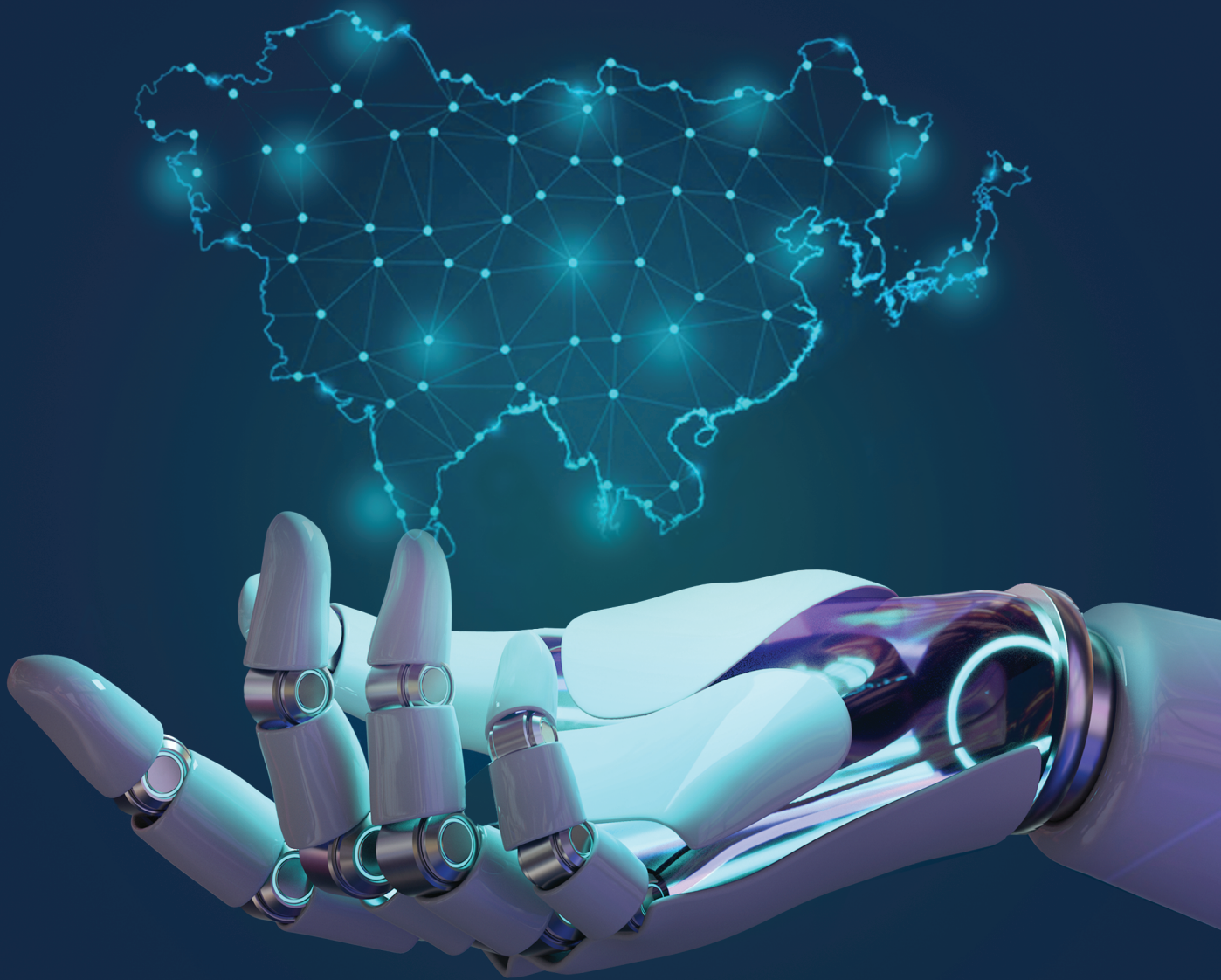# Responsible Development and Use of Generative AI in ASEAN

Workshop Pre-Read Material
5th December 2023

Why this topic

Artificial intelligence (AI) has emerged as a critical transformative force in ASEAN, promising to revolutionize industries, augment decision-making, and enhance societal well-being. However, as the deployment of AI technologies accelerates, so too do the risks associated with their development and implementation. The risks posed by AI, covering invasion of personal privacy, violations of copyright and other intellectual property rights, and breaches of ethical boundaries, have led to increased momentum in developing approaches to mitigate the risks.

