The Emerging Policy Approaches to Generative AI in ASEAN

Report on the Second Virtual Workshop

December 7, 2023

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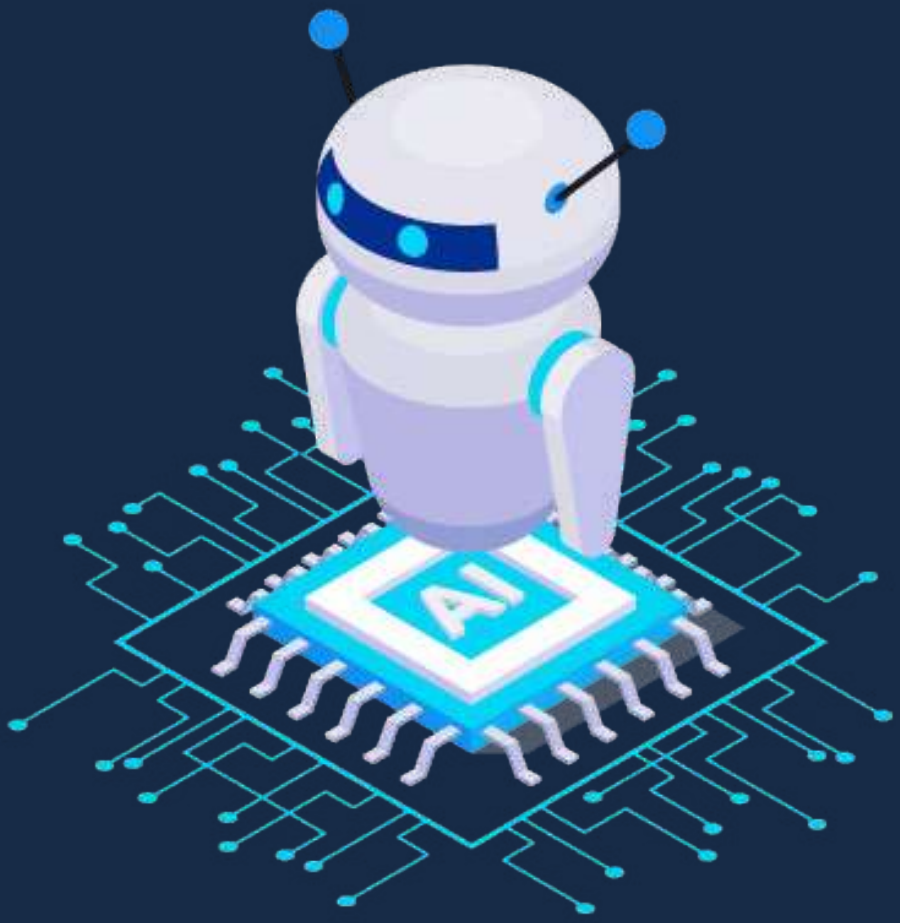
Table of Contents

Introduction



GenAI Governance

Generative AI (GenAI) took the world by storm in late 2022 with the release of ChatGPT. However, with the rapid deployment of Generative AI technologies, there come equally swift risks associated with their development and use.

Recognizing the urgency of addressing these challenges, the ASEAN Committee on Science, Technology, and Innovation (COSTI), working through the ASEAN Secretariat, comenced an initiative in September 2023 to identify key issues in Generative AI implementation and provide recommendations on how to address them. Part of the initiative is to develop a discussion paper on the Responsible Development and Use of Generative AI in ASEAN (the Discussion Paper) that 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 (AMS) in thinking about what needs to be included and prioritized in GenAI governance and policy.

Purpose and Outcome of the Workshop

The final Discussion Paper is planned for early 2024, and will be based on extensive stakeholder consultations. The 2nd Virtual Workshop on The Emerging Policy Approaches to Generative AI in ASEAN brought together recognized regional and international AI and Generative AI experts to discuss the development and use of GenAI and the implications for ASEAN. The workshop, attended over 70 participants, included a wider group of participants such as business leaders, AI specialists, and other key stakeholders who shared their agreement and/or observations with the findings of the Discussion Paper. The findings from the workshop will be analyzed to enhance the final Discussion Paper.

Workshop Proceedings

Welcome and Opening Remarks

The Workshop opened with welcoming remarks by Roger Moyes, Chief of Party of the ASEAN-USAID IGNITE Project, and comments setting the stage for the discussion based on the work carried out to date by the AI Asia Pacific Institute (AIAPI) on the Discussion Paper by Wendy Bonython, AIAPI Advisory Board Member and Workshop Moderator.[1] The workshop was formally launched by John Edgar, Director, USAID ASEAN Affairs Office, who stressed USAID's commitment to supporting the responsible development of AI and GenAI in ASEAN.

