents encapsulate Malaysia's thought and policies on defence AI. In recent updates of key defence documents, AI has been included as new technologies and knowledge to be utilized to defend Malaysia. Other supporting national AI documents have also been released but focuses on the civilian sectors and does not mention defence in these documents. The reflects the separation of defence and civilian policy making and priorities although paradoxically, the government promotes a WOGOS approach for security and defence.

Malaysia's Defense White Paper

Malaysia's inaugural Defence White paper was drafted in 2019 and approved by the Malaysian Parliament at the end of the year. It was published as an open document in 2020.[21] The Defence White paper has laid out some key military capabilities and technologies that will be acquired between 2020 and 2030, which include sophisticated cyber defence tools. Among its key features are the framing of the three pillars underpinning Malaysia's defence strategy remain intact which are concentric deterrence, comprehensive defence and credible partnerships. Concentric deterrence requires extensive funding to build the capabilities of the Malaysian Armed Forces, envisioned to take more than two more decades to attain an aspired fully modernized joint fighting force dubbed as the Future Force between 2050 and 2055. Comprehensive defence will require a WOGOS approach, which

20 Ibid.
21 "Defence White Paper."

demands political willpower, policy direction, legislations and time to build and implement a national WOGOS strategy.

Of the three strategic pillars, the third – credible partnerships – is plausibly the most potent, and attainable, defensive means for Malaysia. The credible partnerships strategy involves various existing bilateral and multilateral initiatives such as the Five Power Defence Arrangements (FPDA), ASEAN Defence Ministers Meeting (ADMM) platform, and the United States's International Military Education and Training (IMET) program as well as various other defence diplomacy mechanisms.

Defence AI and Midterm Review of Defence White Paper

The much-anticipated Midterm Review of Malaysia's inaugural Defence White Paper was launched on 11 September 2025 by Defence Minister Mohamed Khaled bin Nordin. In his speech, he touched upon a few strategic highlights of the Midterm Review, including the ever evolving and changing nature of warfare and the need for the MAF to acquire the latest technologies, including AI tools.[22]

AI is now widely used for military operational and logistics planning, intelligence collection and analysis, and in weapons' guidance systems. AI is also envisioned to be used in the electromagnetic aspects of Network-Centric Operations and the MAF's joint command, control, and communications.

National Cybersecurity and AI Policy Frameworks

Malaysia has developed and published the Cyber Security Act 2024 (Act 854) on 26 June 2024. The Act will entail the establishment of the National Cyber Security Committee and functions in managing cyber security threats and incidents. This is a major milestone for Malaysia in legislating actions to protect national security interests emanating from the cyber and digital domain.

The Malaysian government recognized the importance of AI in the future and has initiated the Malaysia National Artificial Intelligence Roadmap 2021-2025 (AI-RMAP), which laid the strategic framework for the development of AI in terms of usage, technology development and futuristic development.[23] This is an important strategic plan not just to adapt and adopt the usage of AI but also to build Malaysia's own indigenous AI technology.

However, as AI usage expanded, the various security risks associated with AI started to crop up and intensified exponentially. The growing role of AI and its

22 "Midterm Review of Defence White Paper."
23 "ASEAN Guide on AI Governance and Ethics."

related ethical and security risks prompted the Malaysian government to study the matter seriously. In September 2024, the Malaysian government launched the National Guidelines on Artificial Intelligence Governance and Ethics (AIGE) as a strategic measure to ensure safe, ethical and responsible usage of AI.[24] The AIGE also serves as an important step to mitigate AI associated risks. The AIGE serves as the foundation for all public and private sectors to build their own AI ethics and governance policies.

As Malaysia places strong emphasis for regional cooperation to build peace, stability and development with ASEAN, it is not surprising that ASEAN has also launched its own ASEAN Guide on AI Governance and Ethics in 2024 coinciding with Malaysia's own AI-RMAP and AIGE. The ASEAN Guide on AI aspires to streamline regional cooperation in managing AI ethics and governance and mitigating AI risks. Due to the transboundary cyber connections in the Southeast Asia region, any AI security issues will be easily transmitted regionally. ASEAN's urgent response to address potential AI issues via the ASEAN Guide on AI is noteworthy as ASEAN is known for its slow reactionary response and decision. The ASEAN Guide on AI intends to empower ASEAN Member States's government and private sectorial response and responsible usage of AI. In addition, Malaysia also participated in the 2024 Responsible Use of AI in the Military Domain (REAMI) summit in Seoul. There, Defence Minister Datuk Seri Mohamed Khaled Nordin called for an "international framework (to) address potential biases in defining what constitutes ethical and responsible AI use in the military sector." He also warned should such a framework not be inclusive and universal, "a biased, exploitative, and harmful ecosystem" would arise.[25]