Within ASEAN, the ASEAN Digital Masterplan 2025 explicitly included an enabling action to: "Adopt regional policy to deliver best practice guidance on AI governance and ethics, IoT spectrum and technology". The ASEAN Digital Senior Officials' Meeting subsequently commenced preparation of the Draft ASEAN Guide on AI Governance and Ethics (Draft ASEAN Guide), due to be endorsed in early 2024. The Draft ASEAN Guide includes 7 guiding principles for AI development, a voluntary AI governance framework, and a series of national and regional recommendations.

Why this workshop

In recent months, Generative AI (GenAI) has received enhanced global attention following the launch of ChatGPT in late 2022. This attention has been mirrored with a regional surge in general interest in GenAI in Southeast Asia, with some frontier initiatives undertaken by Singapore. However, while there are increasing policy and regulatory developments in Southeast Asia to respond to the risks associated with traditional AI, few specific initiatives are currently responding to the unique risks inherent to GenAI.

The Discussion Paper examines the existing policy gaps and identify opportunities for ASEAN vis-à-vis generative AI and suggest high-level recommendations on broad policy areas in which ASEAN may want to focus its attention and consider further work at the sectoral level. It aims to assist ASEAN Member States in thinking about what needs to be included and prioritized in GenAI governance and policy.

Accordingly, the ASEAN Committee on Science, Technology and Innovation (COSTI), working through the ASEAN Secretariat, launched an initiative in September 2023 to identify the most urgent policy, legal and regulatory gaps in GenAI implementation within ASEAN and provide recommendations on how to address them, and to produce a Discussion Paper on the Responsible Development and Use of GenAI in ASEAN to enhance the governance and adoption of GenAI. The final Discussion Paper is planned for early 2024, and should be based on extensive stakeholder consultations, including the present workshop.

Workshop Outcome

The findings from the workshop will be analyzed to enhance the final Discussion Paper on the Responsible Development and Use of Generative AI in ASEAN.

Generative AI

Generative AI is a subset of artificial intelligence capable of generating text, images, or other media in response to prompts using pre-trained transformer models, typically with large amounts of data. GenAI took the world by storm in late 2022 with the release of ChatGPT, followed by other similar forms of LLMs.

While traditional AI can analyze data and tell you what it sees, GenAI can use that same data to create something entirely new. What makes GenAI unique is that it allows the use of any kind of data for model learning, permitting the model to focus on the most relevant aspects of the data inputs, and enabling the model to produce outputs for many different applications, as it can create images, text, or video instead of being confined to one application only. GenAI uses its training and algorithms to produce new, often unexpected creations or outputs. And just like in art, the results can be breathtaking, peculiar, and sometimes disturbing.

High-level benefits

Generative AI has the potential to deliver a wide range of benefits

Enhancing accessibility
Making the technology more available, usable, and understandable to a broader range of users, including those with diverse backgrounds, expertise, and needs, especially for organizations with limited budgets to serve multiple applications and support ease of integration.

Development and consolidation of infrastructure
Contributing to scalability, efficiency, security, and adaptability, and enabling organizations to effectively harness the benefits of GenAI in their operations, thus reducing costs and required expertise.

Centralization of research and development
Permitting the exploration and sharing of technological foundations, resulting in an exponential acceleration in the development of new applications, improvements in quality, and enhanced safety measures.

GenAI applications open the door to a range of possibilities for ASEAN, albeit with accompanying risks, offering cost-effective, high-end AI benefits. The potential benefits of GenAI are large for sectors with limited budgets (education, climate, small businesses, health services) and those more well-resourced affluent sectors (military, financial services, large corporations).