To showcase the exciting possibilities and underscore prevalent risks associated with GenAI, a short video clip, incorporating insights from the Discussion Paper, was played. This video was created by Bopinc and features content produced with GenAI tools like ChatGPT, HeyGen, Dall-E, and royalty-free music composed by Beatoven. The video can be played from the Bopinc Youtube channel and is also available as a downloadable file[2]

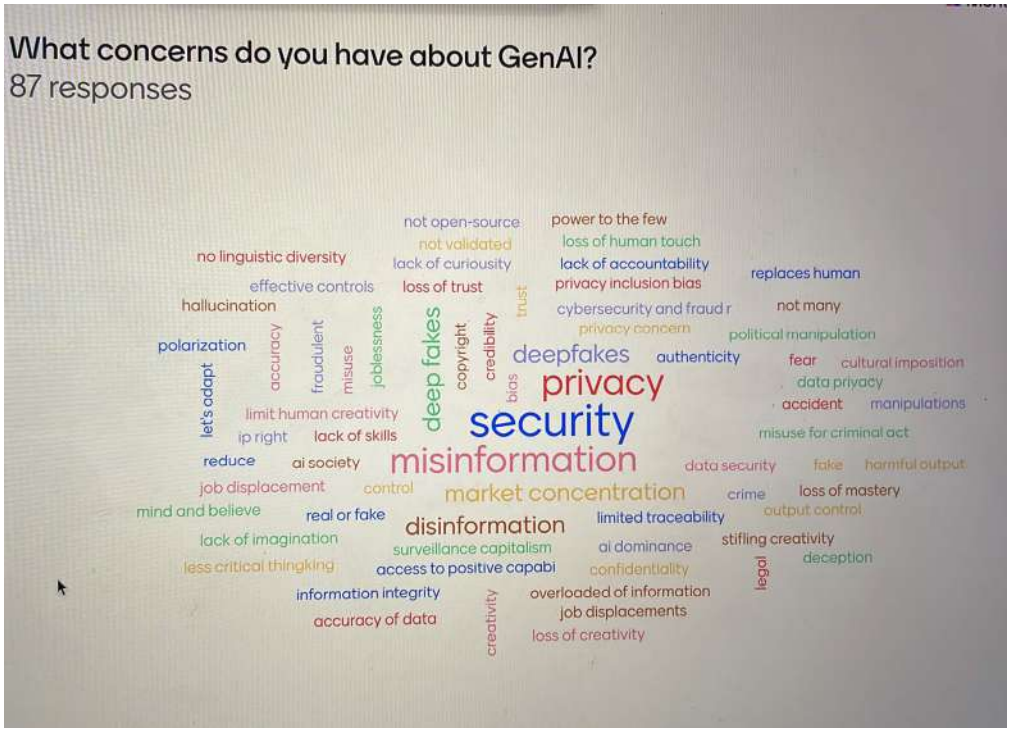
A screenshot of the video played during the workshop

[1] See details on the Project/Discussion Paper in Attachment 1: Workshop Agenda.
[2] Video based on the Discussion Paper on the Responsible Development and Use of Generative AI in ASEAN.

Fireside Chat

Participants delved into the world of GenAI in a Fireside Chat with Kelly Forbes, Executive Director of the AIAPI, and Professor Toby Walsh, Chief Scientist at UNSW.ai. They explored GenAI's transformative potential for humanity, highlighting its unique acceleration compared to past technologies like electricity or the internet. A parallel was drawn to the emergence of social media, which has not only given voices to people globally but has also been used for negative purposes. Professor Walsh stressed the significance of cultural diversity in the ASEAN region.