National Defence Industry Policy

Malaysia's defence policy has long been underpinned by the strategic need to be self-reliant with indigenous niche defence equipment. Both the 2020 DWP and the 2025 Midterm Review have stressed on the development of policy guidance for utilizing local defence industry to bolster the innovation and acquisition of locally built products for the Malaysian Armed Forces. The Minister of Defence, on 12 January 2026, in his New Year Address has also reiterated the continued importance of supporting and developing our local defence industry to meet niche equipment demands from the Malaysian Armed Forces as a precursor to the launching of the National Defence Industry Policy (DIPN) on 22 January 2026. The policy drives Malaysia's local defence industry forward in a more sustainable manner with better governance. The DIPN aspires to build the defence industry as an economic growth driver, enable local supply chain sustainability, develop

24 "National Guidelines on Artificial Intelligence Governance and Ethics."
25 "International framework needed for ethical AI military use, says Mohamed Khaled."

game changing technologies, innovate the transformation of defence technology and foster good governance. AI defence technology is also stated as one of the main technology niche areas that will be prioritized for indigenous development.[26]

National Strategic Defence Plan (2026-2030) and Defence Capacity Action Framework (2026-2030)

The *Pelan Strategik Pertahanan Negara (2026-2030) (PSPN)* (National Strategic Defence Plan (2026-2030)) and *Rangka Tindakan Kapasiti Pertahanan (2026-2030) (RTKP)* (Defence Capacity Action Framework 2026-2030) was launched on 25 June 2026.[27] Both of these strategic plans outline the defence planning for Malaysian Armed Forces focusing chiefly on the building of manpower knowledge, skills and welfare of personnel. In both documents, the need to include AI for future defence technologies such as in command-and-control (C2) systems, and in countering unmanned aerial platforms were emphasized. The RTKP also included a section on building future defence technologies locally via indigenous scientists and research, and AI was included as one of the niche areas for local defence industries to focus on.[28] These policy plans continue the trajectories of earlier defence policies on the importance of incorporating defence AI in future capability building plans. Nonetheless, the documents did not provide any timelines or action plans to operationalize these intentions and serve more as policy statements. The documents also make no reference to the funds to be made available for defence AI.

2.4 Defence AI in Senior Leaders' Official Statements

Anwar Ibrahim, the Prime Minister of Malaysia, has been one of the key advocates to turn Malaysia into a major regional AI powerhouse. During his term, a few tech giants such as Microsoft announced plans to set up AI centres in Malaysia. In his meeting with NVIDIA CEO, Jensen Huang on 31 October 2025, Anwar has announced a joint collaboration between Malaysian company YTL Power with NVIDIA to build an AI centre in Kulai, Johor. Anwar has also announced that by 2030, Malaysia will be the regional leader in AI technologies.[29]

Malaysia aspires not just to have international AI centres located in Malaysia, but also technological development of AI software and hardware in Malaysia as well as locally built microchips and superchips for AI programs and centres. In building local AI centres, Malaysia will also focus on the usage of clean and renewable

26 "National Defence Industry Policy."
27 Pelan Strategik Pertahanan Negara 2026-2030.
28 Rangka Tindakan Kapasiti Pertahanan 2026-2030.
29 Choy, "YTL Power completes first Nvidia-powered AI data centre in Johor, YTL AI Cloud now operational."

energy to power the AI centres. All these augurs well for Malaysia's defence AI. For AI to be used in defence and military purpose, it is better to have indigenous technologies supported by local expertise to protect data security and get accurate AI analysis as opposed to foreign-based AI tools as information shared and used may not be secure and analytical responses may be covertly controlled and tailored by foreign interference. Malaysia as a neutral middle power having its own proprietary AI systems especially for the defence sector will ensure that it will not be held hostage or disrupted in its utilization of AI during crisis or conflict.

Echoing the Prime Minister's strategic ambition, then Chief of Army Tan Sri Muhammad Hafizuddeain Jantan also argued in 2025 that AI plays a key role in the MAF's ability to innovate and strengthen its military force. He particularly emphasized the need to develop data-driven doctrine and training and highlighted the role of AI in inspection and evaluation systems, asset management and predictive maintenance as well as operational decision support with the help of smart analytics. Overall, he said, "AI is not just a tool that makes tasks easier, but a catalyst for increasing efficiency, conserving resources, and saving lives.[30]

Building on Malaysia's risk-conscious approach, Royal Malaysian Navy Chief Admiral Tran Sri Zulhelmy Ithnain struck a cautious note in a July 2026 interview with the New Strait Times. He left no doubt that the Navy is pursuing technology-driven systems "as an enabler through human-machine integration, not replacement." While AI can accelerate decision-making and enhance situational awareness, Admiral Zulhelmy argued, "it cannot substitute judgment, intent or legal and ethical responsibilities." Against this background, the Navy is primarily looking at AI as a "decision-support tool, initially focused on enhancing maritime domain awareness through advanced data fusion and anomaly detection." Cognizant of the country's strained fiscal condition, the Navy Chief also portrayed AI as a technology that can "provide asymmetric advantages without attempting to match costly high-end capabilities that may be financially unsustainable."[31]

2.5 Discourses on Concerns Regarding Current and Future Defence AI Applications

The advent of AI is also fraught with both real and potential strategic risks. The emergence of AI technology is in many ways a double-edged sword. On the one hand, AI promises excellent potential for driving advanced decision-planning sys-

30 "Army chief: AI must drive military transformation to meet modern warfare demands."
31 Nizam, "Navy sails on despite ageing fleet."

tems, precision-guided systems such as drones, intelligence collection and analysis, military education, logistics and cyber defence. In the civilian sector, AI may be used to augment economic growth, enhance educational learning experiences, and automate various office functions, optimizing productivity.