Potential risks

The major risks and challenges posed by GenAI models can be analysed in three distinct phases of the AI model lifecycle. Overall, such risks arise mainly due to the complexity of these models and the nature of the data they are trained on.
First, in the input phase, data inputs need to be carefully curated and selected to train the model effectively. At this stage, privacy and data governance pose major risks.
Second, in the model phase, the AI system's inner workings become paramount, in particular the ways in which the features and parameters of the model are activated and utilized to produce a given output. Here, major risks relating to explainability and transparency arise with GenAI.
Finally, the output phase, where new content is generated in response to a prompt, delves into the intricate layers of the AI model and how they collectively result in the application's final output. In this phase, the major emerging risks of GenAI include mistakes and "hallucinations"; privacy and confidentiality; disinformation, toxicity, deepfakes, and cyber-threats; copyright; embedded biases; and dependence issues.
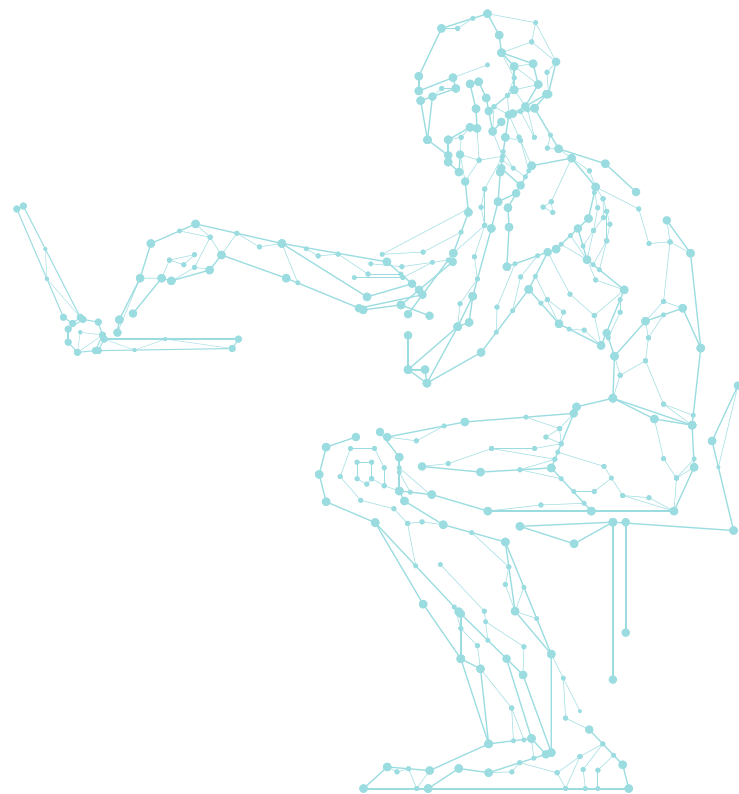
ASEAN's AI Experience

ASEAN Member States (AMS) are at very different stages of digital development and AI readiness, and this forms an important part of the context underpinning the responsible development and use of AI and related technologies.

Six of the ten AMS—Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam—have adopted explicit AI strategies. The remaining four Member States, along with Timor Leste, are presently limited to digital policies and strategies, with minimal or no reference to AI. Generally, while varying quite significantly incoverage from country to country, the six AI strategies commonly focus on the development and use of AI as a tool to accelerate economic growth and innovation, on building the human capacities required to implement AI initiatives, and to a somewhat lesser extent, on strengthening the regulatory ecosystem to underpin the responsible use of AI. While in the ASEAN context, sporadic efforts have been made to adapt to the rapid rollout of GenAI, regional levels of GenAI development and use are very nascent.

Lessons learnt

The research has identified five key lessons learned in the ASEAN AI experience to date.

The urgent need to bridge the digital divide

There exists strong potential to bridge the digital and cultural divides through harnessing the developmental potential of digital technologies, including AI and GenAI, and quickly addressing the emerging policy and regulatory challenges, including strengthening the critical legislative infrastructure to handle the emerging risks of AI and GenAI.

The depth of the coordination challenges in ASEAN

The diverse nature of the political and economic structures of ASEAN poses coordination challenges and certainly, this is the case for digital and AI development. The Discussion Paper builds on the draft ASEAN Guide recommended activities such as the ASEAN Working Group on AI Governance as key elements for promoting more regional coordination.

Weak awareness and understanding of AI or GenAI

Considerable efforts are required to raise awareness of accompanying the commercial use of AI with rigorous governance and ethics frameworks to manage the risks. This must be accompanied by efforts to educate the population at large about the risks and benefits and opportunities of AI, as well as to implement proactive measures to meet the new demands on labor forces created by AI.

The challenges for ASEAN of fitting into the global framework of AI governance

ASEAN will likely be able to benefit from balancing the various approaches of the three so-called digital empires (United States, European Union, and China), perhaps drawing interoperability and innovation elements from the US, regulatory experiences from the EU, and technical aspects from China. In addition, lessons can be drawn from other regional players (Singapore, Japan, South Korea), as well as from other regions such as Latin America and Africa.