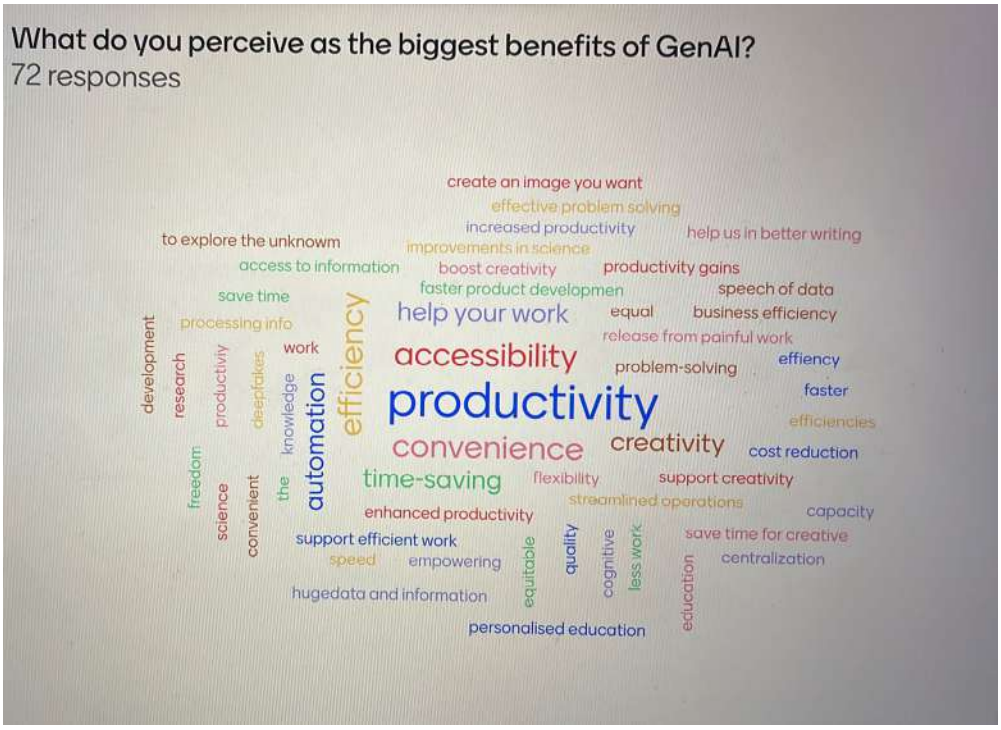
He highlighted the importance of active participation by AMS in shaping the conversation rather than having solutions and norms imposed by external entities. The discussion concluded on an optimistic note regarding the long-term prospects of GenAI, acknowledging, however, the presence of certain risks and challenges that may be encountered in the short term. Professor Walsh specifically called for greater participation in such conversations on AI, and for ASEAN populations to become better informed and to have a stronger voice on AI matters.



Screenshot 1 of the word cloud in Mentimeter

Following the Fireside Chat, workshop participants had the chance to express their views on the benefits and concerns of GenAI. A Mentimeter poll was conducted, and the results were visually represented in a word cloud. The poll revealed key positive benefits, including enhancements in productivity and efficiency, greater accessibility of the technology, convenience, effective problem-solving, and even creativity.

Participants were also forthcoming in sharing their concerns, citing issues such as misinformation or disinformation, risks to security and privacy, the threat of deep fakes, polarization, and a lack of trust.



Screenshot 2 of the word cloud in Mentimeter

Recap of the Findings of the Discussion Paper

Kelly Forbes, Executive Director of AIAPI, and Peter Brimble, Advisory Board Member of AIAPI, then presented the key findings and recommendations of the draft Discussion Paper.

The key topics presented, which are covered in Attachment 3, Workshop Pre-Read Material, and Attachment 4, Workshop Presentation on the Responsible Development and Use of Generative AI in ASEAN, are as follows:

- What is Unique about Generative AI?
- Traditional AI vs Generative AI
- The Benefits and Risks of Generative AI
- Global and Regional Trends in Generative AI
- Key Lessons Learned from the ASEAN AI Experience
- Adaptations to the Draft ASEAN AI Guide
- Adapting the AI Principles for Generative AI
- Adapting the AI Governance Framework for Generative AI

The presentation concluded with six key recommendations to promote responsible GenAI, all supported by an **AI Technical Assistance Facility** suggested to be funded and established under the proposed Working Group on AI Governance:

- Building the institutional and regulatory foundations
- Supporting data development and flows
- Enhancing digital literacy and awareness
- Strengthening regional cooperation
- Driving interoperability
- Supporting practical implementation through cross-cutting measures

Reports on Breakout Sessions

The workshop transitioned into breakout sessions, dividing participants into four groups, each assigned to a specific topic. The collaborative discussions spanned approximately 40 minutes, capturing valuable insights and suggestions on designated Miro boards. Subsequently, facilitators from the AIAPI and the Asia Foundation summarized the key outcomes during the plenary session.

Overall Question for all Groups

How should ASEAN Respond and what are the Practical Implications for Policies?

There are three leading AI global governance powers: US, China and EU.