On the other hand, it also offers new ways for security threats to emerge, which traditional mechanisms may be ill-equipped to counter. There are three AI-enabled potential threats which may emerge: First, AI can be used by terrorists to conduct automated terror attacks, plan attacks, cover their tracks, and widely publish what they did to a global audience. Second, maritime pirates may use AI-enabled tactics to hijack merchant ships, use AI-controlled autonomous vessels or unmanned drones to conduct reconnaissance missions or even assault crews. AI-enhances malware could also corrupt a ship's digital onboard systems. Finally, there is a more existential concern related to "AI singularity"[32] as a threat to human mankind.[33]

With these three potential threats posed by AI, it is both timely and crucial for the MAF to acquire and utilize latest AI technologies and build the know-how in operating these systems, learning how potential adversaries may use it for nefarious purposes and ways to counter these threats, and how AI itself may pose a national security threat. The MAF must prepare itself to detect, deter, and destroy these new threats. The reiteration of the importance of acquiring AI technology in the Midterm Review of the Defence White Paper will provide the impetus for the MAF to strategically enter the important, albeit paradoxical, AI field.

32 Sexton, "What is the Artificial Intelligence Singularity?"
33 For more, see: Leong, "AI in the Battlefield."

3 Developing Defence AI

At the national level, AI is featured dominantly as a future techno-economic instrument that can boost Malaysia's economy. AI tools are also encouraged to be used to enhance productivity and enable some key sectors to operate automatically such as in the manufacturing sector. The government service including the higher education sector are using Gemini Pro as their main AI tool to facilitate daily operations, research and learning.[34] All these AI initiatives point to Malaysian government's seriousness in embracing AI in its national policy agenda. Not surprisingly, various statements of intent for AI to be incorporated in the defence sector, has been included in recent defence policy documents as stated in Section 2.3.

3.1 Priorities

The DWP 2020 envisions the MAF to be fully modernized, equipped and operational by 2050. Each of the Malaysian Armed Forces services has its own individual capability-building plans – The Malaysian Army with "Army4NextG" (in the process of being updated to a new strategic building plan), the Royal Malaysian Navy with "Plan15to5," and the Royal Malaysian Air Force with "CAP55." All the three services' plans will build a Future Force that will be integrated to operate jointly. One key joint enabler is the acquisition of joint networking systems for seamless C5ISR operations with AI included.[35]

As indicated earlier, the MAF is looking to acquire sophisticated AI defence technologies for the short term and jointly develop its own technical expertise to innovate and build local AI defence tools and systems for mid- and long-term use. Developing indigenous AI systems is important to support Malaysia's self-reliance defence policy to be able to build and operate its own defence AI systems to cut down foreign technical dependency and ensure sovereign utilization of AI.

The MAF is in the process of realigning its Future Force plan with the inclusion of new and emerging technologies. These new technologies will change the tactics and operational concepts currently used by the MAF and influence the development of new joint warfighting doctrine in the MAF's refreshed and upcoming Future Force plan. As part of the Future Force, a Cyber Electro Magnetic Command will be fully developed, which is envisioned to have full operational capabilities staffed by proficient cyber-digital and AI experts by 2030.[36]

34 Basrin, Olivia, "Enabling Gemini for education across all Malaysian public universities."
35 Defence White Paper, pp. 44-54.
36 "Cyber and Electromagnetic Defence Command to be set up."

Currently, most of Malaysia's defence research and development activities are directly related to ongoing procurement projects (Section 3.3). This is important to understand as the prime platform modernization initiatives also provide an inroad for (foreign) AI solutions into Malaysia's defence AI ecosystem. Embedding the development of AI solutions within these procurement programs also makes it difficult to identify the MAF's true AI R&D priorities as the procurement programs set the pace. Nonetheless, publicly available information suggests that the MAF is mainly focusing on developing AI for cyber and information security, decision support and mission planning, electronic warfare and electronic intelligence, simulation and synthetic training environments as well as exploring AI-enhanced approaches to swarming.

3.2 Domestic R&D Actors

There a few notable domestic defence companies focusing on building defence AI tools in partnership with foreign companies such as Havelsan from Türkiye. This is a critical and urgent step towards building indigenous AI defense systems by developing local expertise while working with foreign partners and through contractual transfer-of-technology obligations until Malaysia can develop its own proprietary AI systems.