Considerable opportunities along the AI lifecycle

In particular to answer the question *"How can developed countries benefit from and fast-track growth for developing countries?"* More developed digital economies can develop AI products that can be marketed in less developed economies to support the economic growth process, and developing countries can participate in the AI life cycle in line with their resource bases.
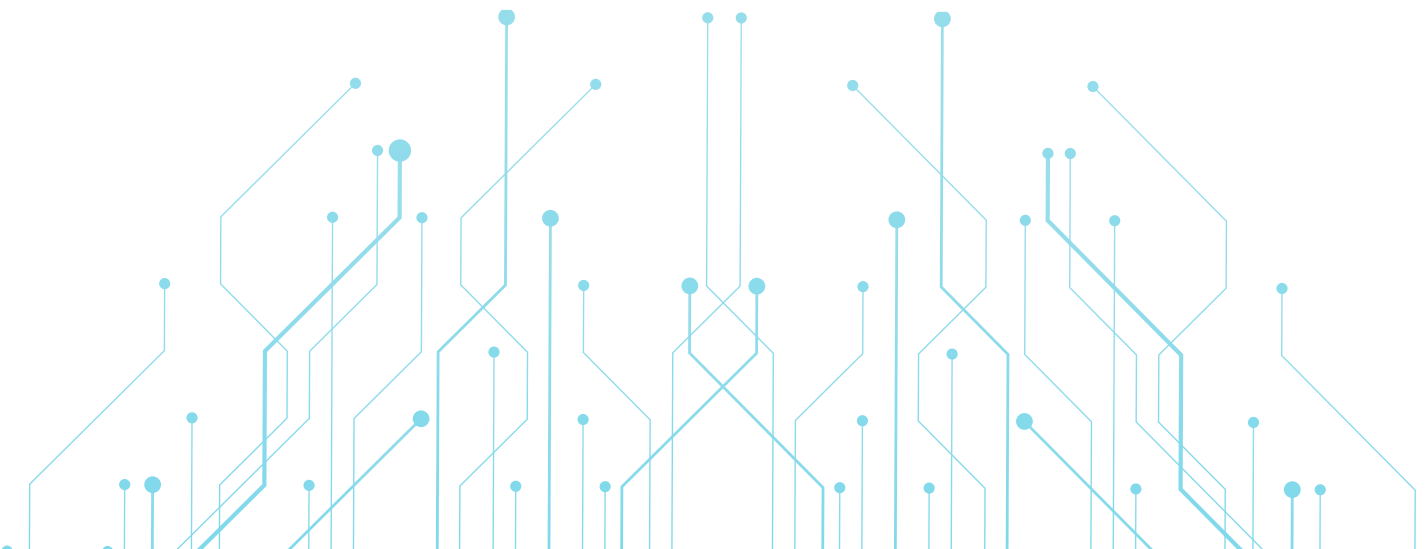
Towards Responsible Development and Use of Generative AI in ASEAN

In order to progress towards a policy and regulatory framework to govern and ensure responsible GenAI, the following adaptations to the principles and governance framework of the Draft ASEAN Guide and enhanced national and regional policy recommendations are proposed.

GenAI in ASEAN

Adaptations to AI Principles

For the seven draft ASEAN AI Principles, adaptations are proposed to respond to the GenAI-specific challenges and to guide risk assessments of GenAI applications. The proposed adaptations include key action items related to the content of the respective principle that tangibly indicates what private organisations and AMS need to do to accomplish each principle in the context of GenAI.

Adaptations to the AI Framework

For the four key components of the Draft ASEAN AI Governance Framework

1. internal oversight of AI
2. risk assessments and determining the level of human control
3. AI Governance in the model lifecycle
4. multi-stakeholder engagement

the Discussion Paper outlines critical adaptations to reflect the responsible development and use of GenAI. And for the five stages of the AI model lifecycle (pre-input phase, input phase, model phase, output phase, and post-output phase), the key aspects of progressing a GenAI model through the various stages can be fleshed out.

Building the institutional and regulatory foundations

A critical element of the basic ecosystem to support AI and GenAI development and governance in ASEAN involves consistent and well-implemented institutional and regulatory frameworks across ASEAN, aligned with international standards, and suited to the risks and benefits of AI and GenAI. In order to facilitate and operationalize the enhancement of AI governance across ASEAN, it is proposed that an AI Technical Assistance Facility be funded and established under the proposed Working Group on AI Governance.

