

AI NATION 2030

**NATIONAL AI ACTION PLAN
2026-2030**

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MINISTRY OF DIGITAL

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AI MALAYSIA BERHAD [202601028115 (1690210-V)] (National AI Office)

AI Malaysia Berhad is the national agency under the Digital Ministry, mandated to lead, coordinate, and accelerate the nation's Artificial Intelligence (AI) ecosystem towards realising the AI Nation 2030 vision.

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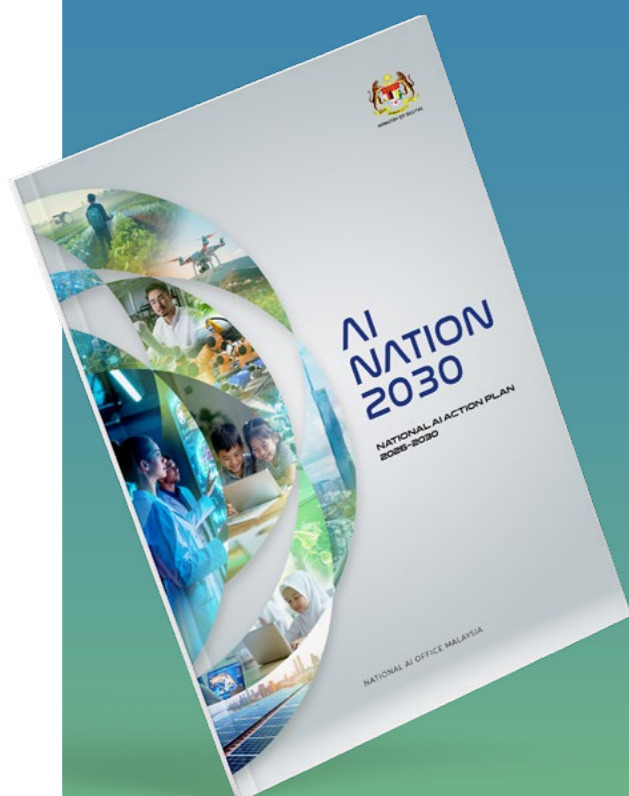
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FOREWORD

PRIME MINISTER OF MALAYSIA

YAB Dato' Seri Anwar bin Ibrahim

Throughout history, technology has been the catalyst of human progress, whether one refers to rudimentary tools of stone and wood to hunt and build shelters, or the invention of the Gutenberg printing press that eradicates borders for the dissemination of ideas. Artificial Intelligence (AI) would be an extension of this, standing at the centre of profound social, economic and global transformation.

For the *Rakyat*, AI must translate into meaningful improvements in everyday life — better access to services, more responsive institutions, improved healthcare and education outcomes, and broader economic opportunities. For businesses, AI represents a powerful driver of productivity, competitiveness, and innovation. And for the government, AI is a tool to strengthen policy effectiveness, service delivery, and institutional capability.

Anchored on the MADANI philosophy, becoming an AI nation is not merely on adoption, but should harness technology to fulfill purpose, values and culture. Thus the success of Malaysia as an AI nation is to mobilise AI to address national challenges be it sluggish wage growth or climate change, while ensuring the adoption would not deprive people of humane qualities. This AI Nation 2030 document marks Malaysia's aspiration to be an AI nation by 2030, which paves technological transformations to raise the ceiling for the *Rakyat*, lift the floor,





while ensuring that growth is rooted in identity, history, values and our humanity.

Yet, this pathway of AI diffusion can be fraught with challenges. The benefit of new technology can be impeded by geostrategic landscapes or productivity paradox where national adoption practices may not commensurate with the resources disbursed to build the new layers of digital infrastructure. Oversight of adoption gaps could concentrate AI adoption in urban areas, widening the digital divide with those outside of these circles. Furthermore, new technologies test the agility of governance where alignment between policies, technological exploration and human values, ethical principles in addition to legal definitions, will be tried. The MADANI principle is anchored on inclusivity and social justice, thus an AI nation should distribute benefits of AI to proliferate among every layer of society.

Building future-ready talent prepared to live in the human-machine era is the task at present. The wrong turn of an AI nation can sow dependence on AI and dehumanise identity, values and culture. If the purpose of humanity is to learn, assimilate knowledge, acquire knowledge and churn out ideas; adoption without due diligence could redesign thinking to those contrary of their own values and practices. Thus, the development of responsible AI is a challenge Malaysia must rise to address, especially to build new technology and machines that reflects our priorities, values and culture.

To these ends, building the AI nation is not merely a technology agenda, it is a nation-building agenda. Malaysia had made milestones, whether it is digital transformation from 5G connectivity to device availability at individual and enterprise levels. Strategically primed to be an AI hub, Malaysia's years of experience in semiconductor testing, assembly and packaging, has drawn investments to move the nation up the global value chain as articulated in the National Semiconductor Strategy. Malaysia's foundations are complemented by plans on renewable

energy, education and talent which are anchored in MADANI principles that emphasises prosperity and innovation.

Under the Malaysia MADANI framework, innovation must serve a higher purpose. This proves the necessity for Made by Malaysia AI capabilities, strengthening domestic innovation and positioning Malaysian enterprises as producers of advanced technologies, not just users.

Thus, AI Nation 2030 articulates Malaysia's strategic direction to realise an ambition that reaches skyward but is deeply rooted in identity and values. It sets out national priorities to strengthen governance and policy alignment, develop future-ready talent, secure critical digital infrastructure, embed responsible and ethical AI practices, and foster sustained collaboration across government, industry, academia, and society.

This journey calls for collective confidence and participation. Becoming an AI nation is to realise a technological future where the nation can acquire knowledge, achieve potential and be imbued by values of humanity, while benefiting from the productivity, creativity and possibilities introduced by new technologies.

I urge all Malaysians – across sectors, professions, and communities – to take part in shaping an AI future that reflects our values, strengthens our resilience, and reinforces Malaysia's standing in the world.

With unity of purpose and shared commitment, we will harness AI as a force for progress, opportunity, and national advancement.

FOREWORD



MINISTER OF DIGITAL

YB Gobind Singh Deo



AI Nation 2030 reflects Malaysia's commitment to move from aspiration to execution in building a strong and sustainable AI ecosystem. It has been shaped through extensive engagement with industry, startups, researchers, academia, society and the public sector, and informed by practical insights on what is required to scale Artificial Intelligence (AI) responsibly and effectively.

These engagements point to the importance of three focus areas: strengthening local capabilities, enabling the development of Made by Malaysia AI solutions, and establishing trust in the use of AI. Together, they form the basis of a strategy that supports innovation while addressing real-world needs.

The strategy sets out clear priorities to accelerate talent development, strengthen digital infrastructure, support startups and enterprises, and expand public-private collaboration across key sectors such as government, healthcare, education, manufacturing and agriculture.

Realising these priorities requires sustained investment in technology, infrastructure, and capabilities. The Government remains committed to fostering a stable, trusted and innovation-

supportive environment that provides clarity, strengthens ecosystem confidence, and enables long-term partnerships.

AI Nation 2030 also advances trusted AI through practical governance arrangements, appropriate safeguards and responsible adoption, ensuring that innovation progresses in tandem with security, reliability and public confidence.

This is supported by strengthened AI governance and the implementation of the *Akta Perkongsian Data 2025 [Akta 864]*, alongside national data sharing frameworks that enable secure and trusted data exchange for AI adoption.

The government will continue to work closely with the ecosystem to translate this strategy into measurable outcomes. Through consistent implementation and partnership, Malaysia can build an AI ecosystem that is competitive, trusted and anchored in local strengths, while strengthening its role as a reliable AI partner internationally.

FOREWORD



SECRETARY GENERAL MINISTRY OF DIGITAL

YBhg. Datuk Fabian Bigar



AI Nation 2030 provides a common national framework to guide the coordinated adoption of Artificial Intelligence (AI) across the public sector. Its implementation requires alignment across ministries, agencies and state governments, supported by consistent policies, shared standards and clear delivery mechanisms.

The Ministry of Digital, together with the AI Malaysia (National AI Office) and other agencies, is working to strengthen whole-of-government coordination to enable responsible and effective AI adoption. This includes aligning regulatory approaches, facilitating data and capability sharing, and integrating AI considerations into sectoral planning and public service transformation.

A key consideration throughout this process is that AI adoption remains human-centred. Within government, AI must be applied to augment human capabilities, improve service delivery and support better decision-making, while safeguarding privacy, security and public trust.

A key priority is advancing towards an AI-augmented public service that empowers civil servants through intelligent automation to enhance productivity, decision-making and service delivery.

AI Nation 2030 also supports a structured approach to adoption, from capability development and pilot deployment to scaling and continuous improvement. This enables ministries and agencies to plan and implement AI initiatives in a coherent and sustainable manner.

Through strong inter-agency collaboration and disciplined execution, the public sector can play a catalytic role in accelerating responsible AI adoption across the economy. This will help ensure that AI delivers practical value to citizens, businesses and communities, while advancing Malaysia's digital transformation agenda.

QUICK FACTS

WHAT IS ARTIFICIAL INTELLIGENCE (AI)?

Artificial Intelligence (AI) refers to machine-based systems that generate outputs such as predictions, recommendations, content or decisions based on defined objectives, in alignment with OECD's internationally recognised definition¹. These systems can operate with varying levels of autonomy and can adapt over time as they learn from data.

AI spans a broad and evolving range of capabilities, including:



Machine Learning: Algorithms that learn patterns and insights from data to support prediction and classification tasks.



Deep Learning: Neural network-based systems capable of processing large, complex datasets and automatically identifying relevant features.



Generative AI (GenAI): Models trained on large-scale data that can create new content such as text, images, audio or code.



Agentic AI: An emerging class of systems that runs tools in iterative loops to achieve goals giving it a high-level of autonomy, including the ability to plan, execute tasks and make decisions, with significant implications for governance, accountability and work.

WHY AI MATTERS NOW?

The global AI landscape is undergoing rapid structural transformation, presenting both significant opportunities and emerging risks for Malaysia. These shifts underscore why a clear national ambition, articulated through the National AI Action Plan 2026-2030 (AI Nation 2030), is both timely and necessary.

Technological advances are accelerating AI adoption across sectors. The rise of large, general-purpose models, alongside emerging forms of Agentic AI, is lowering barriers to deployment while increasing the scale, complexity and societal impact of AI systems.

At the same time, global and regional competition is intensifying. Countries across ASEAN and beyond are scaling investments in AI talent, high-performance compute capacity and AI-focused industrial policies. Without an updated and coordinated national response, Malaysia faces heightened risks of talent outflows and reduced attractiveness for AI-driven foreign direct investment.

AI development has also become a strategic and geopolitical consideration. Decisions relating to data centre and compute infrastructure, semiconductor supply chains and AI sovereignty increasingly shape national competitiveness and economic resilience, extending beyond purely technological concerns.

Taken together, these shifts elevate AI from a technological trend to a strategic national priority. The choices Malaysia makes today will determine whether AI becomes a driver of sustained growth, resilience and shared prosperity or a missed opportunity in an increasingly competitive global landscape.

¹ OECD (2024), "Explanatory memorandum on the updated OECD definition of an AI system", *OECD Artificial Intelligence Papers*, No. 8, OECD Publishing, Paris, <https://doi.org/10.1787/623da898-en>.

WHAT IS THE AI NATION ASPIRATION?

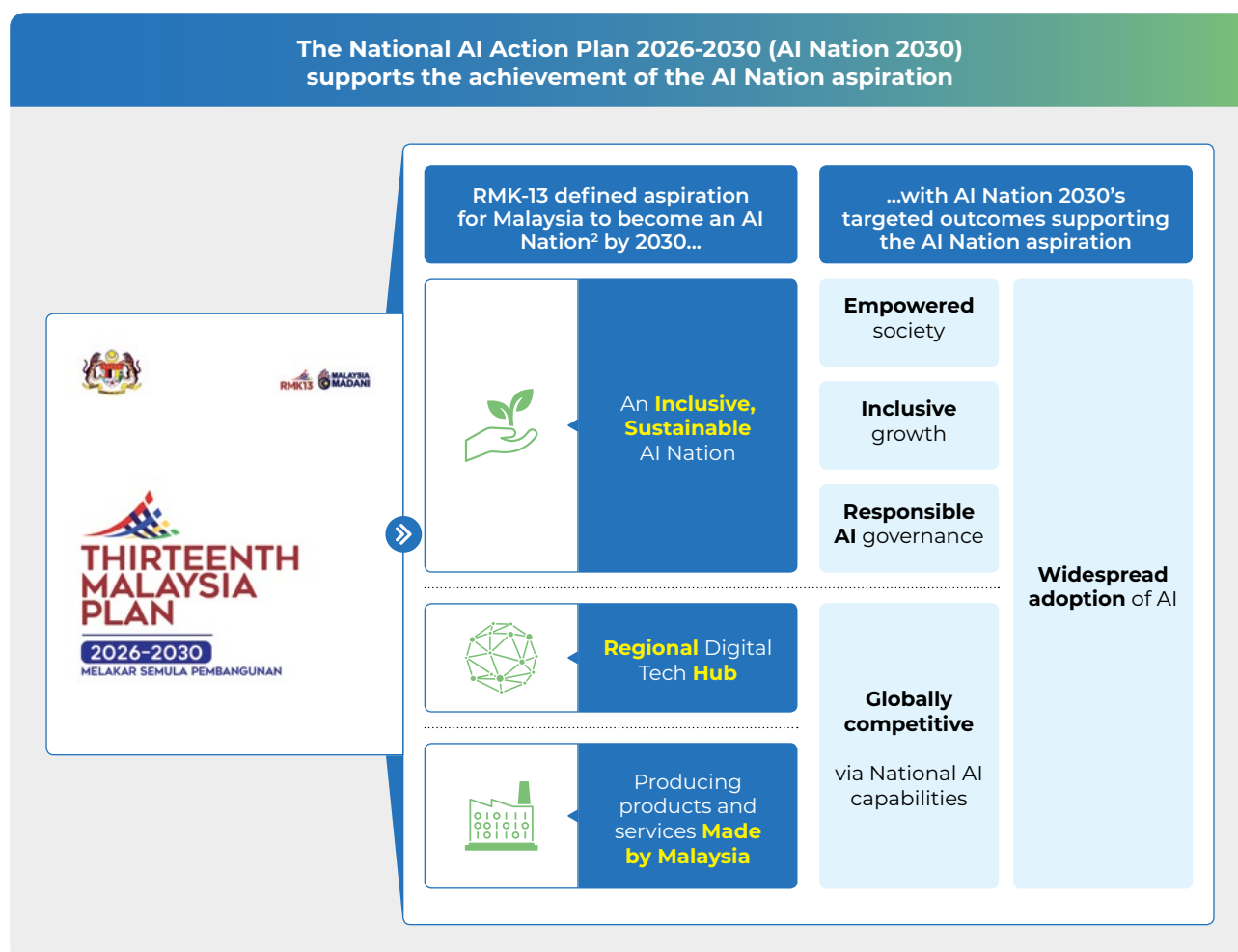


Figure 1: Malaysia's AI Nation Aspiration and Target Outcomes under RMK-13.

The AI Nation aspiration, as articulated in the Thirteenth Malaysia Plan (RMK-13), positions Artificial Intelligence (AI) as a core driver of Malaysia's next phase of national development. An AI Nation is one in which AI technologies are integrated holistically across socioeconomic development, public administration, and the daily lives of citizens.

This direction is reinforced by the National Fourth Industrial Revolution (4IR) Policy and the Malaysia Digital Economy Blueprint, which support advanced technology adoption and a data-driven economy. Prime Minister Datuk Seri Anwar Ibrahim has emphasised that Malaysia must shape its own AI future through homegrown solutions that reflect national values and deliver meaningful benefits.

By 2030, Malaysia aspires to become a **Regional Digital Technology Hub** and a producer of globally competitive **Made by Malaysia AI products and services** that is **Inclusive and Sustainable**. This aspiration places equal emphasis on economic competitiveness, inclusive growth, responsible governance, and societal empowerment, ensuring that AI adoption delivers broad-based national value rather than narrow sectoral gains.

² An AI nation refers to a country with AI-technology integrated holistically as the main thrust in socioeconomic development, national administration and daily lives of the societies. Source: RMK-13 Main document.



PART 1:

THE NATIONAL AI STRATEGIC CONTEXT

MALAYSIA'S STARTING POINT: EMERGING AI LEADER

Malaysia enters the AI Nation 2030 phase from a position of relative strength. Through the AI Roadmap 2021-2025 (AI-Rmap), the country established its first structured national AI framework and positioned AI as a strategic priority for economic development and innovation. This initial phase focused on building foundational enablers, including governance, research and development, digital infrastructure, talent development, AI acculturation and ecosystem activation.

These efforts contributed to steady improvements in Malaysia's government AI readiness ranking between 2021 and 2024, performing ahead of many ASEAN peers. Malaysia's approach has also emphasised responsible and values-driven adoption, ensuring AI deployment supports social cohesion, ethical responsibility and public trust.