A Malaysian government-owned company, MIMOS International Venture Berhad (MIVB), subsidiary of MIMOS Berhad, a company under the Malaysian Ministry of Finance Incorporated and also an agency under the Malaysian Ministry of Science, Technology and Innovation (MOSTI), will cooperate with Havelsan to co-develop a robust Malaysian national ecosystem dedicated to localized foundational AI for defence. The deal was announced during DSA 2026 in Kuala Lumpur.[37] Nonetheless, the amount and the timeline of the cooperative effort has not been publicly disclosed.

The National Defence University of Malaysia (NDUM) is also conducting research and development on AI systems for both security and defence agencies under its flagship think tank, the Sultan Ibrahim Centre for Research and Innovation (PaKSI). Core areas of research include using AI for C6 ISR nodes and integrating various ISR sensors and drones for information analysis and decision-making advisories. NDUM works closely with the Ministry of Defence's Science and Technology Research Institute for Defence (STRIDE) as a key partner in research, development and innovation of defence technologies including ammunition, weapons sensors

37 "MIVSB and HAVELSAN Forge Strategic Partnership to Launch Foundational AI Ecosystem."

and AI. PaKSI's Centre for Defence and Strategic Studies (CDeSS) runs cooperative programs with the Malaysian Institute of Defence and Security (MiDAS), a think-tank under the Ministry of Defence, for policy and strategy-oriented research and publications, which has covered AI as of recently.

Malaysia's defence AI ecosystem is developing at several levels. Established defence companies such as DEFTECH[38] and Sapura Defence are well placed to integrate AI into MAF C2 systems, communications networks, and cyber-digital operations. Mid-tier specialists such as G3 Global could also provide more focused digital and AI capabilities for MAF. Sapura Secured Technologies, an established local defence contractor, has built its own proprietary V-ATTACK platform for AI-enabled cyber defence.[39] Another local defence company, Aerodyne Group, is also applying computer vision, machine learning, deep learning, cloud computing, and thermal sensing in the development of its UAVs, including nested and swarm-drone systems designed for sophisticated ISR missions.[40] DreamEdge Sdn Bhd's work on AI-enabled unmanned ground vehicles (UGV), which autonomously conduct obstacle avoidance and pathfinding, could create longer-term spill-over opportunities in areas such as military logistics, reconnaissance, and operations in hazardous environments such as mine-clearing missions.[41] In collaboration with STRIDE, DreamEdge has produced an UGV prototype, Kawbra unveiled in DSA 2022.[42] These indigenous AI enterprising projects are well positioned to support future locally sourced defence AI systems and platforms for the MAF.

3.3 International Procurement

Currently, defence procurement projects in cooperation with international partners are the primary inroad for AI to reach Malaysia's armed forces. In most cases, Malaysia's offset requirements also foresee 30% local content requirements that can be met via research and development projects.

In general, MAF has used FireEye (now known as Trellix) cybersecurity solutions for protecting its computers and networks. Trellix also runs AI powered cyber security solutions, capitalizing on AI for threat analysis and building counter measures. In this aspect, the MAF is using AI as part of its broader cyber electromagnetic tools for security and threat intelligence gathering and analysis.

38 For more information, see: https://www.sapuratech.com.my/ (last accessed 31 August 2026).
39 "Sapura Debuts Sovereign AI Defence Systems."
40 "Coordination intelligence for teams of uncrewed aircraft." For more on the company, see also: https://aerodyne.group/ (last accessed 31 August 2026).
41 For more information, see: https://www.dreamedge.jp/ (last accessed 31 August 2026).
42 "The Kawbra is a Locally Made Unmanned Ground Vehicle."

To advance its defence AI capabilities, the MAF has reached out to different international partners:

- Turkish defence company Havelsan has been contracted to team up with MAF and local vendors to bolster MAF's cyber and AI defence tools and systems. Local companies such as System Consultancy Services (SCS) and AI start-ups such Zetrix and Aonic, will most likely serve the AI defence needs for the MAF in the near future as the Malaysian government wants to increase the percentage of indigenous content and support for defence self-reliance.[43]
- Havelsan and Malaysia's MIMOS International Venture agreed to expand the local AI ecosystem by signing a memorandum of understanding to localize foundational AI for defence.[44] In addition, Aselsan and Sapura Secured Technologies agreed to strengthen "Malaysia's technological sovereignty in critical areas, including Software-Defined Radio technology and AI."[45]
- South Korea is one of Malaysia's largest arms suppliers mainly providing the country with FA-50M light combat aircraft. These aircraft are being equipped with modern sensors and data links, which could provide the foundation for AI-related work on avionics and sensor data fusion.[46]

After delivery of the first two Maritime Patrol Aircraft (MPA) for the RMAF at the end of 2026 and early 2027, the MAF intends to procure additional MPA. Additional MALE UAS may be procured from Türkiye after three Anka MALE UAS were delivered in 2026.[47] The Anka drones are optimized for ISR roles and MDA operations. The upcoming MALE UAS will be equipped for combat missions. AI systems will be used to analyse the Information and data gathered from the Anka UAS and for rapid decision making and prioritization of responses.