Supporting data development and flows

In the context of GenAI, a solid foundation for the ecosystem requires special attention to data in two areas. The first relates to the flows of data throughout the different stages of the AI life cycle. The second data-related topic to be considered by AMS relates to the regional or international flows of data which is directly linked to GenAI development and use.

Enhancing digital literacy and awareness

ASEAN's success in the transition to an AI-equipped region is highly dependent on how well its population and workforces can adapt and thrive with the new technology. A further critical reality is the impact of the new technologies on the workforce which must be addressed. On a more practical level, training and education on GenAI and related risks must be made much more accessible.

Strengthening regional cooperation

The emerging risks of GenAI have reinforced AI's transnational character, and accelerated the need for new efforts on how AMS will cooperate, both to increase innovation and to mitigate risks. AMS should foster new collaborations for the flows of data by way of bilateral, multilateral or regional agreements.

Driving interoperability Recommendation

Interoperability is a strategic imperative for ASEAN nations, enabling them to enhance collaboration, optimize resources, improve service delivery, and address complex challenges more effectively. Specifically, the following interoperability measures should be considered

1. Develop cross-platform standards
2. Foster collaboration for common frameworks
3. Implement application programming interface and data exchange protocols
4. Encourage use of open standards
5. Carry out regular testing and updates for compatibility

Supporting practical implementation through cross-cutting measures

It is essential to consider selected cross-cutting actions to facilitate the smooth and practical implementation of the overall program for the responsible development and use of GenAI in ASEAN.

Implementation support

Establishment of sandboxes
In the evolving AI industry, sandboxes can play a crucial role across ASEAN by offering a controlled environment or platform where developers and researchers can experiment, test, and refine their AI models, algorithms, or applications.

Compiling a compendium of use cases
Building on the recommendation from the Draft ASEAN Guide on compiling a compendium of use cases demonstrating practical implementation of the ASEAN AI Guide by ASEAN organizations, we propose to explicitly include AI and GenAI failure use cases.

Mandating a Two-Step Quality Control Process
To respond to the unique challenges that GenAI imposes on the implementation of principles, it is necessary to introduce a systematic approach for evaluating and certifying GenAI models comprising both assessment and certification processes to ensure that GenAI models meet specific performance criteria and adhere to the AI principles.

Open questions for discussion

Overall Question for all groups
The discussion paper presents a number of key recommendations. Please discuss your feedback on these. In particular, do you feel that an AI Technical Assistance Facility would be useful to support AMS efforts to develop and implement AI strategies, and to address emerging GenAI challenges?

Implementation
What is required to enable AMS to roll out the Draft ASEAN AI Framework and the GenAI adaptations? We propose three key cross-cutting action items for ASEAN to consider: Sandboxes, a compendium of use cases, and a two-step quality control process (assessment + certification). Do you agree that these are critical implementation elements?
Would you add anything and are there any lessons or points ASEAN should consider while implementing this?

Regional Cooperation
The emerging risks of GenAI have reinforced AI's transnational character, and accelerated the need for new efforts on how AMS will cooperate, both to increase innovation and mitigate risks. Close cooperation allows observing near neighbors, sharing lessons learned, and solving challenges together. In addition to the possibilities of fostering agreements to solve critical problems, such as data transfers. How to ensure coordination between the activities under the ASEAN Digital Master Plan (Draft ASEAN Guide), the DEFA, the COSTI, and other AI-related initiatives?

Building the AI Ecosystem
A critical element of the basic ecosystem to support AI and GenAI development and governance in ASEAN involves consistent and well-implemented institutional and regulatory frameworks across ASEAN, aligned with international standards and suited to the risks and benefits of AI and GenAI. How should AMS proceed to strengthen the legislative and regulatory frameworks to handle the risks of AI/GenAI (data protection/privacy, cybersecurity, copyright, consumer protection)?

Contacts

The project has contracted AI Asia Pacific Institute to prepare the draft Discussion Paper on the Responsible Development and Use of Generative AI. For more information, please contact

Kelly Forbes
AI Asia Pacific Institute
kelly.forbes@aiasiapacific.org

Eko Utomo
ASEAN-USAID IGNITE
Eko.Utomo@cadmusgroup.com

AI ASIA PACIFIC
INSTITUTE