AI is increasingly applied to narrow development gaps, support SMEs, expand opportunities in rural and underserved communities, and improve access to healthcare, education and public services. However, despite this progress, Malaysia has yet to transition into large-scale, multi-sector AI deployment. Material gaps remain in advanced talent depth, private investment mobilisation and research-to-commercialisation pathways. Addressing these gaps is critical to avoid stagnation at the "contender" level and to unlock the next phase of AI-driven national impact.

LESSONS FROM AI ROADMAP 2021-2025

Experience from the AI Roadmap 2021-2025 demonstrates that policy design and execution are decisive multipliers in AI adoption. The roadmap successfully established foundational enablers that strengthen national readiness and ecosystem awareness.

As implementation progressed, opportunities emerged to strengthen coordination, evolve funding models and sharpen outcome-focused targets to accelerate ecosystem activation and deliver measurable impact. The National AI Action Plan 2026-2030 (AI Nation 2030) responds directly to these insights by shifting toward a more coordinated, outcome-oriented approach. It prioritises clearer strategic linkages, targeted resource allocation and catalytic initiatives designed to deliver visible improvements across priority sectors.

This marks a deliberate transition from building readiness to delivering results, ensuring that AI policy functions as an engine for sustained value creation rather than a collection of standalone initiatives.

ALIGNING AI NATION 2030 WITH NATIONAL DEVELOPMENT PRIORITIES

The National AI Action Plan 2026-2030 (AI Nation 2030) is intentionally designed to align with Malaysia's core national policy frameworks, ensuring coherence, continuity and execution efficiency. Rather than operating as a standalone agenda, the AI Nation 2030 functions as an integrative layer across national development priorities.

The AI Nation 2030 directly supports the **Thirteenth Malaysia Plan (RMK-13)** aspiration for Malaysia to become an AI Nation, reinforces the **National Fourth Industrial Revolution (4IR) Policy** by accelerating advanced technology adoption, innovation and productivity gains across priority sectors, and builds on the **Malaysia Digital Economy Blueprint (MDEB)** thrusts to drive digital leadership, strengthen inclusive growth and coordinated public-private implementation.

This alignment ensures that AI adoption is coherent, well-governed and translates into measurable impact across national development priorities.



PART 2:

THE ACTION PLAN FRAMEWORK

THE AI NATION 2030 ARCHITECTURE

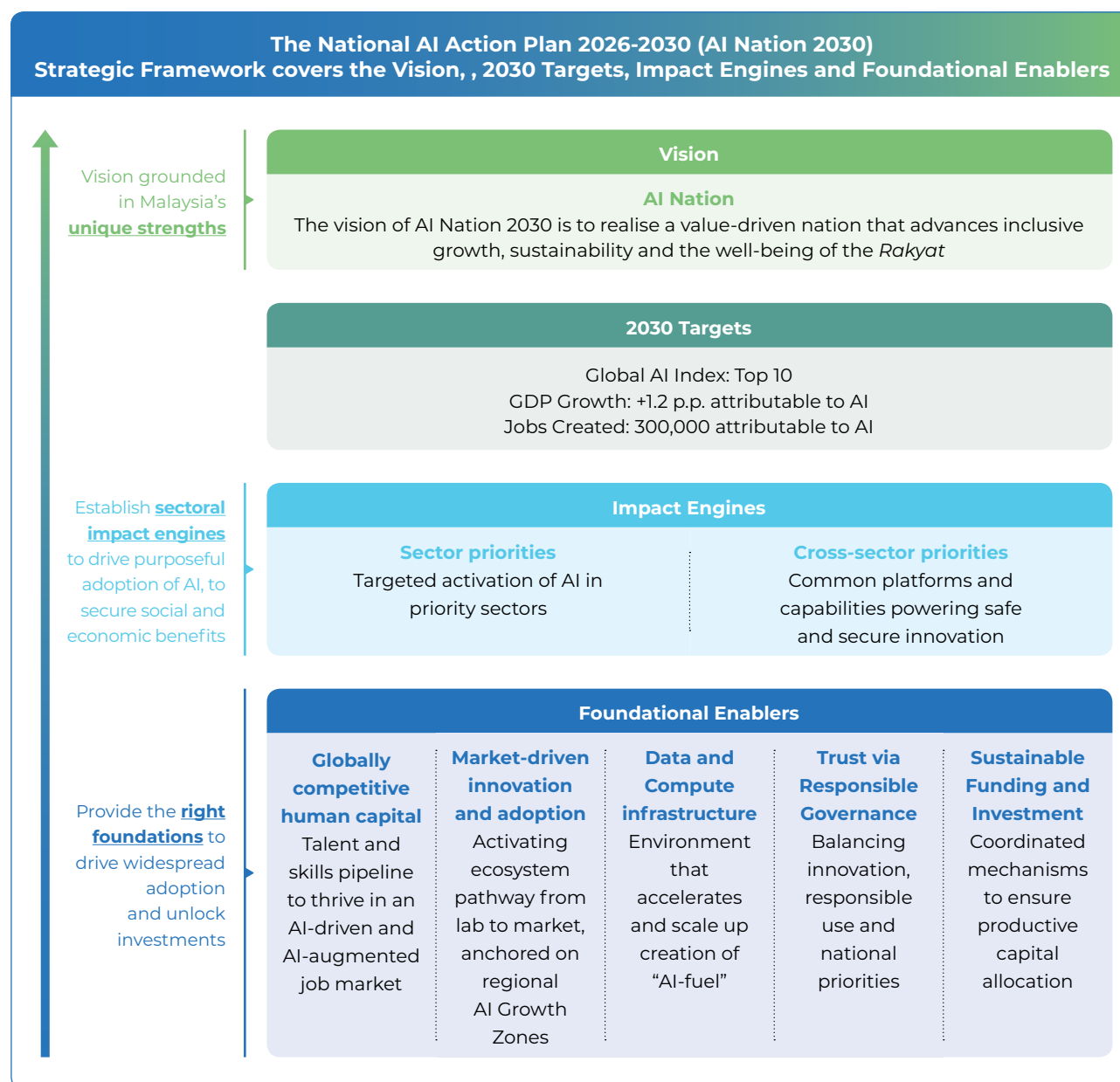


Figure 2: The AI Nation 2030 Architecture.

The National AI Action Plan 2026-2030 (AI Nation 2030) is structured around a clear, layered framework that links national ambition to execution. At the apex is the AI Nation Vision, which sets the long-term aspiration. This is translated into action through Impact Engines that drive targeted adoption and outcomes across priority sectors. These efforts are underpinned by Foundational Enablers that provide the system-wide capabilities, infrastructure, and governance needed to sustain adoption at scale.

Together, this architecture ensures that AI policy moves cohesively from vision to delivery while maintaining alignment, accountability, and national impact.

VISION: TOWARDS A VALUE-DRIVEN AI NATION

The vision of the AI Nation 2030 is to realise an Inclusive and Sustainable AI Nation. It seeks to ensure that Artificial Intelligence is adopted responsibly to strengthen national competitiveness, support sustainability, and encourage local innovation and production.

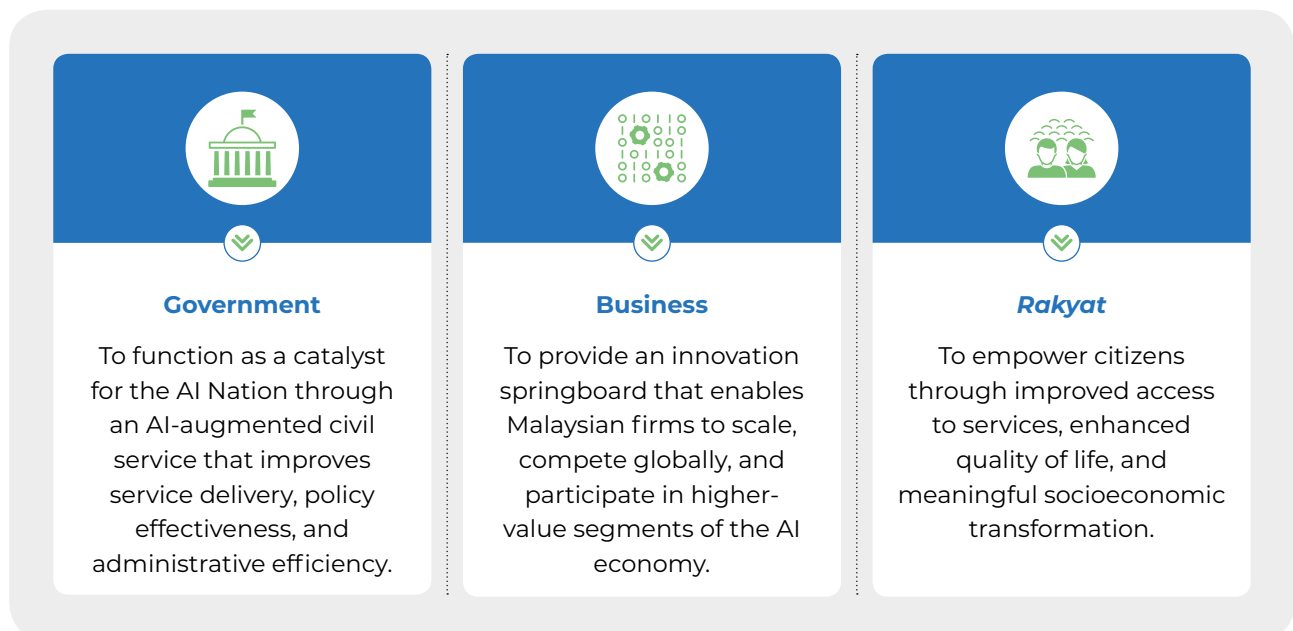
This vision recognises that technological progress must be balanced with trust, effective governance, and positive societal outcomes. AI adoption is therefore not an end in itself but a means to deliver inclusive growth, national resilience, and long-term value for Malaysia.

MISSION: DELIVERING MEANINGFUL AI TRANSFORMATION

The mission of AI Nation 2030 is to deploy AI systematically across Government, Business, and the *Rakyat* translating technological capability into tangible and measurable benefits.

2030 TARGETS

By 2030, AI Nation 2030 aims to position Malaysia among the Top 10 in recognised Global AI Indices, while delivering measurable economic and employment market impact through AI adoption. This includes achieving up to 1.2 percentage points of incremental GDP growth attributable to AI and supporting the creation of up to 300,000 new jobs attributable to AI by 2030. These targets reflect Malaysia's ambition to translate responsible and purposeful AI adoption into stronger national competitiveness, higher productivity, a more future-ready workforce, and long-term value creation for the country.



This mission reinforces a whole-of-nation approach, ensuring that AI deployment is demand-led, impact-focused, and aligned with real needs.

SHAPING HUMAN-CENTRIC AI

In line with the Prime Minister's MADANI vision, the AI Nation 2030 positions AI as a force for good. Human-centric AI principles guide the framework, ensuring that AI adoption strengthens social cohesion, respects cultural integrity, and upholds ethical responsibility.

Malaysia recognises that ethics and responsible governance must be central to AI adoption to safeguard the public interest and sustain confidence in the technology. Accordingly, AI Nation 2030 recognises and builds upon the National Guidelines on AI Governance and Ethics (AIGE)³ and its seven ethical principles. It further aims to operationalise these principles to support practical implementation across sectors.

AI is expected to help bridge development divides, empower small and medium enterprises, uplift rural and underserved communities, and expand access to services including healthcare, education, and public delivery. This approach safeguards against adoption driven purely by efficiency, which could otherwise widen inequality or weaken public trust.

STRATEGIC POLICY SHIFTS

To move from foundational readiness to sustained national impact, the AI Nation 2030 is anchored on five Strategic Policy Shifts. These shifts define the critical changes required to accelerate AI adoption, address persistent ecosystem gaps, and ensure that AI delivers measurable public and economic value.

These shifts provide clear national direction on what must change to enable AI to scale responsibly and competitively across the economy:

Global Talent



Expanding access to world-class AI expertise by attracting, engaging, and retaining global and local talent to support Malaysia's AI agenda, wherever they are.

Market-Led Innovation



Accelerating the translation of research to drive economic impact by coordinating industry, academia, and government.

High-Value Data



Unlocking innovation by developing priority national datasets through public-private collaboration while ensuring secure and trusted data sharing.

Responsible Governance



Establishing clear safeguards to ensure AI is developed and deployed in a trustworthy, ethical, and secure manner.

Government as Catalyst for AI



Drive AI adoption and productivity by growing a strong local, Made by Malaysia AI ecosystem.

Together, these Strategic Policy Shifts reposition AI policy from building capabilities in isolation to delivering sustained execution, coordination, and national impact.

³ Ministry of Science, Technology and Innovation (MOSTI), *The National Guidelines on AI Governance & Ethics (AIGE)* Putrajaya: Government of Malaysia, 2023.

CATALYTIC INITIATIVES DELIVERING FAST-TRACK RESULTS

To ensure the AI Nation 2030 (National AI Action Plan 2026–2030) delivers immediate and visible value, the Government adopts a tiered implementation approach centred on Catalytic Initiatives. These are high-impact projects designed to act as early “igniters” of the national AI ecosystem.

Catalytic Initiatives are selected based on three rigorous criteria:

Broad-Based Societal Impact

- » Projects must benefit a wide segment of the population, enabling citizens to experience the AI Nation through improved public services or healthcare.

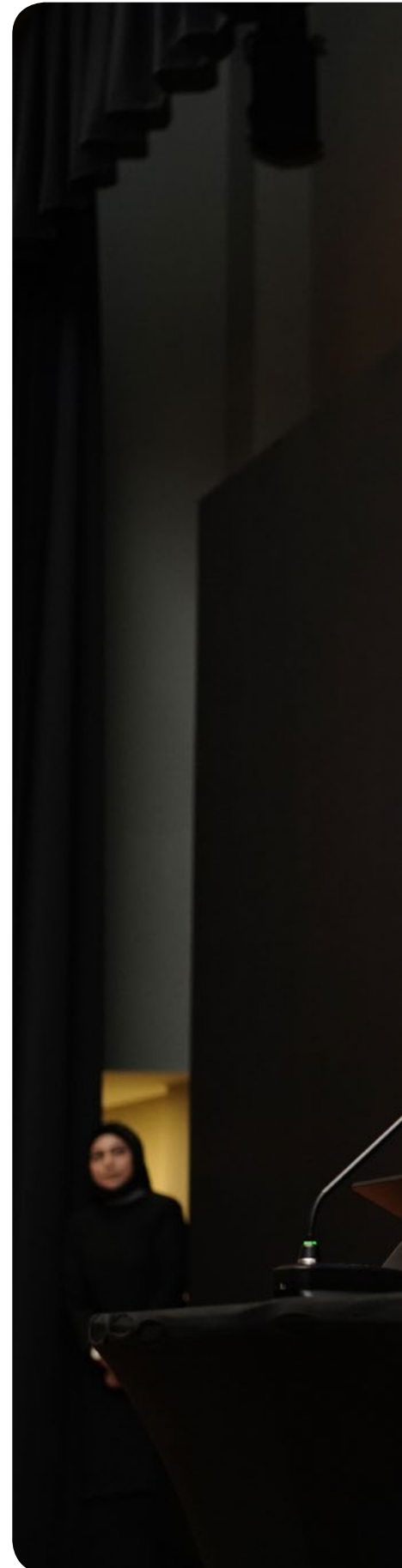
Rapid Speed-to-Outcome

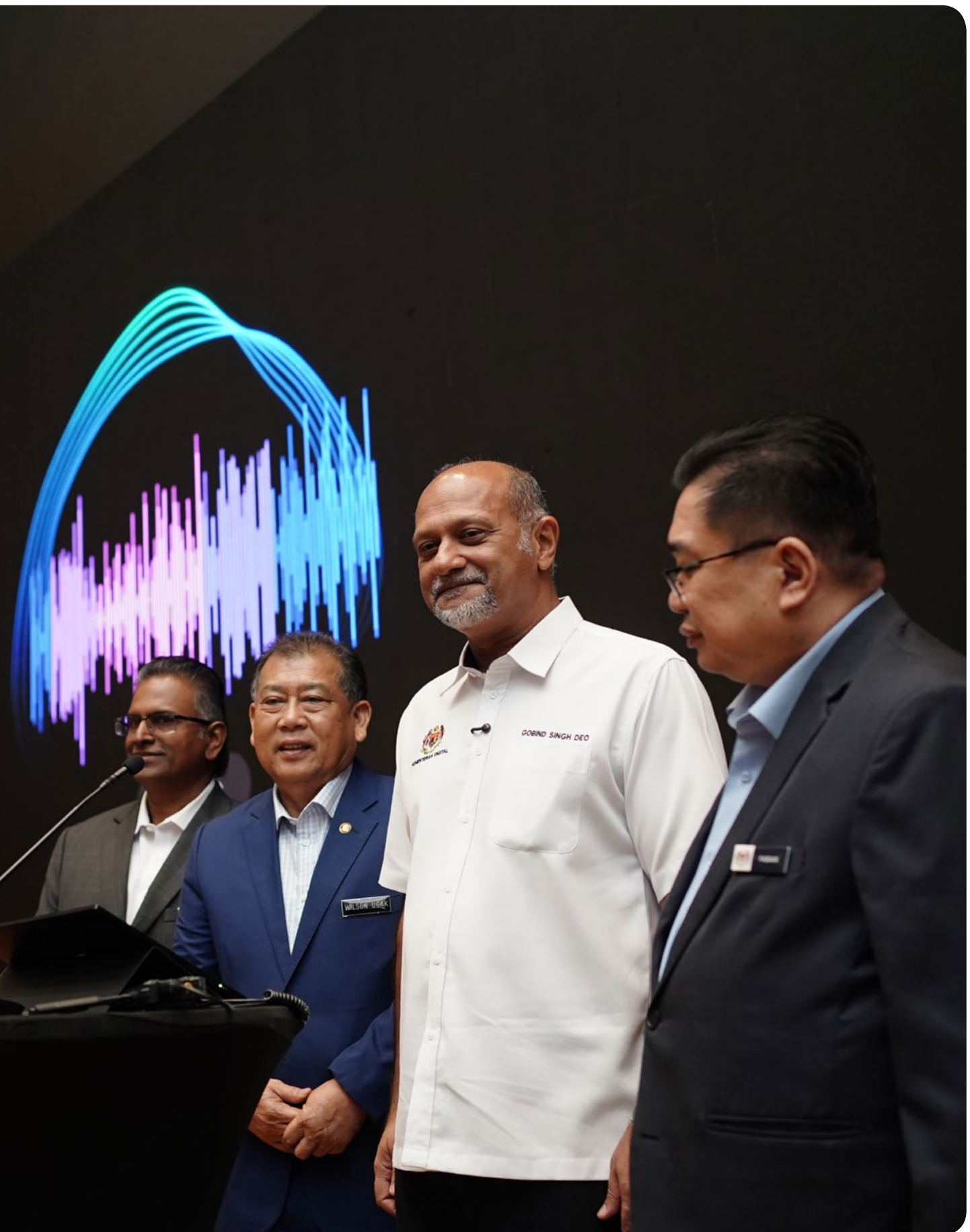
- » Projects must be capable of delivering measurable results within a two-year timeframe to demonstrate early proof of value.