The RMN has procured 5 LCSs with the first one slated for delivery at end of 2026. The LCS program is marred by the reneging of Norwegian Kongsberg's contract to supply Naval Strike Missiles (NSM) for the LCSs. The contract was signed in 2018, and the Malaysian government has paid 95% of the NSM's costs. This incident reflected on the reliability of European countries to sell and deliver arms and the morality of simply reneging contractual obligations without fair warning period and offer to repay costs and damages. Any future defense AI procurement from NATO member states will most likely be subject to more stringent political risks assessment by Malaysia.

43 "SC Systems."
44 "MIVSB and Havelsan Collaborate to Advance Globally Competitive DeepTech Capabiities through a Foundational AI Ecosystem to be Jointly Developed."
45 Mahari, "Sapura, Aselsan partner to strenghten Malaysia's defence technology capabilities."
46 "Malaysia opens talks with KAI on KF-21 Boramae as Second FA-50M batch enters discussion."
47 "RMAF strengthens South China Sea surveillance with drones and new patrol aircraft."

Malaysia's reliance on defence solutions originating from many different countries also raises long-term challenges for the interoperability of the armed forces to conduct joint network-centric operations. So far, however, advancing inter- and intra-service interoperability with AI is not yet on the country's defence AI agenda as it focuses first in building a joint fighting force.

4 Organizing Defence AI

The Malaysian government has announced initiatives to advance the country's AI-relevant institutions. The government also welcomes the contribution of foreign companies to advance Malaysia's digitalization with data centres, microchip production, and rare earth extraction as key priorities.[48] However, most of these plans focus on the civil sector and adjacent industries to drive Malaysia's economic development. Not much has been stated on how the domestic AI industry will be utilized for the defence sector.

4.1 Defence and Malaysian Armed Forces Sector

The MAF has formed a Cyber and Electromagnetic Command (CEMA) in November 2025 that oversees all joint cyber, digital, electromagnetic and AI warfare.[49] The Command is building capabilities, doctrine and both tactical and technical skills to fight in a modern digital battlespace. The Command is part of MAF's Future Force component integrating all cyber, AI and digital tools across all services and serve as the joint cyber digital AI force. Just before the launch of the CEMA Command Adly Zahari, Deputy Minister for Defence, stated in the *Dewan Rakyat*, Malaysia's Parliament, that AI will be used in joint military surveillance, cyber defence, intelligence systems, drone operations, smart weapons, communication systems, training simulators and logistics management.[50] So far, however, the CEMA Command is still in its infancy stage, and as detailed in earlier sections, will work with both foreign and local AI companies to serve current and near-term defence AI needs before Malaysian defence AI companies are able to produce world-leading defence AI tools and systems. Although AI is not included in CEMA's moniker, defence AI is expected to be included as one of its responsibilities.[51]

4.2 Civil Security Sector

At the national level, the National Cyber Security Agency (NACSA) established in 2017 serves as the national lead agency for cyber security matters, with the objectives of securing and strengthening Malaysia's resilience in facing the threats of cyber-attacks, by coordinating and consolidating the nation's best experts and resources in the field of cyber security.[52] NACSA also develops and implements

48 "Microsoft announces US$2.2 billion investment to fuel Malaysia's could and AI transformation;" "Advancing Malaysia Together: Google announces US$2 billion investment in Malaysia, including first Google Data Centre and Google Cloud Region."
49 Azmi, "Malaysia to establish dedicated cyber force to tackle evolving warfare threats."
50 "AI, drones, cyber warfare: Malaysia's Armed Forces cyber command goes 'live' this December."
51 "Security by Algorithm?"
52 "NACSA: National Cyber Security Agency."

national cyber security policies and strategies as well as protecting critical national infrastructure from cyber-attacks. It is expected that NACSA will collaborate closely with MAF's CEMA Command to build centralized defence AI and AI security systems and solutions as well as policies, strategies and procedures to deal with national AI security crises emanating from domestic and external actors.

NACSA also serves as the central command, control and coordinating agency for mitigating and managing cyber security risks in Malaysia. AI generated security threats are also tackled by NACSA, while AI generated defence threats, especially from foreign adversaries, is expected to be jointly managed with the MAF CEMA Command.

Malaysia also has two other government agencies dedicated to the coordination and monitoring of ethical AI development and usage. The *Jabatan Digital Negara* (National Digital Department) oversees the digitalization of government service and the ethical development and implementation of AI adaption in the public sector, which includes all government ministries and agencies. It is expected that some jurisdiction over the MAF is included but the more secretive nature of defence AI will be monitored exclusively by the MAF.[53] The National AI Office (NAIO) developed and enforces the AIGE (see Section 2.3) and supports the ethical development and adaption of AI in Malaysia. NAIO also monitors both public and private sectors' utilization of AI adhering to accepted ethical standards.

53 "JDN's Artificial Intelligence (AI) Initiative."

5 Funding Defence AI

Not much is stated in Malaysia's annual defence budgets on AI investments. However, given the emphasis on defence AI in numerous new policy documents and statements by the Minister of Defence, we may see more dedicated budget allocations for acquiring defence AI tools to be announced in upcoming annual defence budgets.