High Degree of Control

- » Projects must leverage direct public sector assets such as government data or infrastructure to reduce market friction and accelerate deployment.

Unlike standard initiatives, Catalytic Initiatives operate under a “Fast Track” delivery model and are prioritised for immediate funding mobilisation. They serve as early “Lighthouses”, generating foundational datasets and use cases that encourage wider private sector participation.







PART 3:

IMPACT ENGINES: DRIVING SECTORAL TRANSFORMATION

IMPACT ENGINES

Impact Engines are targeted strategies designed to accelerate AI adoption in high-impact sectors of the Malaysian economy by translating national AI ambition into concrete, sector-specific transformation.

Each Impact Engine is structured to create a closed-loop ecosystem in which data, talent, infrastructure and AI solutions reinforce one another. This approach ensures that AI adoption drives productivity, innovation, and long-term competitiveness.

The selection of Impact Engines reflects two complementary priorities:



Economic Impact Sectors,
such as Manufacturing, Oil and Gas, and
Power Utility where AI adoption can
deliver large-scale productivity gains, and
contribute significantly to GDP.



Societal Impact Sectors,
including Healthcare, Education, Agrofood,
AI Cities and Public Services, where AI
delivers broad public value by improving
access, strengthening food security, and
quality of life.



IMPACT ENGINE DELIVERY MODELS

To ensure clear accountability and effective delivery, initiatives are structured according to their primary development and leadership models.



Government-Initiated Initiatives

focus on national priorities and public service outcomes, including Healthcare, AI Cities, Public Services, Education, Agrofood, and the Local AI Ecosystem.



Public-Private Partnership (PPP) Initiatives

bring together government and industry to transform foundational sectors such as Manufacturing, Plantation, and Micro, Small and Medium Enterprises (MSMEs).

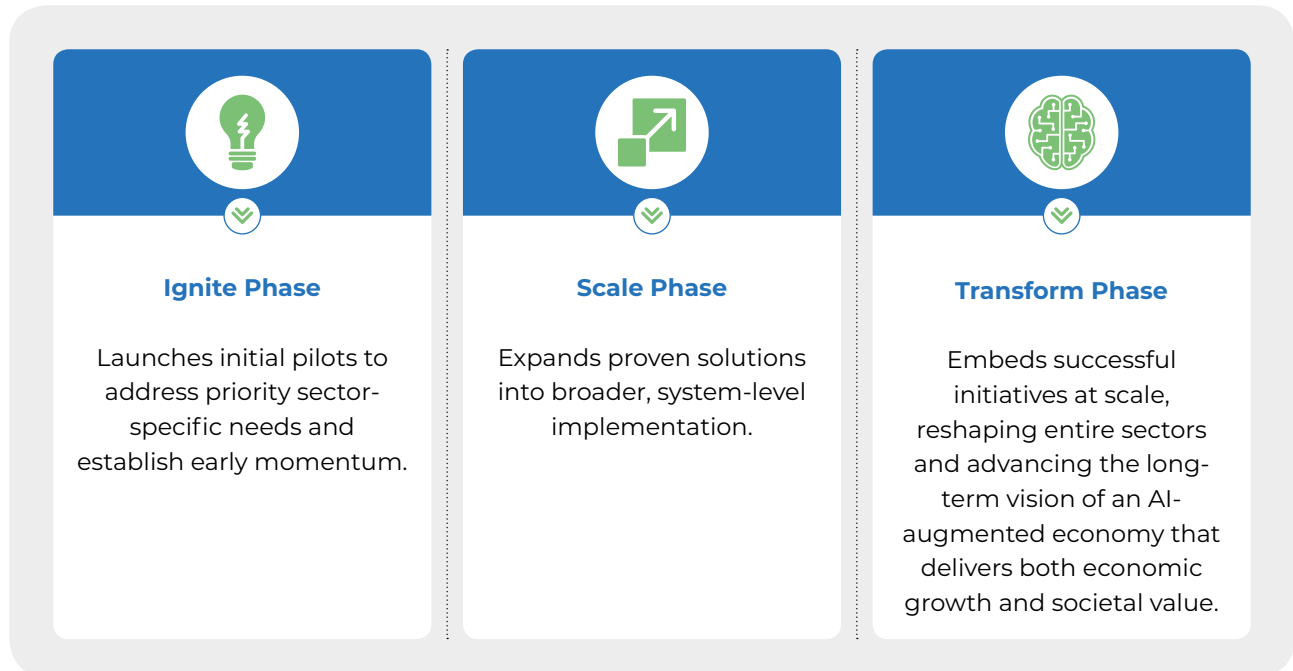


Industry Champion-Led Initiatives

operate in more mature sectors and enable direct collaboration between government and industry leaders in areas such as Power Utility, Oil and Gas, Financial Services, and Telecommunications. This approach ensures sector-specific expertise drives implementation while delivering national-level benefits.



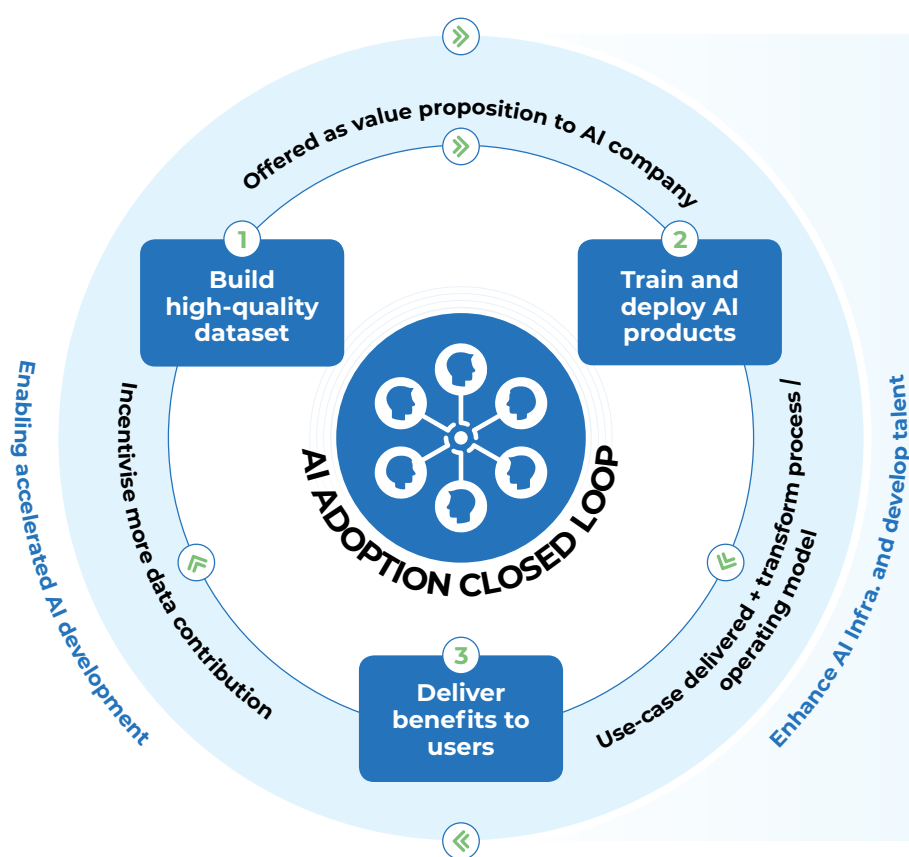
For Government-initiated and PPP-led initiatives, implementation follows a structured progression pathway to support sustained transformation:



HOW IMPACT ENGINES OPERATE: THE AI ADOPTION CLOSED LOOP

Each Impact Engine operates through a standardised **AI Adoption Closed Loop**, which serves as the core operating mechanism, particularly for Government-initiated and Public-Private Partnership (PPP) initiatives.

Rather than a linear rollout, this mechanism creates a **self-reinforcing cycle** in which sectoral demand, data generation, solution development and ecosystem capability reinforce one another.



Adoption loop for each sector to be tailored, to ensure:

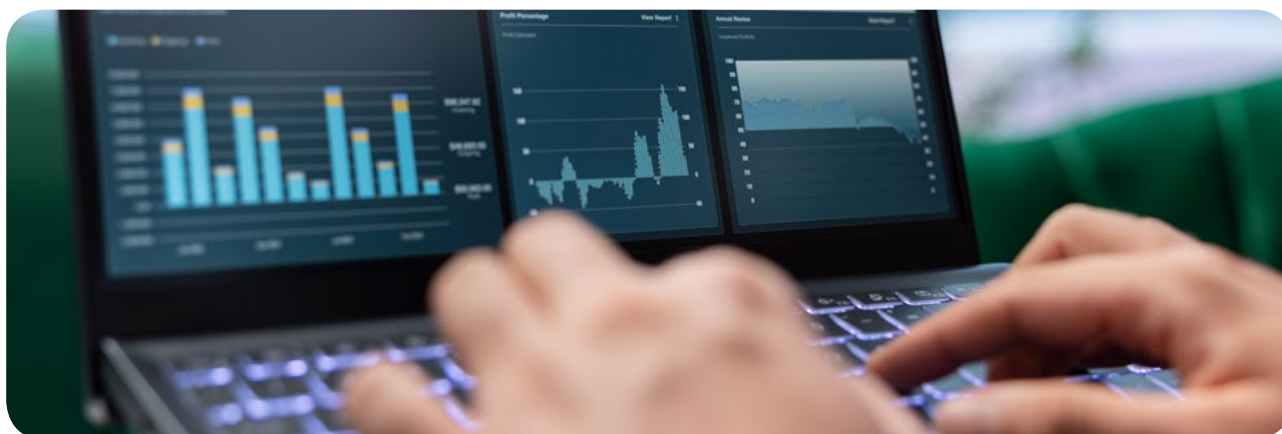
Problem-led solution

Use cases defined to address sector-specific needs

Relevant technology solutions

Use cases to be adjusted as per pace of technology development

Figure 3: The AI Adoption Closed Loop – illustrates how this closed-loop model underpins each Impact Engine, ensuring AI adoption is continuous, purpose-led, and scalable.



The closed loop comprises four interlinked stages:



Build High-Quality Data

Sector-relevant, high-quality datasets are developed and made accessible to support AI development based on real-world use cases.



Train and Deploy AI Solutions

AI solutions are developed and deployed to address defined use cases and improve processes, service and operating models.



Deliver Benefits to Users

AI applications generate tangible benefits for users, encouraging adoption, additional data contribution and stronger participation for AI companies, start-ups and MSMEs.



Enhance AI Infrastructure and Develop Talent

Ongoing investment in AI infrastructure, compute capacity and talent enables more advanced use cases and the next cycle of innovation.

By applying this closed-loop model, Impact Engines ensure that AI adoption delivers lasting sectoral impact, strengthens Malaysia's AI ecosystem and supports the transition from AI consumer to value-adding producer.

14 Leading Initiatives Across Strategic Sectors (AI Impact Engines)

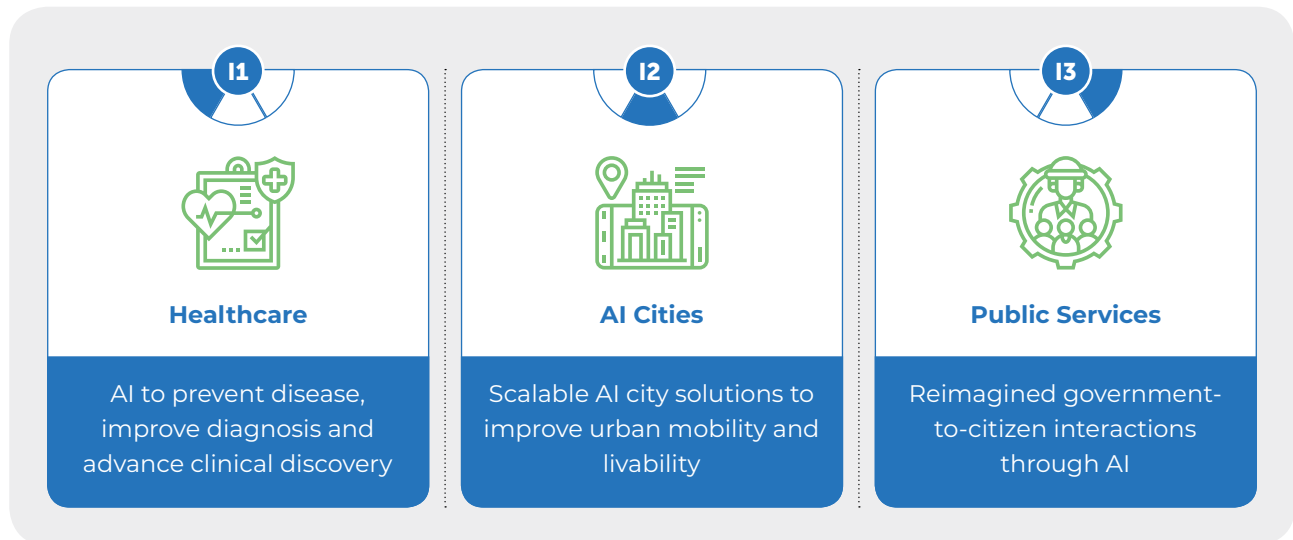
Development Category	Sector	Initiatives
Government-Initiated Impact Engines	Healthcare	I1: AI to Prevent, Diagnose and Advance Clinical Discovery *
	AI Cities	I2: Scalable AI City Solutions *
	Public Services	I3: Reimagined Government-to- <i>Rakyat</i> Interactions *
	Public Sector	I4: AI-augmented Government that Works Smarter
	Education	I5: Personalised Learning for Tertiary Education
	Agrofood	I6: Scalable Agristack
	Cross-Sector	I7: Secure and Localised AI Ecosystem for Malaysia
Public-Private Partnership (PPP) Impact Engines	Manufacturing	I8: AI Hub for the Manufacturing Ecosystem
	Plantation	I9: AI Platform for Smallholder Empowerment
	AI for MSMEs	I10: Modular Resources for MSMEs
Industry Champion-Led Impact Engines	Power Utility	I11: AI for a Green Energy Future
	Oil & Gas	I12: Modernising the OGSE Ecosystem
	Financial Services	I13: Growth, Inclusion and Security
	Telecommunications	I14: Empowering Malaysia's AI Infrastructure

* Catalytic Initiatives

CATALYTIC IMPACT ENGINES INITIATIVES

While the AI Nation 2030 comprises 14 Impact Engines, three are designated as high-priority Catalytic Initiatives in the initial Ignite phase. These initiatives are prioritised because they address national priorities directly and leverage public sector leadership to bypass market friction and deliver early proof-of-value.

The Catalytic Impact Engine Initiatives are:



These initiatives operate under a fast-track delivery model and are prioritised for early funding mobilisation. They serve as early lighthouses, generating foundational datasets and use cases that stimulate broader private sector participation.

ACCELERATING AI ADOPTION ACROSS PRIORITY SECTORS THROUGH IMPACT ENGINES

Impact Engines translate national strategy into real-world results by embedding AI in priority sectors. Each engine focuses on delivering measurable improvements in productivity, services, and quality of life, supported by foundational enablers and a structured pathway from pilot to large-scale adoption.



GOVERNMENT-INITIATED IMPACT ENGINES

Government-Initiated Impact Engines form a core delivery category under Malaysia's AI Nation 2030 (National AI Action Plan 2026–2030), focusing on national priorities and public service outcomes. These initiatives are led by the government and implemented either directly or through structured public-private collaboration, leveraging public sector data, infrastructure, and regulatory authority to accelerate AI adoption at scale.

By addressing high-impact areas such as healthcare, education, public services, cities, and agrofood, these Impact Engines turn national strategy into real improvements in quality of life, reducing inefficiencies and ensuring that every *Rakyat* experiences tangible benefits from AI adoption.

II

HEALTHCARE: AI TO PREVENT, DIAGNOSE AND ADVANCE CLINICAL DISCOVERY

» Overview

AI in Healthcare leverages high-quality national health data to build a closed-loop system that progressively expands across the healthcare service.

Through the deployment of AI-powered diagnostics and population health management tools, this approach improves clinical outcomes and clinician productivity while enabling earlier detection and prevention of chronic diseases.

Over time, the healthcare system will transition towards a fully integrated, AI-powered model that accelerates medical discovery and strengthens long-term societal well-being.

» Key Lead

Ministry of Health

» Proposed Data Providers

Ministry of Health
Public and private hospitals

» Target End-State

An integrated AI-powered healthcare system that improves the quality and efficiency of healthcare services, advances preventive care, strengthens societal well-being, and positions Malaysia as ASEAN's regional hub for AI and clinical research.



» Healthcare Intended Outcomes

Higher Clinician Productivity	Greater Access to Advanced Treatments	Moving Up the Value Chain
Achieve a 16-40% productivity gain for radiologists, enabling faster and more accurate diagnoses.	Increase diagnostic accuracy by more than 10% and provide citizens with earlier access to innovative therapies.	Attract Foreign Direct Investment (FDI) and increase service export revenue through clinical trial hosting and the development of a strong talent ecosystem.
Healthier citizens with targeted advice	Data-driven policy and planning	Unlock capacity and efficiency across the health system
Enable timely, personalised health guidance to prevent the onset of chronic diseases.	Optimise community health programme and optimise resource allocation	Prevent costly Non-Communicable Diseases (NCD) complications early to free up resources and refocus on higher-impact needs

» Implementation Approach

Ignite	Scale	Transform
- Launch AI diagnostics in radiology, focusing on domains that are most ready for AI adoption and supported by high-quality local validation datasets. - Identify pre-NCD populations through risk segmentation and deliver personalised “preventive nudges” via digital engagement platforms.	- Expand AI diagnostic applications to additional clinical domains, including pathology and cardiology. - Establish a nationwide NCD surveillance system to map regional risk patterns and refine interventions based on real-world outcomes.	- Evolve the sector into an AI-enabled Clinical Research Engine that powers real-world, multi-site global trials through advanced execution capabilities. - Provide frontline healthcare providers with real-time, AI-generated patient summaries.



GOVERNMENT-INITIATED IMPACT ENGINES

12

AI CITIES: SCALABLE AI CITY SOLUTIONS

» Overview

AI Cities builds on existing Smart City initiatives by adding an intelligence layer to physical, Internet of Things (IoT) and communications infrastructure.

The initiative positions cities as concentrated living labs and testbeds for deploying integrated AI solutions that address real-world urban challenges. By establishing interoperable urban technology stacks, Malaysia can digitally connect multiple modes of transport and unlock data at scale to support seamless urban transformation.

Ultimately, AI Cities enables smarter decision-making through real-time mobility insights and more proactive urban planning.

» Key Lead

Ministry of Digital

» Solution Providers

Smart city and urban technology solution providers

» Proposed Data Providers

City governments, local authorities, and relevant federal government agencies

» Target End-State

Malaysia is positioned as a leading regional AI city powerhouse that delivers exceptional, *Rakyat*-centric services.



» AI Cities Intended Outcomes

Seamless Urban Transformation	Smarter Decision-Making	Improved Urban Liveability
Shorten commutes and improve traffic flow, saving up to 44 hours per month in travel time.	Enable government access to real-time, integrated mobility data for proactive planning and faster responses.	Enhance quality of life, making cities more attractive to families, businesses, and investors.

» Implementation Approach

Ignite	Scale	Transform
Establish city-centric end-to-end AI mobility stacks connected to a National Smart City Command, beginning in major cities where enabling infrastructure is already in place.	Mature the end-to-end and mobility stacks in the initial pilot cities while broadening impact into system-level implementation by completing the full AI stack and generating cross-city insights through the national platform.	Realise a nationwide interoperable urban technology stack by scaling proven AI City solutions to other regions, expanding into diverse smart technology stacks tailored to urban priorities, including safety, security, energy, and environmental management.



GOVERNMENT-INITIATED IMPACT ENGINES

13

PUBLIC SERVICES: REIMAGINED GOVERNMENT-TO-RAKYAT INTERACTIONS

» Overview

Public Services reimagines how citizens interact with government services. Leveraging MyDigital ID and the MyGOV Malaysia platform, it introduces a unified AI interface that enables personalised, always-on, and secure public services, improving accessibility, efficiency, and trust. By integrating services across agencies and enabling secure data exchange, the platform reduces fragmentation and simplifies how citizens access information, benefits, and transactions, allowing services to respond faster and more effectively to public needs.

» Key Lead

Ministry of Digital
• Jabatan Digital Negara

» Proposed Solution Providers

Foundation model providers and GovTech Malaysia Technical Team

» Proposed Data Providers

Relevant ministries and government agencies

» Target End-State

Seamless public services delivered through a unified, multimodal government AI interface powered by agentic AI.



» Public Services Intended Outcomes

Higher Citizen Satisfaction

Achieve up to a 45% increase in citizen satisfaction through always-on, context-aware government services.

Operational Efficiency

Reduce service delivery costs by 20–30% through AI-supported knowledge management and agentic AI task orchestration.

Hyper-Personalisation

Deliver secure, multimodal, and multilingual experiences that simplify complex service journeys for every *Rakyat*.

» Implementation Approach

Ignite

Launch a unified AI citizen interface on MyGOV Malaysia, integrated with MyDigital ID, starting with high-impact services such as taxation and licensing to enable seamless onboarding and digital transactions.

Scale

Provide tailored and multilingual digital experience for *Rakyat* by integrating data across ministries, enabling proactive solutions that improve daily life.

Transform

Simplify *Rakyat* interactions through a single-entry AI assistant that leverages Agentic AI to navigate complex processes and complete tasks on users' behalf, enabling the platform to deliver context-aware support at every step.



GOVERNMENT-INITIATED IMPACT ENGINES

14

PUBLIC SECTOR: AI-AUGMENTED GOVERNMENT THAT WORKS SMARTER

Overview

The public sector enhances how civil servants work by empowering them with secure, purpose-built AI solutions. As AI becomes mainstream, the focus shifts from generic tools to trusted, context-aware AI systems capable of handling the government's vast and complex datasets.

By embedding AI into daily workflows, the public sector can move beyond optimising routine processes towards a broader transformation of administrative and cross-sector functions. This data-driven approach enables policy simulation and real-time decision support, ensuring the government remains agile and responsive to national challenges.

Key Lead

Ministry of Digital
• Jabatan Digital Negara

Proposed Solution Providers

Foundation model providers and GovTech Malaysia Technical Team

Proposed Data Providers

Relevant ministries and government agencies

Target End-State

Public officers are empowered by AI to work smarter, more efficiently and respond proactively to increasingly complex national challenges.



» Public Sector Intended Outcomes

Do More with Less	Higher Public Servant Job Satisfaction	Data-Driven Policymaking
Achieve a 35% reduction in budget costs across impacted areas over a ten-year period.	Free up 30% of civil servant capacity from repetitive administrative tasks, enabling greater focus on higher-value strategic work.	Enable faster, more citizen-focused policies through AI-enabled analysis of large datasets, insight generation, and scenario simulation.

» Implementation Approach

Ignite	Scale	Transform
Focus on AI for everyday productivity by scaling “AI@Work” to support tasks such as meeting minutes, presentation preparation, and email drafting by building user adoption and enables model fine-tuning using trusted sovereign AI.	Advance towards functional transformation by pairing AI tools with process and operating model changes targeting administration-heavy and priority functions such as procurement, grants management, and parliamentary response workflows.	Enable AI for effective policymaking by leveraging anonymised, multi-agency data sets by using AI to support complex policy simulations and generate data-driven briefings and strategic recommendations.



GOVERNMENT-INITIATED IMPACT ENGINES

15

EDUCATION: PERSONALISED LEARNING FOR TERTIARY EDUCATION

Overview

Education advances educator capability and student learning outcomes through the strategic integration of AI tools. Foundational learning data systems enable personalised academic and career guidance tailored to each student's strengths, needs, and aspirations.

AI-empowered educators are supported with tools that enhance teaching quality, while adaptive learning platforms dynamically adjust content based on student performance and learning patterns. Over time, this approach helps close quality gaps across institutions, improves graduate outcomes, and strengthens Malaysia's competitiveness as a regional higher education hub.

Key Lead

Ministry of Higher Education

Proposed Solution Providers

Foundation model providers and GovTech Malaysia Technical Team

Proposed Data Providers

Public and private universities and learning management system (LMS) service providers

Target End-State

Position Malaysia as the regional benchmark for AI-powered tertiary education, unlocking every student's potential and driving system-wide academic excellence.



» Education Intended Outcomes

Advanced Educator Capability	Maximised Learning Impact	Elevated Regional Competitiveness
Boosting teaching quality with AI-driven content development, grading support, and learning analytics to foster a system-wide uplift in standards.	Delivering adaptive learning pathways and career coaching aligned with individual student strengths and needs.	Enhancing academic reputation positions Malaysia as a preferred destination for AI-integrated higher education.

» Implementation Approach

Ignite	Scale	Transform
Provide AI-driven support tools, beginning with STEM subjects to build foundational learning data systems that enable adaptive learning.	Roll out adaptive learning platforms that deliver personalised curriculum content based on student performance and engagement data.	Achieve a fully integrated system where AI supports holistic academic and career guidance. Maximise learning outcomes by helping students identify best-fit career pathways and adapting to individual strengths and needs.



GOVERNMENT-INITIATED IMPACT ENGINES

16

AGROFOOD: SCALABLE AGRISTACK

» Overview

Agrofood focuses on building foundational capabilities to leverage data for the purpose of enabling AI-driven precision farming and predictive analytics, empowering farmers to optimise inputs, improve yields, and reduce losses.

This data-driven approach modernises traditional farming practices through more accurate yield forecasting, early pest and disease detection, and better-informed decision-making. Over time, AI-integrated agriculture strengthens national food self-sufficiency and positions Malaysia as a regional leader in tropical agritech innovation.

» Key Lead

Ministry of Agriculture and Food Security

» Proposed Data Providers

Farmers and producer groups, universities and research institutions, Malaysian Good Agricultural Practice, and civil society organisations

» Target End-State

A more self-sufficient nation, supported by an empowered and innovative Agritech ecosystem.



» Agrofood Intended Outcomes

Enhancing Farmer Livelihood	Creation of Agritech	Enhanced Food Security
Improve farmer livelihood levels through AI-optimised yield while saving resources and time for farmers.	Facilitates AI solutions development in the ecosystem from the new and readily available data.	Advance national food self-sufficiency while reducing import reliance.

» Implementation Approach

Ignite	Scale	Transform
Establish foundation by integrating data to launch AI-driven pilots for precision irrigation and fertilisation in selected paddy and vegetable clusters, validating yield and efficiency gains to advance nationwide agricultural transformation.	Integrate relevant data sets such as weather analytics and automated pest detection to cover a broader range of crops, including vegetables and fruits.	Leverage holistic datasets to enable a fully data-driven agricultural ecosystem.



GOVERNMENT-INITIATED IMPACT ENGINES

I7

CROSS-SECTOR: SECURE AND LOCALISED AI ECOSYSTEM FOR MALAYSIA

» Overview

This Impact Engine focuses on building a secure, AI ecosystem anchored in Malaysia's data, values, and capabilities. By developing an AI stack comprising trusted local datasets, indigenous AI models, and secure compute infrastructure, Malaysia ensures that sensitive national data remains under domestic control.

The initiative prioritises AI systems that are culturally, linguistically, and contextually aligned with Malaysian society. In doing so, it strengthens national security and digital resilience while nurturing a competitive ecosystem of local AI innovators capable of scaling regionally and globally.

» Key Lead

Ministry of Digital
• Jabatan Digital Negara

» Proposed Data Providers

Respective ministries, Dewan Bahasa dan Pustaka (DBP), media organisations.

» Target End-State

An AI ecosystem rooted in local strengths, delivering trusted and inclusive services while supporting resilient, homegrown innovation.



» Cross-Sector Intended Outcomes

Enhanced Local AI Ecosystem Autonomy	Building Malaysia's Homegrown AI Industry	Cultural Aligned and Inclusive AI Services
Broaden the AI provider base and strengthen talent and supply chains to reduce external reliance.	Build culturally aligned AI solutions that reflect Malaysia's values, languages and societal context.	Develop AI services that reflect Malaysia's diverse languages, contexts, values, and societal norms, supporting inclusive and culturally aligned AI experiences for the <i>Rakyat</i> .

» Implementation Approach

Ignite	Scale	Transform
Establish lighthouse pilot programmes to guide the development of independent digital infrastructure and launch proof-of-concepts for sensitive public sector applications, including public safety and government-specific AI.	Identify high-impact sectorial AI use-cases from "Impact Engine Initiatives" and scale them across industries to accelerate the development of localised AI models.	Certify local Malaysian AI models, provide access to AI data sets, and promote safety tools in order to accelerate sector adoption from both public and private sectors.



PUBLIC-PRIVATE PARTNERSHIP (PPP) IMPACT ENGINES

Public-Private Partnership (PPP) Impact Engines form a core delivery category under Malaysia's National AI Action Plan 2026-2030 (AI Nation 2030). They are designed to accelerate transformation in major industrial sectors, including Manufacturing, Plantation, and Micro, Small and Medium Enterprises (MSMEs). These initiatives enable close collaboration between government and industry to build closed-loop AI ecosystems, where high-quality data, specialised talent, and deployable AI solutions reinforce one another. Through this approach, PPP-Led Impact Engines unlock productivity gains, support sector-wide modernisation, and generate strong economic multiplier effects.

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MANUFACTURING: AI HUB FOR THE MANUFACTURING ECOSYSTEM

Overview

Manufacturing builds on Malaysia's strong economic base, with the sector contributing approximately 24% to national GDP⁴. This initiative positions manufacturing as a testbed for scalable AI adoption, spanning Tier 1 multinational corporations through to SMEs, to drive organic adoption across targeted industries.

By establishing an AI Hub for the Manufacturing Ecosystem, Malaysia aims to develop foundational AI models tailored to core sectors, beginning with semiconductors, and progressively adapt them for broader applications such as predictive maintenance and process optimisation. This structured approach addresses barriers to adoption by reducing implementation costs, addressing talent constraints, and accelerating time-to-value, helping local companies overcome high implementation costs and talent shortages while attracting high-value foreign direct investment.

Key Lead

Ministry of Investment, Trade and Industry

Proposed Data Providers

Private Companies/Government-Linked Companies

⁴ Ministry of Investment, Trade and Industry (MITI), *National Industrial Master Plan 2030 (NIMP 2030)*, Kuala Lumpur: Government of Malaysia, 2023.



» Target End-State

Become the preferred destination for advanced manufacturing where AI unlocks productivity and accelerates Malaysia's movement up the value chain.

» Manufacturing Intended Outcomes

Higher Manufacturing Productivity	Faster AI Adoption for SMEs	Attraction of Global Players
Achieve an increase in productive capacity via enhanced efficiency and reduced operational bottlenecks.	Overcome adoption barriers and help smaller companies scale digital transformation to improve their global competitiveness.	Strengthen Malaysia's position in key industries, such as semiconductors, to boost FDI inflows through AI-powered hubs.

» Implementation Approach

Ignite	Scale	Transform
Initiate AI Model Development and Proof of Concept (PoC) deployments by convening industry players to identify use cases and develop foundational AI models, tailored to core manufacturing sectors.	Execute model expansion and Sector Adaptation by broadening AI models and tailoring them for application across additional manufacturing sub-sectors, including automotive, chemicals, and medical devices.	Enable Organic Ecosystem Activation through comprehensive testbeds, shared data infrastructure, and sustained technical support.



PUBLIC-PRIVATE PARTNERSHIP (PPP) IMPACT ENGINES

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PLANTATION: AI PLATFORM FOR SMALLHOLDER EMPOWERMENT

Overview

The plantation sector faces a significant digital divide, particularly in palm oil, where smallholders manage approximately 26.4% of Malaysia's planted area⁵ but have limited access to advanced AI tools due to cost, capability, and knowledge constraints.

This initiative focuses on developing a platform that consolidates existing datasets and AI solutions to support smallholders with high-impact capabilities such as pest and disease management, fertiliser optimisation, and harvest timing. By coordinating support from central agencies and large plantation players, the platform enables smallholders to improve yields, reduce labour intensity, and adopt precision farming practices comparable to large estates. Over time, this ecosystem-based approach strengthens national palm oil productivity and positions Malaysia as a global hub for exporting AI solutions tailored to tropical plantation agriculture.