The annual average defence budget for the MAF and MINDEF hovers at just about 1% of GDP at an estimated USD4.8bn.[54] This amount pales in comparison to other middle powers in Asia when considering the budget has factored in both operational expenditure (OE) and development expenditure (DE). The OE takes a huge share as it is used to pay for maintenance and repairs of assets, personnel pay and welfare, maintaining and building barracks and both MAF and MINDEF buildings, and numerous other OE items. The DE is to procure new assets and systems. The 2026 US-Israel-Iran War and its impact on global economy is felt in Malaysia as the government has announced some austerity measures to trim down some of the ministries' 2026 budget. This may impact future MAF procurement plans and modernization efforts including the acquisition of AI technologies. It is likely the Malaysian defence budget will stay at around 1% of GDP due to economic constraints and the lack of a tangible push from Malaysian politicians to increase defence spending.

Malaysia's budget for big item purchase is laid out in 5-year plans. The latest plan known as *Rancangan Malaysia Ketiga Belas* (RMK13) for 2026-2030 includes the following major MAF procurement projects:[55]

- The Malaysian Army has earmarked around USD390M for 16 projects, including short-range air defence systems, tactical communication systems, mobility assets, weaponry, and specialized equipment. No specific details were provided but the projected equipment acquisitions are expected as modernization efforts and to replace older equipment as opposed to expansion of offensive capabilities.
- The Royal Malaysian Navy has earmarked a total of $685 million for procuring two MRSS, SSM launchers and training system, among other non-specified items.
- For the Royal Malaysian Air Force, a sum of USD750M has been apportioned to acquire two Medium Range Air Defence (MERAD) batteries and a mid-life upgrade (MLU) project for its squadron of EC725AP helicopters.

54 "Malaysia Military Spending."
55 Abas, "Armed Forces Procurement Focus for 2026 and RMK13."

However, there is no special mention of any defence AI systems procurement under RMK13. As with all new weapons platforms, AI is expected to be integrated in C2 network systems, decision making process and maintenance diagnostics. This points to the acquisition of defence AI systems and tools via platform procurements rather that a dedicated defence AI procurement track

6 Fielding and Operating Defence AI

The MAF is aware of the importance of AI technologies for future warfare. Lessons learnt from the Russian-Ukraine War and the 2026 US-Israel-Iran war has generated strong interest in the utility of AI in modern warfare context. The MAF has announced various plans to incorporate AI in its defence strategy and technologies but has remained rather mute on how the MAF will acquire and operate dedicated defence AI. Hence, it is expected that the MAF will adopt some of the AI attributes in its Future Force and planned acquisition of AI assets.

Doctrinal adaptation is becoming increasingly relevant as several ongoing procurement projects involving international defence partners will further the MAF's exposure to AI as part of newly acquired platforms, not stand-alone AI applications.[56] While official conformations are lacking or remain vague it is fair to assume that AI to advance decision support, modernize battle/combat management systems, improve data analytics, data management, and predictive maintenance as well as enhance target identification and classification constitute the priorities.

6.1 Malaysian Army

The Malaysian Army has announced in 2026 that it will be acquiring 18 Caesar SPH from France and plans to procure utility helicopters, 36 new 105mm guns (to augment 18 French Nexter LG1 Mk III 105mm guns acquired in 2018), short range-to-medium range anti-aircraft missiles, man portable anti-aircraft missiles, ground targeting radars, small and medium sized tactical drones, and medium range air defence radars.[57] It is expected that the Malaysian Army will integrate these assets via a C6ISR network for collecting information, analysis of information, decision making, communication and deployment of precision force and fires. AI is expected play a role in automating some of the functions, providing computational and data analysis, and enable faster and reliable decision-action cycle loops.

6.2 Royal Malaysian Air Force

The RMAF will be incorporating its three new Anka MALE UAS delivered in 2026 for C2 and data analysis. It may also use AI to integrate information fusion and decision making through its network of new assets that has been deployed or will be delivered soon, namely 18 LCA/FLITs in the form of FA-50s from South Korea, and 2 ATR-72 MPAs for joint seamless multidomain awareness missions and targeted action.

56 With this, the MAF follows a "learning by procuring" approach as discussed by Borchert, "The Very Long Game of Defense AI Adoption: Introduction," p. 26.
57 "Here comes the boom: Malaysia inks deal for France's Caesar mobile artillery and local tech transfer."

The RMAF plans to procure its second batch of another 18 LCAs after the first batch has been delivered, additional MALE UAS, two more MPAs, and a battery of MERADs together with supporting radars. It is envisioned that these assets will bolster RMAF's integrated air defence system (IADS) and AI will mostly likely be included as a technological force multiplier. However, there are no official statement on how AI may be incorporated, but it can be safely assumed that to be able to operate in a modern (and future-ready) threat environment, AI is expected to play a major role in RMAF's IADS network of systems.