Key Lead

Ministry of Plantation and Commodities
• Malaysian Palm Oil Board (MPOB)

Proposed Data Providers

Ministry of Rural and Regional Development and universities
• Federal Land Development Authority (FELDA)
• Federal Land Consolidation and Rehabilitation Authority (FELCRA)
• Rubber Industry Smallholders Development Authority (RISDA)

Target End-State

Advance AI adoption across the plantation sector, positioning Malaysia as a global leader and exporter of AI solutions for palm oil.

⁵ BERNAMA, Planted Oil Palm Area To Hit 5.64 Mln Hectares In 2025, 11 September 2025.



» Plantation Intended Outcomes

Reduced Labour Burden	Improve Large Plantation Supply Base	Activated Agritech Ecosystem
Achieve up to 70% reduction in manual labour and up to 2.7 times greater land coverage through AI-enabled automation.	Increased Fresh Fruit Bunch (FFB) volume and quality from supply base of smallholders.	Catalyse local innovation to serve more than 300,000 smallholders while unlocking new export opportunities for Malaysian-developed agritech solutions.

» Implementation Approach

Ignite	Scale	Transform
Focus on Platform Development for Smallholders (e.g. MySawit) by consolidating existing initiatives across MPOB divisions.	Expansion of platforms such as MySawit by integrating additional AI solutions, such as autonomous drone services for spraying and monitoring, which also generate richer training data.	Enablement by leveraging Malaysia's technical capabilities to serve global markets. Local plantations can extend their technology advantage to Malaysia-owned operations in international markets, positioning Malaysia as a global hub for AI in palm oil.



PUBLIC-PRIVATE PARTNERSHIP (PPP) IMPACT ENGINES

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AI FOR MSMEs: MODULAR RESOURCES FOR MSMEs

» Overview

Micro, Small and Medium Enterprises (MSMEs) form the backbone of Malaysia's services sector, representing approximately 84.4% of all businesses⁶. While awareness of AI among MSMEs is relatively high, adoption remains limited due to talent shortages, cost constraints, and uncertainty around where to start.

This initiative builds on the Business Digitalisation Initiative (BDI) to create a one-stop AI enablement ecosystem for MSMEs⁷. It provides modular, affordable, and pre-vetted AI tools integrated into platforms MSMEs already use, supported by training and advisory services. By lowering entry barriers and simplifying adoption, the initiative enables MSMEs to leapfrog incremental digital upgrades and embed AI directly into daily operations, improving productivity, competitiveness, and long-term resilience.

» Key Lead

Ministry of Digital
• Malaysia Digital Economy Corporation (MDEC)

» Proposed Solution Providers

SaaS providers, Platform players

» Proposed Data Providers

Platform players

» Target End-State

Inclusive AI access for all MSMEs, supported by end-to-end enablement tailored to different stages of the MSMEs AI adoption journey.

⁶ SME Corp Malaysia, *Profile and Importance to the Economy*, 2025.

⁷ Malaysia Digital Economy Corporation (MDEC), *Business Digitalisation Initiative (BDI)*.



» MSMEs Intended Outcomes

Lower Adoption Barriers	Enhanced Productivity	Stronger Economic Resilience
Provide 1.5 million MSMEs with scalable access to AI by embedding tools into platforms they already use.	Enable automation of back-office and customer-facing functions, allowing MSMEs to move beyond basic digitisation to higher value-added activities.	Widespread AI adoption across the services sector strengthens value chains and creates new monetisation opportunities for both solution providers and MSMEs.

» Implementation Approach

Ignite	Scale	Transform
Building on BDI, provide fit-for-purpose, targeted and practical AI solutions tailored to individual MSME requirements and digital maturity levels.	Provide modular support and scaled Proof of Concept (POCs) through a library of open-source AI toolkits, training and advisory services, supported by onboarding frameworks modular across segments, digital maturity levels and service sub-sectors.	Establish an AI marketplace for MSMEs where businesses can access tailored, affordable and vetted AI solutions and services, including offerings from local providers.

INDUSTRY CHAMPION-LED IMPACT ENGINES

Industry Champion-Led Impact Engines focus on mature sectors where established private-sector leaders are well positioned to spearhead AI adoption. These initiatives build on existing industry capabilities and market structures, with the Government partnering closely with industry champions to advance national objectives through practical and commercially sustainable implementation.

Unlike government-initiated Impact Engines, which primarily target public service delivery and early ecosystem activation, Industry Champion-Led Impact Engines emphasise joint execution between the public and private sectors. This model allows the Government to support sector-specific transformation while leveraging industry leadership, operational expertise, and market readiness. The result is AI adoption that delivers shared value for citizens, strengthens industry competitiveness, and contributes to national economic resilience.

To balance innovation with stability, Industry Champion-Led Impact Engines are guided by two complementary strategic themes:

» Theme A: Access New Growth and Underserved Opportunities

Leveraging AI to expand into emerging markets, address unmet needs, and unlock new sources of value.

» Theme B: Support Existing Business

Strengthening established operations through AI-driven efficiency, resilience, and long-term competitiveness, ensuring core industries remain robust as they adapt to an increasingly AI-enabled economy.

Implementation follows a facilitative, partnership-based engagement model. The Government plays a coordinating role by identifying areas of strategic alignment, enabling access to foundational enablers, and supporting coherence with national policy priorities. Governance arrangements remain proportionate and flexible, with industry champions maintaining regular engagement to receive support and alignment, without the prescriptive reporting requirements applied to catalytic government-led initiatives.







INDUSTRY CHAMPION-LED IMPACT ENGINES

III

POWER UTILITY: AI FOR A GREEN ENERGY FUTURE

» Overview

The Power Utility Impact Engine applies AI to modernise the power utility sector, supporting the expansion of renewable energy and the development of an intelligent, flexible grid capable of meeting future demand. The focus is on using AI to balance sustainability goals with operational reliability and high standards of customer service.

» Strategic Focus

Accelerating Malaysia's transition to a sustainable, resilient energy system.

Growth-Oriented Outcomes

Scale renewable energy through flexible grids and advanced analytics, including AI-enabled solar generation management.

Core Business Transformation

Improve service delivery, customer experience and operational efficiency across the utility value chain.

Government Facilitation

Access to national AI talent, public datasets through the National Data Exchange, linkages to AI solution providers, and international cooperation frameworks that support energy transition efforts.



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OIL AND GAS: MODERNISING THE OGSE ECOSYSTEM

» Overview

The Oil and Gas Impact Engine focuses on democratising AI adoption across the oil and gas value chain, with particular emphasis on the local Oil and Gas Services and Equipment (OGSE) ecosystem. AI is positioned as a practical enabler to improve productivity, strengthen operational resilience, and support future growth beyond traditional operations.

» Strategic Focus

Strengthening the long-term competitiveness of Malaysia's oil and gas sector while enabling diversification.

Growth-Oriented Outcomes

Deploy AI across new ventures and embed AI capabilities within the industry champion's investment and venture portfolio.

Core Business Transformation

Modernise the local OGSE ecosystem by increasing AI adoption across existing operations and service delivery.

Government Facilitation

Access to national AI talent, public datasets through the National Data Exchange, linkages to AI solution providers, and international cooperation frameworks that support energy transition efforts.



INDUSTRY CHAMPION-LED IMPACT ENGINES

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FINANCIAL SERVICES: GROWTH, INCLUSION AND SECURITY

Overview

AI is applied across Malaysia's financial sector to expand access to finance while reinforcing trust, security, and regulatory compliance. The focus is on serving underserved segments, including MSMEs and start-ups, without compromising financial stability or consumer protection.

Strategic Focus

Supporting economic growth, financial inclusion, and system integrity.

Growth-Oriented Outcomes

Expand financial inclusion, including improved access to funding and financial services for MSMEs and start-ups.

Core Business Transformation

Strengthen regulatory compliance, fraud detection, cybersecurity, and risk management through AI-enabled capabilities.

Government Facilitation

Specialised AI talent pipelines, collaboration with research Centres of Excellence, and regulatory sandbox environments to safely test and scale AI-enabled financial innovations.



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TELECOMMUNICATIONS: EMPOWERING MALAYSIA'S AI INFRASTRUCTURE

» Overview

The telecommunications sector underpins Malaysia's AI ecosystem by enabling the deployment, management, and commercialisation of AI-ready infrastructure. By strengthening connectivity, data transmission, and compute access, this Impact Engine allows AI solutions to scale efficiently, securely, and reliably across sectors.

» Strategic Focus

Providing the digital and compute backbone for national AI adoption.

Growth-Oriented Outcomes

Develop new revenue streams through AI-enabled infrastructure and digital services.

Core Business Transformation

Ensure robust and scalable infrastructure to meet growing domestic AI demand across industries.

Government Facilitation

Access to shared data pools, high-powered compute resources, and ecosystem support to enable local developers and enterprises to build, deploy, and scale AI solutions.



PART 4:

FOUNDATIONAL ENABLERS: ANCHORING SYSTEM- WIDE AI ADOPTION

FOUNDATIONAL ENABLERS

Complementing the sector-led Impact Engines, the Foundational Enablers provide the support required to sustain and scale AI adoption across the economy. They are the shared foundational components that individual sectors rely on, ensuring that AI deployment is consistent, trusted, and repeatable beyond isolated pilots.

Aligned with the Thirteenth Malaysia Plan (RMK-13), these enablers reinforce critical national capacities, including talent development, innovation pathways, data and compute infrastructure, governance, and financing. Together, they support Malaysia's transition from fragmented AI adoption to a coordinated, value-adding AI ecosystem with long-term resilience and competitiveness.

14 initiatives identified to strengthen Malaysia's AI foundational enablers

Globally Competitive Human Capital	E1*	Global Talent Network: Attract Malaysian and global AI talent to contribute, remotely or on-site to stimulate local AI ecosystem —while developing local talent
	E2	Talent Pipeline @ Scale: Widespread & accessible proactive skilling effort to expand the safety net against job displacement & provide new opportunities for all
	E3	AI-Centric Higher Education: Instill a mindset shift in higher education & equip learners with techno-functional & data skills while building a sustainable pipeline of AI talent
	E4	AI-Fluent Students: Embed AI usage, safety & ethics into K-12 learning so that every student can use AI tools responsibly & effectively
	E5	AI-Competent Civil Service: Prepare civil servants for an AI-augmented govt with the knowledge & skills to adopt AI at work, to deliver AI-enabled public services & to regulate AI
Market-Driven Innovation & Adoption	E6	Research Foundry: Create a balanced push-pull environment that translates industry-informed R&D to products by consolidating research & funding and adopting a quadruple helix approach
	E7*	AI Growth Zones: Zones anchored on quadruple helix approach, offers compute access, AI talent, playbooks, access to Research Foundry and zone-level sandbox to drive throughput, time-to-market gains and job creation
	E8	Public Trust and Confidence: AI on the public comms agenda: build AI literacy and promote responsible use (privacy, bias, safety) to secure public trust

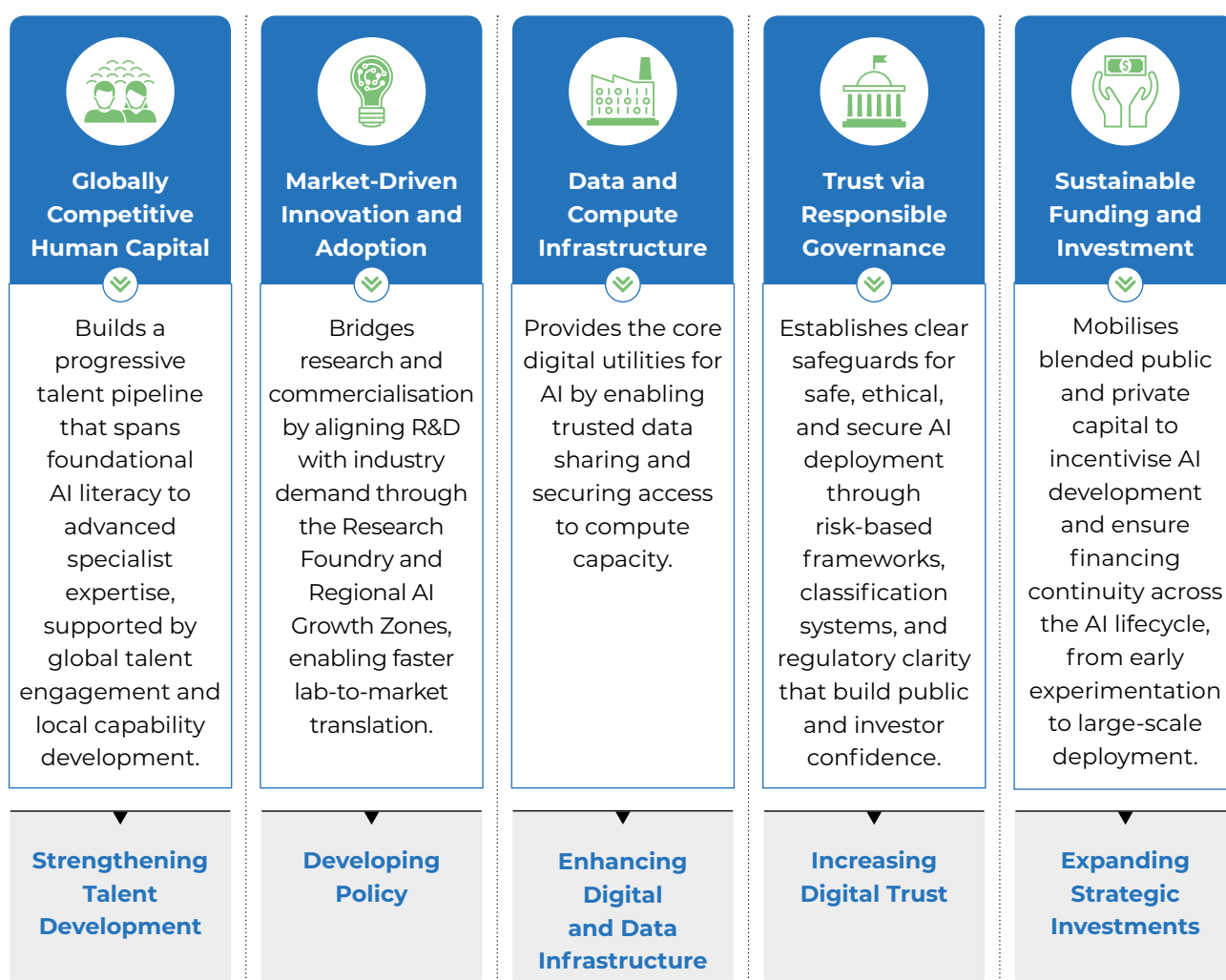
Data & Compute Infrastructure	E9	AI-Ready Data Ecosystem: Aggregates a 'Top 100' priority dataset catalogue across sectors, packaging them into trusted, purpose-driven data products for AI and analytics – to catalyse establishment of a national Data Exchange
	E10	Accessible High-Compute Capacity: Provide accessible compute capacity to deliver affordable, AI-ready high-performance compute while staying within the nation's climate-impact commitments
Trust via Responsible Governance	E11*	Holistic and Sectoral AI Governance: Establish a unified, future-proof and pro-innovation governance foundation
	E12	AI Trust Function: Create an AI evaluation, assessment & response capability to ensure Malaysia can adequately pre-empt and manage AI risks
	E13	National AI Classification: Establish a criteria-led certification mechanism for Made-by-Malaysia AI—covering compute, data, and models paired with open benchmarks so AI ecosystems can flourish
	E14	AI-Aware Stewardship: Enable Malaysian corporate boards to be ready for an AI future—equipped with the skills, disclosures and controls to govern AI and other emerging-technology risk
Sustainable Funding & Investment		Capital chases opportunity: robust enablers create investable AI ventures, letting funding flow, scale, and recycle across the ecosystem

* Catalytic Initiatives

HOW FOUNDATIONAL ENABLERS OPERATE

Foundational Enablers operate through a coordinated Whole-of-Nation approach that aligns government, industry, academia, and civil society. Rather than acting as standalone programmes, they function as shared mechanisms that support initiatives such as impact engines and convert these initiatives into national assets.

This is achieved through five interlinked pillars:



DELIVERY AND OVERSIGHT

Delivery of the Foundational Enablers is coordinated through a tiered governance structure led by the AI Malaysia (National AI Office). Each pillar is assigned to designated Lead Ministries, ensuring clear ownership, accountability, and alignment with national priorities while enabling cross-agency coordination.

CATALYTIC FOUNDATIONAL ENABLERS INITIATIVES

While 14 Foundational Enablers underpin the AI Nation 2030, three are prioritised as Catalytic Initiatives in the initial phase due to their system-wide impact and first-mover advantage:

- » **E1:** Global Talent Network
- » **E7:** AI Growth Zones
- » **E11:** Holistic and Sectoral AI Governance

These initiatives unlock critical constraints early by expanding talent access, creating demand for AI technology, and providing regulatory certainty, accelerating national self-reliance and momentum across all Impact Engines.

STRENGTHENING CORE CAPABILITIES THROUGH FOUNDATIONAL ENABLERS

Foundational Enablers provide the capabilities, infrastructure, and coordination required to sustain AI adoption at scale. They strengthen critical areas such as talent, data and compute infrastructure, trusted governance, innovation pathways, and sustainable funding, ensuring that Impact Engines can be deployed effectively and scaled across sectors.







GLOBALLY COMPETITIVE HUMAN CAPITAL

EI

GLOBAL TALENT NETWORK

» Overview

Malaysia urgently needs to expand its AI talent base to remain competitive by 2030. This requires attracting both the Malaysian diaspora and international AI experts, whether remotely or on-site. At the same time, Malaysia must simultaneously invest in strengthening its own local AI talent to ensure long-term capabilities.

Although progress has been made through talent attraction programmes, specialised visas, and skills development initiatives, the current pool of AI developers, scientists, and professionals remains below regional and global benchmarks. Existing efforts are positive but not yet sufficient to build a strong and sustainable AI ecosystem at a national scale.

» Key Leads

Ministry of Human Resources
• Talent Corporation Malaysia Berhad (TalentCorp)

» Target

Build an initial cohort of expert-level AI talent with techno-functional skills by 2028, followed by significant expansion to meet national-scale demand by 2030.

» Recommendation

Strengthen Malaysia's AI talent base by accessing global expertise with sustained development of local capabilities through targeted attraction, facilitation and ecosystem building.



Items	Proposed Actions	Implementation Priorities
Access Global AI Talent (Diaspora and International Experts)	Malaysian Diaspora AI Network Establish a national AI diaspora database and launch targeted campaigns, such as “Help Build AI Malaysia”, with clear incentives for national contribution. AI Talent Track under MTEP Introduce a dedicated track for diaspora and global experts, offering enhanced incentives, multi-role flexibility, and KPI-linked renewals, leveraging the KL20 Innovation Pass. Digital e-Residency Pass Enable high-potential foreign digital talent and entrepreneurs to conduct business and contribute remotely without requiring physical residency. AI Talent Concierge Establish a dedicated function to attract and retain AI experts, providing end-to-end support for visas, relocation, schooling and housing.	- Map and verify diaspora talent through professional and alumni networks, supported by a dedicated outreach team. - Build on existing Innovation Pass offerings and bundle visas with R&D incentives where appropriate. - Define the scope of the e-Residency pass to enable business participation without granting automatic residency rights. - Integrate processes across Immigration, Ministry of Higher Education (MOHE), and private partners, supported by clear service timelines and ROI principles.
Invest in and Build Local AI Talent	Talent Investment Fund Establish a public-private co-investment vehicle to attract world-class AI builders to base teams or new AI companies in Malaysia. AI Fellows for Malaysia Fund Malaysians to pursue advanced AI research or industry experience abroad, with flexibility in immediate return but clear expectations for future ecosystem contributions.	- Anchor the fund with capital from sovereign investors and Government-Linked Companies (GLCs), supported by a clear business case and impact framework. - Require fellows to submit structured impact plans, including spin-offs, patents, training or knowledge transfer. - Track contributions through defined reporting and monitoring mechanisms.



GLOBALLY COMPETITIVE HUMAN CAPITAL

E2

TALENT PIPELINE @ SCALE

» Overview

Rapid advances in AI and automation are reshaping Malaysia's labour market. While some roles face displacement, new demand is emerging for digital, AI and AI-adjacent skills across sectors. A broad and accessible national skilling effort is therefore needed to protect workers and create new pathways into higher-value roles.

Although a national skilling ecosystem already exists, current reskilling efforts remain fragmented, uneven in access and depth, and not always aligned with industry needs. A more coordinated, scalable and industry-driven approach is required.

» Key Leads

Ministry of Human Resources
• Talent Corporation Malaysia Berhad (TalentCorp)

» Target

Enable Malaysians in at-risk or transitioning roles to successfully move into higher-value, future-ready and AI-enabled occupations through a scalable, inclusive and industry-aligned national reskilling and upskilling pipeline.

» Recommendation

Strengthen Malaysia's national skilling system by embedding AI-focused reskilling and upskilling as a core capability to protect workers from displacement while enabling transitions into future-ready roles. The approach focuses on expanding access, improving programme quality, deepening industry collaboration, and creating clear credentials and career pathways, with AI serving both as a skillset and an enabler.



Items	Proposed Actions	Implementation Priorities
Broaden Access to Skilling	• Individual Impact Diagnostic Tool Develop a personal AI impact and readiness diagnostic tool to assess displacement risk, identify transferable skills and recommend learning pathways. • National Career and Skills Taxonomy Develop a dynamic taxonomy covering AI and AI-adjacent roles across key sectors to improve career visibility and navigation.	• Deploy the diagnostic tool as a national entry point for workers to understand their skilling needs and available options. • Lead taxonomy development in collaboration with TalentCorp, Malaysian Qualifications Agency (MQA), MDEC and Human Resource Development Corporation (HRD Corp), aligned with existing skills frameworks.
Ensure Funding and Access	• AI Skilling Credits Introduce individual-based AI skilling credits which can be used to enrol in AI training programmes through approved platforms to support Malaysians in at-risk professions, low-income groups and workers outside the traditional levy schemes.	• Extend access to gig workers, SME employees and the long-term unemployed. • Integrate eligibility and access with systems such as the Social Security Organisation (SOCSO), Employees Provident Fund (EPF), HRD Corp and national digital identity platforms.
Enhance Curriculum and Delivery	• National Skilling Marketplace Establish a unified national platform aggregating AI and digital skilling programmes from public and private providers. • Project-Based Extended Programmes Pilot and scale longer, project-based reskilling programmes focused on applied, employer-validated learning.	• Enable a seamless discovery-to-placement journey on a single platform, including funding eligibility checks. • Prioritise hands-on, project-based delivery and avoid lecture-heavy programme repackaging.
Strengthen Industry Integration	• Employer AI Skilling Pledges Introduce an AI skilling pledge to secure industry commitments for placements, apprenticeships, bootcamps, and employment pathways.	• Engage employers through existing industry councils and talent platforms. • Incentivise participation through levy mechanisms, co-funding arrangements, or tax incentives where appropriate.



GLOBALLY COMPETITIVE HUMAN CAPITAL

Ensure Credential Stackability

• Accredited and Stackable Courses

Ensure reskilling programmes are industry-recognised, stackable and aligned with national qualification frameworks.

- Co-lead the development of assessment and accreditation mechanisms, leveraging AI tools to review curriculum quality and skills coverage.
- Enable credit transferability and progression pathways into formal qualifications.

E3

AI-CENTRIC HIGHER EDUCATION

Overview

Malaysia has made steady progress in positioning AI as a priority in higher education, supported by policy direction, initial funding, and early curriculum integration. However, the pace of talent development remains constrained by accreditation timelines, limited educator expertise, uneven industry participation, and unclear employment pathways. Building a sustainable pipeline of AI-ready graduates requires higher education institutions, colleges, and TVET providers to move beyond isolated initiatives towards a coordinated, industry-connected, and values-driven AI education model that equips student learners with techno-functional, data, and ethical AI competencies.

Key Lead

Ministry of Higher Education

Target

Increase participation in AI-related learning, strengthen educator capability, and expand industry placements and apprenticeships in AI fields.

Recommendation

The aim is to drive a mindset shift across higher education, colleges, and TVET institutions by mainstreaming AI competencies, strengthening educators, and expanding industry collaboration through curriculum reform, educator capability building, shared infrastructure, and applied industry-led learning, guided by human values and responsible AI.



Items	Proposed Actions	Implementation Priorities
Mainstream AI in the Curriculum	• National AI Policy for Higher Education Establish a policy framework covering curriculum delivery, accreditation, administration, and ethics. • Fast-Lane Accreditation Introduce expedited pathways for AI courses and modular electives aligned with MQA AI standards. • AI-Infused Curriculum Refresh Update programmes to embed applied, ethical, and responsible AI. • Flagship AI Adopters Designate selected institutions and faculties as centres of excellence to pilot and scale best practices.	• Ensure baseline AI fluency for all graduates while strengthening specialist talent pipelines. • Expand modular AI electives across disciplines and scale successful initiatives across institutions. • Leverage upcoming MQA AI standards to support fast-lane accreditation and continuous curriculum updates.
Empower Educators with Training and Resources	• Educator AI Mobility and Fellowships Provide advanced training and industry attachments with leading AI research and industry labs. • Educator Upskilling Programmes Implement structured AI bootcamps, certification pathways, and peer learning networks. • National Virtual AI Lab Provide shared access to compute resources, curated datasets, and AI sandboxes for teaching and experimentation.	• Secure co-funding arrangements and leverage national AI research and compute resources to support teaching and applied learning.



GLOBALLY COMPETITIVE HUMAN CAPITAL

Scale Industry-Led Training and Apprenticeships

- **Institute-Industry AI Clinics**

Enable universities and TVET institutions to partner with industry on capstone projects and case-based learning.

- **Work-Based Learning and Apprenticeships**

Expand structured placements with local and multinational companies which employ AI as core to their operation.

- Ensure case materials are open and reusable to support teaching and curriculum scaling.
- Coordinate placements through national industry-academia platforms and link them to defined AI learning outcomes and industry incentives.

E4

AI-FLUENT STUDENTS

Overview

AI tools are already widely used by primary and secondary school students in Malaysia and globally, with strong potential to enhance learning outcomes. However, gaps in AI literacy, educator readiness, and equitable access to devices and connectivity risk misuse, uneven learning, and a widening digital divide without a coordinated and systemic response. Embedding AI usage, safety, and ethics early is critical to ensure students use AI responsibly and build a foundation for future workforce readiness.

Key Lead

Ministry of Education

Target

Achieve widespread AI literacy among primary and secondary school students.

Recommendation

The aim is to embed AI literacy, safety, and ethical use across primary and secondary education by strengthening policy coherence, empowering educators, integrating AI into curricula, and addressing digital access gaps. This positions AI as a learning enabler while safeguarding students and supporting inclusive, values-based adoption.



Items	Proposed Actions	Implementation Priorities
Ensure Policy Coherence and Mindset Shift	• Policy Alignment Integrate AI explicitly into existing education blueprints and digital education policies, recognising AI as an enabler of teaching and learning. • Curriculum Enhancement Embed AI safety, ethics, and effective usage across relevant subjects and ICT or moral education. • Industry Partnerships Work with technology partners to support curriculum integration, funding, and resources.	• Phase AI curriculum enhancements into existing syllabi. • Align national AI literacy guidelines for teachers and students. • Ensure coordination across digital education initiatives to avoid overlap.
Empower Educators to Teach about AI and Teach with AI	• Educator Enablement Provide clear frameworks, guidance, and incentives for teachers to use AI in teaching and learning. • AI Champion Cohort Train selected educators to advanced proficiency as mentors and pace-setters, supported by national platforms and industry collaboration.	• Scale educator training programmes in partnership with industry. • Strengthen peer networks to share practices and accelerate adoption.
Bridge the Digital Divide	• AI Readiness Assessments Introduce school-level assessments integrated into broader digitalisation initiatives. • EdTech Infrastructure Deploy AI-enabled classroom tools, devices, and platforms to support teaching and learning nationwide.	• Pair device roll-outs with maintenance and connectivity funding. • Expand AI-powered classroom pilots and ensure rural and underserved schools are included.



Globally Competitive Human Capital

E5

AI-COMPETENT CIVIL SERVANT

Overview

AI adoption in the public sector is accelerating, improving productivity, service delivery, and policy outcomes. However, gaps in AI competency, regulatory readiness, and consistent application across ministries risk undermining governance, operational effectiveness, and confidence in Malaysia's AI ecosystem without structured upskilling.

Key Lead

Public Service Department

Target

Strengthen managerial proficiency in emerging technologies, including AI, across government.

Recommendation

Prepare civil servants for an AI-augmented government by embedding AI competency as a core requirement, strengthening regulatory capability, and standardising structured learning and industry exposure to enable responsible and effective AI adoption.



Items	Proposed Actions	Implementation Priorities
Make AI Training a Mandate	• Training as a Pre-Condition Require completion of AI training before approving, deploying, or overseeing government AI systems.	• Roll out in phases, starting with high-risk and regulated sectors. • Align requirements with existing governance and approval processes to ensure compliance.
Introduce Tiered AI Competency Frameworks	• AI Competency Assessment Assess baseline knowledge, confidence, and responsible AI awareness across the public sector. • Competency Mapping Develop tiered frameworks covering policy, operations, technology, and responsible AI use. • Recognition and Certification Link certifications and competency badges to career progression and professional development linked to AI capability attainment.	• Update frameworks regularly to reflect evolving AI development. • Align competency recognition with career advancement.
Centralise Learning to Ensure Quality and Consistency	• Tiered Learning Pathways Develop structured learning pathways by role and competency level, including courses and micro-credentials. • Central Learning Portal Integrate AI training resources, guidance, and peer learning into a unified platform.	• Scale existing programmes and ensure consistent quality and ensure alignment with national AI priorities.
Ensure Industry and Regulatory Exposure	• Industry and Regulator Placements Expand placements with leading AI regulators, think tanks, and technology companies.	• Coordinate industry and regulatory placements to provide exposure and ensure skills are applied effectively upon completion of placement programmes.



MARKET-DRIVEN INNOVATION AND ADOPTION

E6 RESEARCH FOUNDRY

Overview

Research Foundry aims to strengthen Malaysia's AI research, development, and commercialisation pipeline by creating a balanced push-pull ecosystem that translates industry-informed R&D into market-ready products. It consolidates research direction and funding under a coordinated, mission-driven framework based on a quadruple helix model centred on industry-academia collaboration with strategic support from the government.

The objective is to build a functioning end-to-end innovation-to-commercialisation pathway, supported by clear research priorities, aligned funding, development resources, strong IP protection and structured commercialisation support.

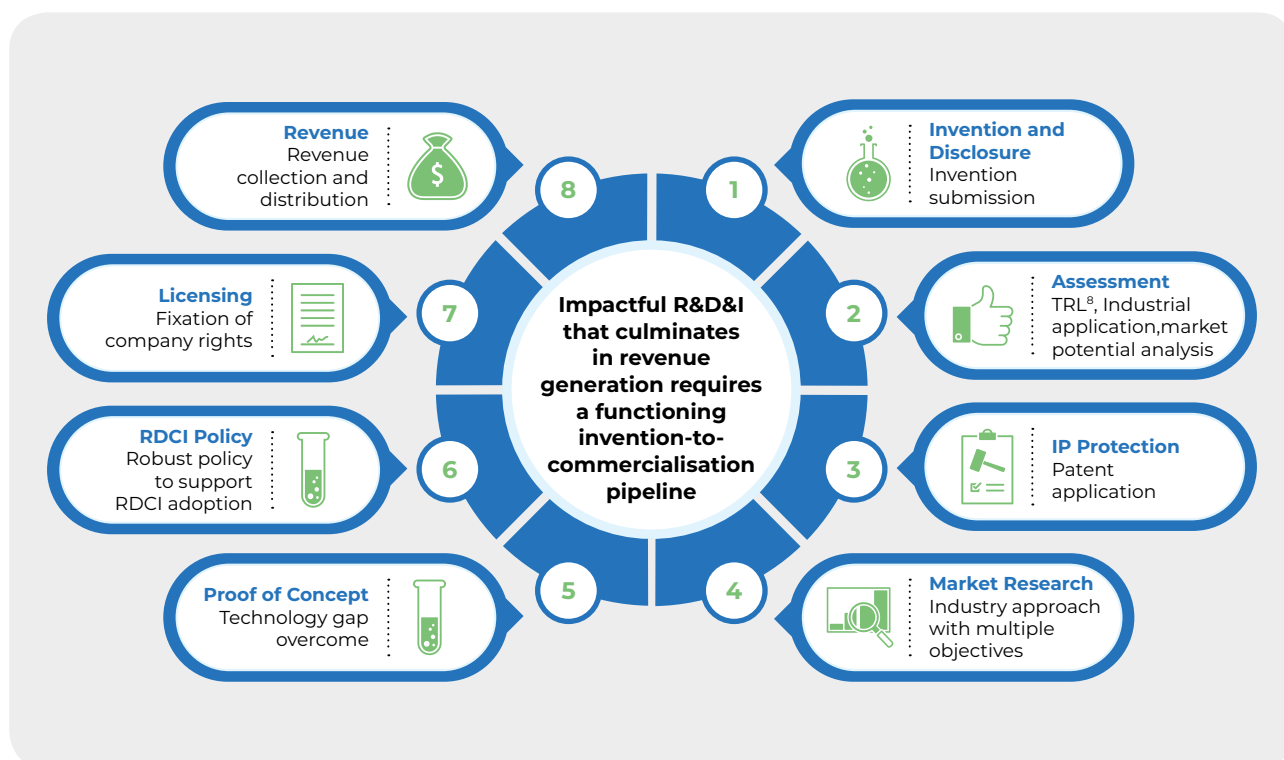


Figure 4: The Research Foundry Quadruple Helix Model – illustrates a coordinated, end-to-end innovation-to-commercialisation pathway driven by industry, academia, government, and market alignment.