6.3 Royal Malaysian Navy

The RMN has procured its LMS Batch 2 with 3 *Ada* class corvettes built by STM in Türkiye. These new vessels may include some AI for its CMS system, machinery diagnostics and data analysis from its multidomain sensors and joint integration with other RMN vessels and RMAF platforms.[58] The French *Gowind*-class frigate was selected as the base model for RMN's LCS program and will be armed with anti-surface, anti-submarine and air defence warfare capabilities, and capable to conduct littoral maritime security missions also. The lead ship was officially named KD *Maharaja Lela* in 2017, which serves as the name of the entire class of RMN LCSs. The five new *Maharaja Lela*-class LCS being built is expected to be operational between the end of 2026 and mid-2029. AI technology is expected to be included in some of its operating technologies, if not equipped now but later when the LCSs return to dock for system upgrades. The RMN is also looking to procure two MRSS in the near future with final selection of model and decision expected to be announced by end of 2026.

The sour NSM debacle will pose serious questions about the reliability of working or acquiring defence technologies from Norway and perhaps also other Western European countries in the future, not just for Malaysia but other Asian countries as well, if defence contracts can simply be cancelled without ample warning, reasonable excuse, and immediate offer for monetary compensation. This painful lesson may lead Malaysia to act more cautiously when considering engaging with Western European partners on defence AI in the future. Türkiye, by contrast, may benefit as the country maintains a balanced trade relationship with Malysia and has been a reliable defence partner.[59]

58 Turkish defense company Havelsan will be assembling the CMS systems. Although not publicly announced, some AI functions will most likely be included in the CMS. Havelsan has also just launched its ADVENT-AI CMS at SAHA Expo in May 2026, pointing to Havelsan's ability to incorporate AI tools in its proprietary CMS. See Ozberk, "HAVELSAN Unveils ADVENT-AI Combat Management System at SAHA 2026."

59 Both Malaysia and Türkiye have announced creating a formal platform (to be named as the Policy Talk) to strengthen defence cooperation and address emerging geopolitical and regional security issues. See: "Malaysia, Türkiye launch formal platform to boost defence ties."

7 Training for Defence AI

Defence AI is conducted by each MAF service focusing on service-specific needs. At the joint headquarters level, the CEMA Command provides training and short course on AI especially in awareness of cyber-attacks enabled by AI and how to respond. The MAF's service colleges – the National Resilience College (NRC), the Malaysian Armed Forces Defence College, and the Malaysian Armed Forces Staff College – individually conduct short course on AI technologies for both academic research use and operational environment. With the fast and evolving use of AI in modern context, the MAF is expected to push for more advanced levels of AI training and adoption of new AI tools in its training and education establishments.

In addition to professional military education, AI is also incorporated in military training and exercises including with foreign partners. For examples, AI may have been used to assist in battlefield scenario planning during FPDA's Exercise *Bersama Shield* as well as in its cyber defence components. In Exercise *Bersama Lima*, an information operations network was included for the first time, which was used to generate both real and fake news for added realism in the training. Although not specifically mentioned, AI may have been used to produce simulated information operations.[60] MAF personnel involved in Southeast Asia Cooperation and Training (SEACAT) 2025, were exposed to the SeaVision tool, which has some AI-enabled algorithm to analyse and monitor sea traffic.[61]

The MAF is also expected to increasingly upgrade its war simulators with AI tools to design combat scenarios and run simulated tabletop exercises. The National Resilience College (NRC) in PUSPAHANAS - its senior professional military college for brigadier generals, colonels an equivalent senior government officers – has also included sub modules on the development of AI in the security and defence sectors as well as regulatory and ethical issues. This included the invitation of distinguished guest speakers from cyber security and AI sectors to share their knowledge and experience to NRC course members.[62] The Malaysian Armed Forces Staff College is also embarking on AI assistance for daily administrative and staff work, and ethical AI usage in research. Both Colleges are academic partners with the NDUM, which has also setup its own Centre of Excellence for AI and Cybersecurity under PaKSI in 2026. This centre is likely to play supporting roles for the MAF to collaborate in cyber and AI capacity development, research and development of defence AI tools, and education and training of AI with the support of the Minister of Defence.[63]

60 "Information operations unveiled at Bersama Shield."
61 "SEACAT 2025 concludes, reinforcing maritime security efforts among allies, partners in Southeast Asia."
62 See LinkedIn post by Segaran, Darmain, "Malaysia's Journey in Artificial Intelligence: Potential and Challenges in Science, Technology and Innovation (STI)."
63 Zolkepli/Hack, "M'sia boosts digital defence with cyber command, specialist regiment."

8 Conclusion

Malaysia's unique strategic culture, history, geopolitics and strategic context will lead its defence AI capability and capacity building plans. Malaysia understands that AI poses immense potential as an economic engine and to create jobs. AI is also expected to advance productivity and facilitate the conduct of difficult tasks more efficiently. Malaysia already has reputable computer systems, cyber technologies, and an emerging AI ecosystem consisting of local champions and foreign partners that have been operating in the country for a long time. The Malaysian government also promotes and supports technology start-ups such as AI developers to build and grow their businesses. This points to a targeted approach to build a formidable computer, digital, cyber and AI economic sector, which the Malaysian government supports through simplified business regulations, targeted subsidies and infrastructure support.