^a 1. Technology readiness level 2. Technology Transfer Office

Source: Stanford University's the Global AI Vibrancy Tool



» Key Lead

Ministry of Science, Technology and Innovation

» Recommendation

Enhance the Research, Development, Commercialisation and Innovation (RDCI) ecosystem by aligning funding, expertise and infrastructure towards mission-based research programmes.

Items	Proposed Actions	Implementation Priorities
Coordinated Funding	• Malaysia Grand Challenge Priority Establish AI as a national research priority and work with industry and academia to define high-impact use cases. • Strategic Alignment Align initiatives with the RMK-13 mission-based research programme.	• Leverage existing Malaysia Grand Challenge initiatives. • Collaborate with industry stakeholders to define focus areas and funding priorities.
Collaborative Approach to Drive Applied AI R&D	• Ecosystem Coordination Advance applied R&D and commercialisation through industry-led AI consortia. • Academic Integration Mobilise university expertise to address citizen-centric challenges.	• Centres of Excellence Empower selected universities to serve as AI expertise hubs. • Problem-Oriented Projects Launch targeted projects focused on practical AI use cases.
Open Resources for Reproducible Solutions	• National AI Research Resource Establish shared benchmarks and an open repository for code, datasets, and best-practice playbooks. • National AI Compute Pool Provide facilitated compute access through a national virtual AI lab.	• Coordinate resource pooling across R&D agencies and universities. • Secure compute access as a condition of market entry for providers.



MARKET-DRIVEN INNOVATION AND ADOPTION

International Collaborations

- **Global Partnerships**

Secure Government-to-Government negotiations to identify and secure research partnerships with other leading AI countries.

- **ASEAN Launchpad**

Position Malaysia as a regional base for AI research within ASEAN.

- Initiate joint research calls, mobility programmes, and co-publication efforts.
- Leverage diplomatic missions to identify collaboration opportunities.

Commercialisation Pathway

- **Strengthen IP Protection**

Update legislation to ensure adequate AI protection, issue permissive-IP guidelines for testing, and roll out an AI-focused fast-track aligned with RMK-13 strategy on strengthening IP commercialisation, valuation, and technology transfer.

- **National Technology Transfer Office (TTO)**

Integrate existing university TTOs into a one-stop service for drafting licenses and spin-out agreements.

- Develop a clear reform roadmap beginning with expert consultations and policy review on AI related IP protection.
- Assign a national lead coordinating body engaging quadruple helix AI consortia.

E7

AI GROWTH ZONES

» Overview

AI Growth Zone is industry-led AI demand centres, which accelerate AI ecosystem development through demand-driven adoption and an integrated support track combining compute access, embedded technical talent, and incentives. It de-risks development, provides clearer deal flow, and attracts talent by matching and facilitating AI technology supply to real industry demand.

AI Growth Zones will build on each region's inherent strengths and key economic focus areas, fostering the development of relevant AI use cases aligned to local industries.



1 Northern Corridor Economic Region

High-Value Manufacturing

Vision-guided inspection and sorting on assembly lines

Modern Agriculture

AI paddy yield monitoring for Kedah Agristack

2 Greater Klang Valley

Advanced Manufacturing

AI digital-twin and predictive scheduling for factories

Services

Real-time fraud-detection and credit-scoring engine

3 Iskandar Malaysia

Logistics

Smart port with computer-vision yard management and berth management

Petrochemicals and Oleochemicals

AI-assisted feedstock and trading optimisation

4 East Coast Economic Region

Oil, Gas and Petrochemicals

Real-time plant safety analytics

Tourism

Smart-beach with poacher alerts and visitor monitoring

5 Sarawak Corridor of Renewable Energy

Renewable Energy

Smart port with computer-vision yard management and berth management

Smart Cities

AI traffic and flood-risk management

6 Sabah Development Corridor

Oil, Gas and Petrochemicals

AI-powered drilling optimisation and NPT prediction

Agriculture

Automatic agriculture quality grade sorting engine

Figure 5: Regional AI Growth Zones and Key Economic Focus Areas.



MARKET-DRIVEN INNOVATION AND ADOPTION

Key Leads

Ministry of Digital
 • Malaysia Digital Economy Corporation (MDEC)
 State Authority

Target

Increase the number of AI demand centres across key regions nationwide.

Recommendation

Transition from broad-based investment approaches to targeted, location-based support and ecosystem orchestration to maximise returns.

Items	Proposed Actions	Implementation Priorities
Provide Milestone-Based Support	• Provide Compute Access Offer tiered, time-bound compute credits and onboarding support to reduce entry barriers for AI ventures. • Embed Technical Expertise Deploy trained AI talent into companies via Talent-in-Residence programmes to support development and deployment of AI. • Link Incentives to Outcomes Disburse incentives based on the achievement of defined technical or commercial milestones.	• Secure compute capacity through partnerships with industry or public sector partners. • Structure the Talent-in-Residence programme with AI experts as mentors supporting apprentices throughout the programme. • Publish a transparent scoring rubric for evaluating application for milestone-based support.



Strengthen the Innovation Environment	• Provide Shared Technical Resources Offer curated datasets, reference architectures, and best-practice playbooks. • Streamline Regulatory and Business Processes Provide a single liaison channel to relevant agencies to reduce administrative burden and accelerate deployment.	• Crowdsource innovative tools and datasets. • Coordinate cross-agency company registration, visa, and IP services through a single channel.
Orchestrate Collaboration and Catalyse Demand	• Build Mentor and Talent Networks Identify and retain mentors for solution builders via the AI Track under MTEP and eResidency pathways. • Strengthen Academic Synergies Engage universities to collaborate with zone players on R&D and talent pipelines for targeted focus areas. • Mobilise Private Investment Adopt a portfolio strategy to strengthen existing Government-linked Investment Companies (GLICs) investments in AI ventures. • Activate Demand-Led Programmes Organise structured programmes that connect solution providers with companies seeking AI solutions.	• Deploy AI talent and university partnerships to support Growth Zones and priority R&D. • Embed an AI focus mandates in Government-linked Investment Companies (GLICs) with co-investment funds.



MARKET-DRIVEN INNOVATION AND ADOPTION

E8

PUBLIC TRUST AND CONFIDENCE

Overview

Widespread AI adoption without sufficient public literacy and education risks undermining safety, trust and security. Public awareness and confidence in AI are therefore essential to enable safe and inclusive adoption.

By coordinating a long-term communications approach, leveraging diverse media channels and responding effectively to incidents, Malaysia can strengthen trust and increase responsible AI adoption among citizens.

Key Leads

Ministry of Digital
• AI Malaysia (National AI Office)

Target

Increase the proportion of Malaysians who are confident in and trust AI systems.

Recommendation

Make public awareness and trust in AI a national strategic communications priority to support safe and broad adoption.



Items	Proposed Actions	Implementation Priorities
Proactive Communications to Build Trust and Confidence	Risk Mitigation Communications Proactively share clear and accessible information on how emerging AI risks are mitigated, in collaboration with the AI Trust Function, AI Malaysia (National AI Office) and Malaysian Communications and Multimedia Commission (MCMC). Education via Traditional Channels Use mainstream media, press briefings and documentary content to educate the general public. Social Media Amplification Partner with credible influencers to launch campaigns that increase reach and utilise modern content creation.	Core Focus Areas Structure all content around three main pillars: AI Literacy, Responsible AI Use, and AI Adoption. Audience Segmentation Tailor messaging for specific groups, including youth, rural populations, SMEs, civil servants, and seniors. Influencer Guidelines Develop a formal selection framework for influencers to ensure high standards of credibility and accuracy.
Reactive Response to Provide Clarity and Assurance	AI Response Coordination Mechanism Establish a “hub and spoke” model working with the AI trust function and enforcement agencies to provide effective communication during incidents. AI Trust Barometer Regularly monitor public trust and adoption metrics, displaying results via a public dashboard. Data-Driven Strategy Updates Adjust communication strategies based on insights gathered by the Trust Barometer.	Governance Structure Position the Ministry of Digital as lead, supported by a committee comprising representatives from the AI Trust Function, AI Malaysia (National AI Office), Ministry of Communications and Malaysian Communications and Multimedia Commission (MCMC). External Benchmarking Align selected indicators with internationally recognised trust and technology adoption benchmarks to ensure global comparability and credibility. Demographic Sensitivity Continuously refine messaging to reflect changing public concerns and demographic trends.



DATA AND COMPUTE INFRASTRUCTURE

E9

AI-READY DATA ECOSYSTEM

Overview

Malaysia ranks first in data coverage and openness for official statistics⁹. To sustain this standing, measures should focus on unlocking the economic value of data while safeguarding rights and ensuring trusted data flows.

This can be achieved by instituting a Right-To-Data channel for data requests, expanding the scope of the Data Sharing Framework, scaling up a national-level data repository, and increasing adoption of Government data exchange platforms.

Key Leads

Ministry of Digital
• Jabatan Digital Negara

Target

Improving Malaysia's ranking in the Global Data Barometer.

Recommendation

Create a Malaysian Single Data Platform. Establish a centralised data governance and exchange platform to catalyse AI innovation and secure trusted cross-border data flows.

⁹ Open Data Watch, ODIN Country Profile: Malaysia (2024).



Items	Proposed Actions	Implementation Priorities
Create AI-Ready Datasets	• Impact Engine Strategy Task each Impact Engine lead to define a data-build strategy, including priority areas based on specific use cases and interoperability standards. • Right-to-Data Channel Institute a formal channel for non-sensitive, anonymised public sector data requests.	• Harmonise masking rules for Personally Identifiable Information (PII). • Launch a single portal with a live dashboard to track data request status and ensure accountability. • Partner with Dewan Bahasa dan Pustaka (DBP) and National Archives of Malaysia (Arkib Negara) to steward Malaysian-specific datasets for local AI Model development.
Incentivise Private-Sector Participation	• Contribution Incentives Offer incentives, fast-track regulatory approvals and “AI Data Champion” labels for companies contributing high-quality datasets. • Resource Support Provide open-source development kits, schema libraries and Malaysian benchmarks, including Bahasa Melayu and local cultural datasets.	• Use the “AI Data Champion” label as a formal metric contributing towards a company’s Bursa ESG score. • Provide access to standardised schemas, shared libraries and open technical resources.
Promote Transparent and Fair Exchange	• National Data Exchange Establish a clear marketplace for parties to publish, license and discover datasets under transparent commercial terms. • Regulatory Enforcement Empower the National Data Commission to enforce AI-related data governance and compliance across sectors.	• Offer self-service APIs and escrow-based payment systems to streamline data access and build trust. • Develop data governance codes of practice, audit protocols and graduated penalties for non-compliance.
International Cooperation	• Cross-Border Flows Enable secure data transfers by aligning with international frameworks such as DEPA and APEC Cross-Border Privacy Rules.	• Negotiate DEPA associate status via the Ministry of Digital and initiate pilot data-sharing arrangements with selected international partners.



DATA AND COMPUTE INFRASTRUCTURE

E10

ACCESSIBLE HIGH-COMPUTE CAPACITY

Overview

Accessible local compute capacity is essential to realise Malaysia's Made by Malaysia AI aspiration. AI compute capacity strengthens AI innovation, protects national data and security, and enhances global competitiveness.

The objective is to provide affordable, AI-ready compute capacity while remaining aligned with national sustainability commitments. This capability will:

- Enable localised training of AI models
- Strengthen data protection and national security
- Anchor a shared national R&D and talent hub
- Improve global perception of Malaysia as an AI hub

Key Leads

Ministry of Communications

- Malaysian Communications and Multimedia Commission (MCMC)

Target

Increase the number of Malaysian supercomputers in the TOP500 list.

Recommendation

Build a robust, sustainable and high-powered compute foundation to support Malaysia's national AI ecosystem.

Items	Proposed Actions	Implementation Priorities
Coordinate Demand for AI Compute Capacity	• Bundle Compute Workloads Consolidate demand from government agencies, academic institutions and MSMEs into structured multi-year contracts to provide predictable baseline utilisation.	• Refresh Cadence Implement an annual demand revalidation cycle within the national budget process and allocate unused capacity to the spot market.



	• Compute Voucher Programmes Issue redeemable GPU-hour credits to guarantee base load utilisation while widening access for SMEs and startups.	• Tiered Credit Ladder Establish tiered access linked to a venture's fundraising stage to prevent short-term speculative usage and ensure responsible allocation.
Secure AI Compute Capacity from Data Centre (DC) Players	• Big Tech Reciprocal Agreements Engage hyperscale and cloud providers through reciprocal agreements, offering fast-track incentives in exchange for demonstrable local contributions, including dedicated compute access.	• Performance Clauses Include "fallback clauses" where reservation fees drop by a certain percentage if a Data Centre fails to meet Power Usage Effectiveness (PUE) or Renewable Energy (RE) targets. • Step-Out Options Retain the government's right to reassign racks, with appropriate compensation, if strategic national demand increases.
Promote Private-Sector AI Compute Build-out	• Mobilise Competitive Financing Launch Digital Infrastructure Sukuk and DC Credit Guarantee Schemes with first-loss coverage, alongside accelerated depreciation and investment tax allowances. • Fast-Track Permitting Provide pre-zoned, plug-and-play land for Data Centre clusters and incentivise the conversion of suitable brownfield sites into edge Data Centres.	• Green Sukuk Explore financing for GPU infrastructure combined with on-site renewable energy, structured to qualify under ICMA Green-Bond Principles and attract ESG investors. • Zonal Synergies Align compute infrastructure expansion with existing state-led special economic zone development projects.
Create a National Supercomputing Centre (NSC)	• Shared National Capacity Establish a government-owned NSC serving the public sector, including BNM, academia and SMEs through a National Virtual AI Lab. • Targeted Hardware Procurement Leverage innovative financing instruments, such as AI Sukuk and a National AI Infrastructure Investment Fund, to support phased capacity builds.	• Modular Phasing Deploy modular infrastructure, including pre-fabricated rack systems, to enable future GPU upgrades without requiring full system rebuilds. • Staggered Call-Off Use master purchase agreements to secure pricing while allowing phased hardware deliveries on an 18-month cadence to reduce obsolescence risk.



TRUST VIA RESPONSIBLE GOVERNANCE

E11

HOLISTIC AND SECTORAL AI GOVERNANCE

Overview

Malaysia has a strong foundation for AI adoption, supported by clear national ambition, an established AI roadmap, voluntary governance guidelines and Cabinet-level backing. However, as AI systems expand across sectors, existing governance arrangements must evolve beyond fragmented and voluntary measures into a more coherent, future-ready and risk-based framework.

A holistic yet sector-sensitive approach is needed to provide clear safeguard for responsible innovation, strengthen regulatory credibility and build confidence among citizens, industry and international investors, while enabling AI adoption at scale.

Key Lead

Ministry of Digital

Target

Position Malaysia among leading countries in AI governance and ethical readiness.

Recommendation

Establish a hybrid, risk-based AI governance framework that sets clear national guardrails while empowering sector regulators to oversee AI use cases according to their domain-specific risks and maturity levels.

Items	Proposed Actions	Implementation Priorities
Establish Central AI Oversight with Sector Empowerment	• Create a central AI governance authority to set national principles, coordinate sector regulators and oversee AI governance evolution. • Maintain sector regulators' authority for enforcement and domain-specific governance.	• Define mandate, scope, and operating model of the central AI governance authority. • Formalise coordination mechanisms between the central authority and sector regulators.



Enact a Principles-Based AI Regulatory Framework	• Codify core AI definitions, risk tiers and foundational obligations using a proportional, risk-based approach. • Issue interpretative guidance to ensure consistent application across sectors. • Use this framework as the foundation for future AI legislation.	• Publish the initial framework and guidance. • Align with international standards to support interoperability and investor confidence.
Enable Sector-Specific Governance Mechanisms	• Guide regulators in applying the appropriate mix of governance tools, including legislation (hard law), regulatory guidelines (quasi-binding measures) and voluntary standards (soft law), based on sector risk and maturity. • Require regular reassessment of AI use cases to adjust governance intensity over time.	• Conduct baseline risk and maturity assessments across priority sectors. • Establish periodic review cycles to recalibrate governance mechanisms.
Introduce a Structured Regulatory Reform Pathway	• Define clear and streamlined processes to update governance requirements as AI systems scale in impact and complexity. • Trigger predefined regulatory adjustments when performance or risk thresholds are met.	• Integrate reform pathways into regulatory planning and review processes. • Leverage on international good regulatory and agile regulation practices to guide implementation.



TRUST VIA RESPONSIBLE GOVERNANCE

E12 AI TRUST FUNCTION

Overview

As AI systems grow in scale and complexity, regulatory oversight alone cannot address emerging risks. Malaysia needs a dedicated operational capability to evaluate, monitor and respond to AI risks in real time.

A national AI Trust Function will complement existing governance and enforcement efforts by providing technical assurance, incident response and cross-sector coordination. Its role is to ensure that AI systems remain safe, secure and trustworthy throughout their lifecycle.

Key Lead

Ministry of Digital

Target

Establish a rapid and reliable national capability to detect, assess and contain critical AI-related incidents, with continuous improvement in response readiness, coordination and effectiveness across government and key sectors.

Recommendation

Establish a national AI Trust Function to evaluate, monitor, anticipate and respond to AI risks. This function will strengthen operational assurance and incident response while supporting regulatory frameworks and international alignment.