We can expect AI to be integrated into the MAF primarily via existing procurement programs executed in cooperation with foreign partners. Numerous policy documents emphasize AI's strategic role and provide the basis for the MAF to gradually warm up to the technology. Overall, public statements by senior defence leaders make it clear that the MAF is not looking for quick and disruptive gains when adapting AI. The armed forces prefer a pragmatic step-by-step approach that is meant to generate concrete added value, for example to augment situational awareness, advance predictive maintenance, or improve data management and cyber security. The MAF are thus looking for specific use cases to underline the benefits of AI for the military services instead of announcing shiny programs with big fanfare but doubtful benefits.

Malaysia also strongly emphasizes the ethical use of AI as spelt out in its AI ethical policy. In this regard firm human command and control of AI is essential from a Malaysian perspective, particularly regarding defence AI. Malaysia is pursuing its agenda via ASEAN to build regional policies that ensure AI's ethical use across the region. In this context, Malaysia has also joined the 2024 REAIM summit. Malaysia is also cognizant of the fact that AI can advance the capabilities of terrorists and criminals and is particularly mindful of the fact that unlawful use of AI could be detrimental to maritime security and the sea lanes of communication, which are important for the country's economic well-being.

For Malaysian defence AI to progress forward, a national strategy to build common civil and military AI tools should be developed. This would ensure the integration of common AI systems across all Malaysian sectors and prevent duplication of efforts wasting valuable resources. This would also support Malaysia's policy of self-reliance, not just for defence but also for commercial products. Malaysia is also on track to build enough AI experts to serve as the human catalyst to innovate and build AI tools and thus become a leading regional builder of AI. Lastly, such a national strategy would align with Malaysia's defensive posture and

its neutral foreign policy. Non-alignment with any AI power bloc will require the country to develop its own technology base and prioritize the adoption and operationalization of defence AI. Ongoing procurement projects provide an opportunity to accelerate this process, but success depends on the local absorption of foreign technologies.

In this regard the recent NSM debacle is a strong reminder that Malaysia needs to prudently diversify its defence supplier base to avoid critical dependence. This may create significant logistics and maintenance challenges, but this seems to be the price the country needs to pay to uphold its current foreign and defence policy posture. For decades Malaysia has operated a broad mix of military assets procured from multiple countries such as the United States, France, Italy, Germany, Sweden, Russia, the United Kingdom, China, Türkiye and South Korea. The unreliability of Norway as a defence partner has shifted Malaysia's view to be more prudent and selective in choosing future partners for defence AI. Malaysia's neutral foreign policy stance and selective alignment strategy will continue to influence the MAF to procure equipment including defence AI from various source countries and not be tied to a single major power or a geopolitical bloc, while ultimately attaining self-reliance in niche defence areas.

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List of Abbreviations

AI .....Artificial Intelligence
AMDA .....Anglo Malayan Defence Agreement
ASEAN .....Association of Southeast Asian Nations
BITACG .....Bilateral Training and Consultative Group
C2.....Command Control
C6 ISR.....Command, Control, Communications, Computer, Cyber, Combat Systems, Intelligence, Surveillance, Reconnaissance
CDeSS.....Centre for Defence and Strategic Studies
CEMA .....Cyber Electro Magnetic Activities
CMS .....Combat Management System
DWP .....Defence White Paper
EEZ.....Exclusive Economic Zone
FPDA .....Five Power Defence Arrangements
FLIT .....Flight Lead-In Trainer
GBAD.....Ground Based Air Defense
GDP .....Gross Domestic Product
HANRUH .....*Pertahanan Menyeluruh*
IADS .....Integrated Air Defense System
LCA.....Light Combat Aircraft
LCS.....Littoral Combat Ship
LMS.....Littoral Mission Ship
MAF.....Malaysian Armed Forces
MALE.....Medium Altitude Long Endurance
MLU.....Mid Life Upgrade
MERAD .....Medium Range Air Defense
MiDAS.....Malaysian Institute of Defence and Security
MIMOS.....Malaysian Institute of Microelectronic Systems
MPA.....Maritime Patrol Aircraft
MRSS.....Multi Role Support Ship
NACSA.....National Cyber Security Agency
NDUM .....National Defence University of Malaysia
NRC .....National Resilience College
NSM .....Naval Strike Missile
PaKSI.....Sultan Ibrahim Centre for Research and Innovation
PUSPAHANAS ...National Defence Studies Centre
RMAF.....Royal Malaysian Air Force
RMN .....Royal Malaysian Navy
SEACAT .....Southeast Asia Cooperation and Training
SSM .....Surface-to-Surface Missile
STM.....Savunma Teknolojileri Mühendislik ve Ticaret A.Ş.
UAS .....Unmanned Aerial System
UAV .....Unmanned Aerial Vehicle
UGV .....Unmanned Ground Vehicle
US .....United States
WOGOS.....Whole-of-Government-Whole-of-Society

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