Items	Proposed Actions	Implementation Priorities
Establish a National AI Trust Function	Set up an AI Trust Function responsible for: • Standards and Policy Issue AI safety and security standards, risk classifications, and safe-use guidance.	• Operationalise the AI Trust Function as a body that coordinates with the proposed central AI governance authority.



	• Evaluation and Certification Oversee AI model and application testing, certification and assessor accreditation, and maintain a public AI incident registry. • Incident Monitoring and Forensics Provide expert support for AI incident investigations, attribution and threat intelligence sharing. • International Collaboration and Capacity Building Conduct research, publish periodic risk reports and participate in regional and global AI safety initiatives.	• Recruit and train a specialised multidisciplinary team, including AI risk analysts, adversarial machine learning engineers and incident response leads. • Establish formal coordination protocols with sector regulators and relevant agencies on incident reporting, AI sandboxes, and other areas of shared responsibility.
Empower Existing Agencies to Address AI-Specific Risks	• Integrate AI-specific risk considerations into existing enforcement and incident-response workflows. • Mandate visibility of AI-related incidents across enforcement agencies by reporting to the AI Trust Function. • Maintain enforcement responsibilities within existing agencies, supported by technical expertise from the AI Trust Function.	• Formalise reporting and information-sharing mechanisms between enforcement bodies and the AI Trust Function. • Integrate cybersecurity, communications, financial and law enforcement agencies into a coordinated operational response framework.
Strengthen Regional and International AI Safety Engagement	• Lead and support the ASEAN AI Safety Network to align regional safety and security standards. • Participate in international AI safety coordination, research exchanges and shared incident-learning networks.	• Convene a Malaysia-chaired regional networks involving regulators, academia, and industry. • Use international collaboration to benchmark Malaysia's AI risk posture and strengthen domestic capabilities.



TRUST VIA RESPONSIBLE GOVERNANCE

E13

NATIONAL AI CLASSIFICATION

Overview

Establish a criteria-based certification framework for Made by Malaysia AI covering compute, data, and models, supported by open benchmarks to strengthen the national AI ecosystem.

A strong national AI ecosystem requires sustained capability across data, infrastructure, talent and governance. This will strengthen domestic capacity to develop, deploy and govern AI systems responsibly, supported by trusted standards, clear certification frameworks and coordinated institutional oversight. A calibrated mix of incentives and regulatory measures will drive responsible innovation while reinforcing long-term resilience and national capability across the AI value chain.

Key Leads

Ministry of Digital
• AI Malaysia (National AI Office)

Target

Ensure critical government services hosted on the National AI stack is at an increasing rate towards 2030.

Recommendation

Establish a structured governance model through clear classifications, coordinated implementation to ensure national self-reliance.



Items	Proposed Actions	Implementation Priorities
Centralised Oversight	• AI Malaysia (National AI Office) as Central Implementer Designate AI Malaysia (National AI Office) as the primary driver for Made by Malaysia AI initiatives, including Large Language Models (LLM) and Sovereign Compute.	• Capacity Safeguards Develop and implement a phased compliance roadmap to ensure adequate local capacity and prevent service disruptions or vendor lock-in.
Classification and Certification	• Establish Tiered Classifications Develop guidelines that define requirements across cloud infrastructure, compute power, and model or application layers.	• Risk-Based Thresholds Define thresholds based on the risk level of each application. • Industry Consultation Engage industry bodies and academia to ensure the framework is balanced and practical.
Incentive Packages	• Support Local AI Supply Chains Strengthen Malaysia-owned and operated AI supply chains through measures such as establishing local supplier registries and prioritising government procurement from qualified local providers.	• Integrity Audits Conduct regular audits to prevent misuse of certified status through proxy or front-company arrangements. • Migration Fund Establish a fund to support this initiative.



TRUST VIA RESPONSIBLE GOVERNANCE

E14

AI-AWARE STEWARDSHIP

Overview

As AI adoption accelerates, Malaysian corporate boards must be prepared to oversee emerging technology risks responsibly. Organisations should establish clear Responsible AI (RAI) governance practices to ensure AI is deployed safely, ethically and effectively.

This requires action at two levels. At the organisational level, companies must embed Responsible AI across strategy, processes, culture, governance and technology. At the national level, these efforts must align with broader regulatory frameworks, ethical standards, capacity-building initiatives and technology policies. Strong alignment between corporate and national governance will help build trust, accountability and long-term resilience in AI adoption.

Key Leads

Ministry of Digital
• AI Malaysia (National AI Office)

Target

Achieve adoption of emerging technology governance best practices among 30% of Large Public Listed Companies¹⁰ by 2028, increasing to 50% by 2030.

Recommendation

Update national corporate governance codes and guidelines to address emerging technology and AI risks, ensuring board-level accountability, oversight, and transparency.

¹⁰ Large Companies – aligned to the definition in Malaysian Code of Corporate Governance, Securities Commission Malaysia. Amendments to MCCG will be applicable for listed companies on Bursa Malaysia ("comply or explain"), not applicable for unlisted companies.



Items	Proposed Actions	Implementation Priorities
Encourage AI Disclosures	• Introduce Governance Statement Consider requiring Large Companies to include an Emerging Technology Governance Statement, featuring AI in annual reports. • Publish Maturity Scorecards Encourage companies to publish an <i>Emerging Technology Readiness</i> reports or a <i>Maturity Scorecards</i> to inform stakeholders of organisational capabilities.	• Explore amendments to the Malaysian Code on Corporate Governance (MCCG), building on existing disclosure practices.
Strengthen Leadership Competence	• Enhance Board-Level Expertise Consider requiring boards to possess, or have access to, sufficient expertise to oversee AI and emerging technology risks. • Introduce AI Literacy Programmes Develop AI-literacy playbooks, sector-specific modules and masterclasses for Board of Directors (BoD) and C-suite of Large Companies.	• Review potential MCCG updates and explore an open directory of AI-skilled directors and advisors to support board recruitment.
Strengthen Risk and Control Frameworks	• Encourage AI System Inventories and Risk Mapping Consider requiring companies to maintain a board-approved AI system inventory and risk assessment map, subject to internal audit review. • Promote Foresight Exercises Encourage regular scenario planning exercises to identify and respond to emerging technology risks.	• Align proposed MCCG amendments with existing sector-specific regulatory requirements.
Regulatory and Ecosystem Alignment	• Establish a Joint Working Group Convene the Securities Commission Malaysia (SC), Bursa Malaysia, AI Malaysia (National AI Office), Personal Data Protection Commission (PDPC) and Ministry of Science, Technology and Innovation (MOSTI) to coordinate and align the MCCG, Listing Rules, PDPA revisions and relevant sector-specific guidelines.	• Align the publication of recommendations with the Securities Commission's annual MCCG Monitor to ensure boards receive a single, consolidated update.



PART 5:

GOVERNANCE AND IMPLEMENTATION

WHOLE-OF-NATION EXECUTION MODEL



Figure 6: Whole-of-Nation Execution Model for AI Nation 2030.

a

Whole-of-Nation oversight at the highest level

AI Nation 2030 is implemented through a Whole-of-Nation Execution Model anchored in public-private partnerships and strong cross-ministerial coordination. Oversight is provided by the National Digital Economy and 4IR Council (MED4IRN), chaired by the Prime Minister, ensuring alignment with national priorities.

b

Strategic and implementation advisory activation

Strategic and implementation advisory councils operationalise the quadruple helix, ensuring sustained participation from industry, academia and civil society.

c

AI Malaysia (National AI Office) as central Secretariat

The AI Malaysia (National AI Office) serves as the central Secretariat, driving strategic coordination, stakeholder alignment and integration with broader digital economy and national development.

d

Clear accountability for delivery

Implementation teams operate under defined accountability, coordinated resourcing and a streamlined cross-ministerial reporting structure to ensure effective execution.

This model ensures that AI Nation 2030 is delivered as a coherent national programme rather than a collection of isolated initiatives.

STRATEGIC AND IMPLEMENTATION ADVISORY COUNCILS

To operationalise the quadruple helix model of government, industry, academia and civil society, the AI Nation 2030 establishes two dedicated advisory bodies:

AI Strategic Advisory Council

- » Comprising senior decision-makers to provide national-level strategic guidance, resolve systemic constraints and steer priority directions.

AI Implementation Advisory Council

- » Ensuring sustained industry and academic participation in execution, feedback and continuous improvement.

Together, these councils institutionalise collaboration and embed stakeholder engagement directly into decision-making and delivery, beyond ad hoc consultation.

CLEAR MANDATES AND ACCOUNTABILITY ACROSS GOVERNMENT

The governance framework assigns **clear mandates and accountabilities** across government entities to minimise duplication and execution friction. Each initiative is led by a designated Key Lead with direct responsibility for delivery, supported by streamlined reporting structures and aligned funding mechanisms.

This clarity enables faster decision-making, more efficient resource allocation, and stronger accountability for outcomes.

SHIFTING TO OUTCOME-BASED POLICYMAKING

The AI Nation 2030 marks a deliberate shift from input-driven metrics towards **outcome-based policymaking**. Priority is given to catalytic initiatives that function as **lighthouse projects** and impact multipliers, demonstrating tangible benefits to citizens, businesses and the economy.

By focusing on visible, measurable outcomes, the AI Nation 2030 strengthens public accountability, builds trust, and sustains momentum throughout the implementation period and the AI Nation 2030 aspiration.

CONCLUSION

The National AI Action Plan 2026-2030 (AI Nation 2030) sets out a clear strategic pathway for Malaysia's role in the evolving digital economy. Beyond technology adoption, it reflects a national commitment to strengthening value creation, advancing inclusive growth, and ensuring that the benefits of Artificial Intelligence are broadly shared across society.

Delivering this vision depends on the implementation of two complementary pillars working in tandem:

Impact Engines

- » Accelerating measurable transformation across priority sectors such as healthcare, education, manufacturing, and agriculture, translating AI adoption into real and practical improvements in productivity, service delivery, and quality of life.

Foundational Enablers

- » Reinforcing the core ecosystem through sustained investment in talent development, innovation capacity, digital and compute infrastructure, effective governance, and sustainable financing, ensuring long-term resilience, competitiveness, and trusted AI adoption.

Guided by the MADANI vision, the AI Nation 2030 positions AI as a tool to support equitable development, resilient governance, and long-term sustainability while upholding societal values and public trust. Looking ahead to 2030, Malaysia aspires to move from readiness to leadership, from technology consumer to value-adding producer, and from fragmented adoption to a cohesive national AI ecosystem. AI Nation 2030 is a shared journey that will continue to evolve as technologies advance and opportunities emerge, anchored by a collective commitment to harness Artificial Intelligence for the benefit of all Malaysians.

GLOSSARY

4IR - National Fourth Industrial Revolution Policy: AI, IoT, and robotics convergence.

Agristack - A centralised digital architecture that integrates agricultural data (soil, crops, farm-level) to improve decision-making in the farming ecosystem.

Agritech - The use of technology in agriculture with the aim of improving efficiency and profitability.

AI Classification - A structured system to categorise AI applications based on their risk level, impact, and technical complexity.

AI mobility stack - An AI technology stack tailored for mobility and transport systems.

AI stack - A layered set of technologies used to develop and operate AI systems, typically including hardware, data, models, and applications across the AI lifecycle.

AI-augmented - A human-centric process in which AI is used to enhance performance.

AI-Rmap - National Artificial Intelligence (AI) Roadmap 2021-2025.

AI@Work - Malaysia's government initiative to drive AI adoption among civil servants, focusing on practical use of AI in daily government work.

AIGE - National Guidelines on AI Governance and Ethics.

APEC - Asia-Pacific Economic Cooperation.

APIs - Application Programming Interface: Protocols that allow different software applications to communicate and share data with one another.

ASEAN - Association of Southeast Asian Nations.

BDI - MDEC Business Digitalisation Initiative.

BNM - Bank Negara Malaysia.

Catalytic Initiatives - Catalytic Initiatives are high-priority, fast-tracked projects designed to deliver immediate proof-of-value and broad societal impact within a two-year timeframe using public sector assets.

Closed-loop AI - A system where AI outputs are continuously fed back into the system to improve future performance without manual intervention.

Compute capacity - The amount of computational resources available to process data and run workloads.

Compute infrastructure - The hardware and software resources required to develop, test, operate, and manage computing tasks.

Compute Pool - A shared pool of computing resources that can be accessed by multiple users or organisations.

Dataset - A structured or unstructured collection of data, typically organised for a specific purpose.

DBP - Dewan Bahasa dan Pustaka.

Data Centre: a large group of networked computer servers typically used by organisations for the remote storage, processing, or distribution of large amounts of data.

DEPA - Digital Economy Partnership Agreement.

e-Residency - A government-issued digital identity that allows entrepreneurs to start and manage a business in a country without being physically resident there.

EdTech - Educational Technology.

EPF - Employees Provident Fund (KWSP).

ESG - Environmental, Social, and Governance.

FELDA - Federal Land Development Authority.

Foundational Enablers - Foundational Enablers are the system-wide capabilities and infrastructure required to anchor and scale AI adoption across the entire economy.

GLC - Government-Linked Company.

Global Data Barometer - A global benchmark that tracks the state of data for the public good.

GovTech Malaysia - Malaysia's government digital transformation initiative aimed at delivering public services through digital technologies.

HRD Corp - Human Resource Development Corporation.

ICMA - International Capital Market Association.

ICT - Information and Communication Technology.

Impact Engines - Impact Engines are targeted sectoral strategies that create self-reinforcing cycles of data, talent, and AI solutions to drive productivity and transformation in high-impact areas.

IoT - Internet of Things.

IP - Intellectual Property.

KL20 Innovation Pass - A specialised multi-tiered employment visa category.

LLM - Large Language Models are AI models or systems trained on large and diverse datasets, and are capable of performing a wide range of language-related tasks.

LMS - Learning Management System.

MCCG - Malaysian Code on Corporate Governance.

MCMC - Malaysian Communications and Multimedia Commission.

MDEB - Malaysia Digital Economy Blueprint.

MDEC - Malaysia Digital Economy Corporation.

MED4IRN - National Digital Economy and 4IR Council.

MOHE - Ministry of Higher Education Malaysia.

MPOB - Malaysian Palm Oil Board.

MQA - Malaysian Qualifications Agency.

MTEP - Malaysia Tech Entrepreneur Programme.

MyDigital ID - Malaysia's government initiative for secure and trusted digital identity solutions.

MyGOV Malaysia - The central online portal for all Malaysian government services.

NACSA - National Cyber Security Agency.

NAIO - National AI Office.

NCD - Non-Communicable Diseases.

OECD - Organisation for Economic Co-operation and Development.

OGSE - Oil and Gas Services and Equipment.

Open-source - Software for which the original source code is made freely available and may be redistributed and modified.

PDPA - *Akta Perlindungan Data Peribadi 2010 [Akta 709]*.

PDPC - Personal Data Protection Commission.

PPP - Public-Private Partnership.

PUE - Power Usage Effectiveness: A ratio that describes how efficiently a computer data centre uses energy; specifically, how much energy is used by the computing equipment.

Quadruple helix - An innovation model that recognises four major actors: Government, Academia, Industry, and Civil Society.

R&D - Research and Development.

RAI - Responsible AI: The practice of designing, developing, and deploying AI with good intentions to empower employees and businesses, and fairly impact customers and society.

RDI - Research, Development and Innovation.

Right-To-Data Channel - A proposed mechanism allowing individuals to access, manage, and port their personal data held by organisations.

RISDA - Rubber Industry Smallholders Development Authority.

RMK-13 - Thirteenth Malaysia Plan: Malaysia's national five-year socio-economic development plan covering 2026–2030.

SaaS - Software as a Service.

SC - Securities Commission Malaysia.

Smart technology stacks - A combination of technologies, typically including IoT, AI, data platforms, and connectivity, used to enable intelligent, connected systems such as smart cities or smart infrastructure.

SOCESO - Social Security Organisation (PERKESO).

Sovereign AI - The capacity of a nation to build, train, and deploy AI using its own infrastructure, data, and workforce to ensure autonomy.

Sovereign Compute - This refer to the ability to maintain autonomous control, ownership, and jurisdiction over computing infrastructure.

Sukuk - An Islamic financial certificate, similar to a bond, that complies with Sharia law.

TalentCorp - Talent Corporation Malaysia.

Techno-functional - Skills or roles that require both technical expertise (programming, engineering) and functional business knowledge.

Technology stack - A set of software, hardware, and data components used together to develop, deploy, and operate an application or system.

Testbed - Controlled environment for testing new theories and technologies.

TRL - Technology Readiness Level.

TTO - Technology Transfer Office.

TVET - Technical and Vocational Education and Training.

Whole-of-government - Whole-of-government refers to an approach in which different ministries, agencies, and public institutions coordinate their policies, resources, and actions to achieve shared national objectives, rather than working in isolation.

Whole-of-nation - Collaboration including government, private sector, and civil society.

Zonal Synergies - The alignment and coordination of development efforts within specific geographic zones to maximise shared benefits and efficiency.

A COLLECTIVE EFFORT TOWARDS AN AI NATION

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