- Participants strongly advocated for the principle of ASEAN centrality,emphasizing the need for independence in risk perception and evaluation tools. External perspectives, particularly from the US and EU, were cautioned against overshadowing ASEAN's distinct risk perception, values, and cultural considerations.

- Acknowledging potential cultural differences, participants found value in learning from the EU, US, and South Korean approaches, as well as citing the SEA-LION initiative by AI Singapore as a good practice. They emphasized an integrative approach, drawing lessons from various global initiatives.

- Challenges specific to the region included the need for harmonization on priorities, addressing data availability and localization issues, and supporting the AI industry framework.

- Understanding technology and ethics, considering local languages, and capturing unique regional data for training GenAI models were underscored as important considerations. Challenges with accessing large amounts of local language data were highlighted, prompting the need for ASEAN to capture more of its own data to train regional models and share insights across borders.

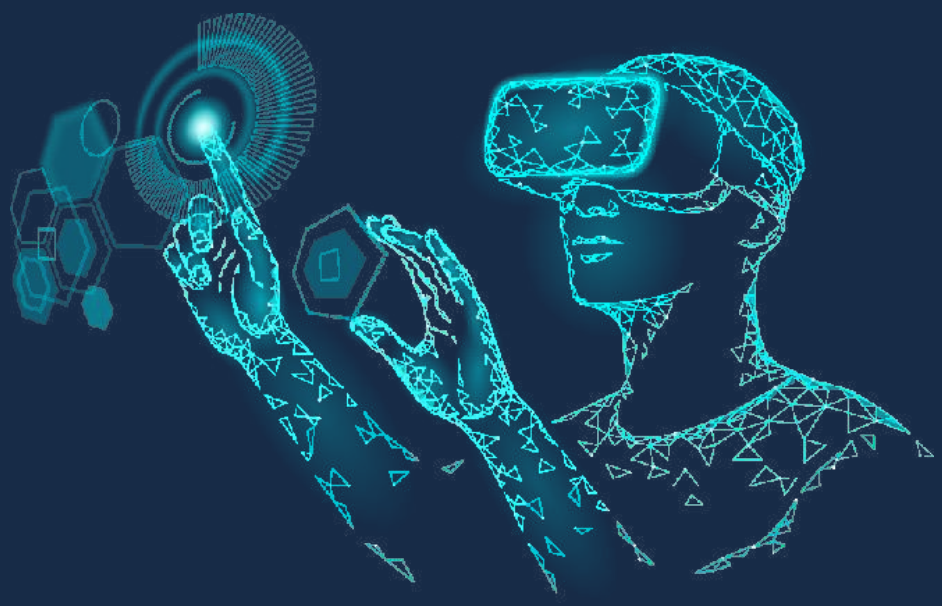
Digital Divide

Question: We propose that if responsibly developed and used, AI/GenAI can be a strong tool to address the digital divide, as opposed to increasing it. How could ASEAN foster digital literacy and awareness?

- Participants emphasized the need for a multi-disciplinary strategy, stressing awareness among policymakers and academia.

- The consensus was on inclusive education strategies, incorporating arts into STEM, promoting technology application in education, and addressing the potential lack of interest in math and science among the younger generation. Participants called for increased funding for public education, especially in universities.

- Participants highlighted the urgency of establishing a digital information literacy framework for ASEAN countries. This framework should cover both the science and application of GenAI, along with essential digital skills. The focus should extend to nurturing both STEM knowledge and softer skills like creativity.



[3] See https://aisingapore.org/aiproducts/sea-lion/.

- The participants advocated for enhanced collaboration between businesses and academia, particularly in solving real-world problems with GenAI. They stressed the ethical responsibility of businesses, suggesting the importance of algorithmic explainers. The discussion also emphasized contextualizing GenAI development within the moral values of ASEAN countries' citizens. Practical approaches that connect businesses with real-world problems to academics capable of solving them were encouraged.

Data Governance

Question: In the context of GenAI, a solid foundation for the ecosystem requires special attention to data, particularly related to the regional and international flows. How to enhance management of the risks posed by data development and flows? Investment in data center infrastructure is one of the ways that this can be achieved. If so, how could AMS leverage this?

Reflections on risk management

- Participants emphasized the importance of addressing risks associated with cross-border data flows. The participant underscored the significance of personal data, indicating a need for careful consideration to protect privacy.

- Additionally, participants mentioned the need of Intra-governmental relationship agreements for collaboration and coordination between governmental entities.

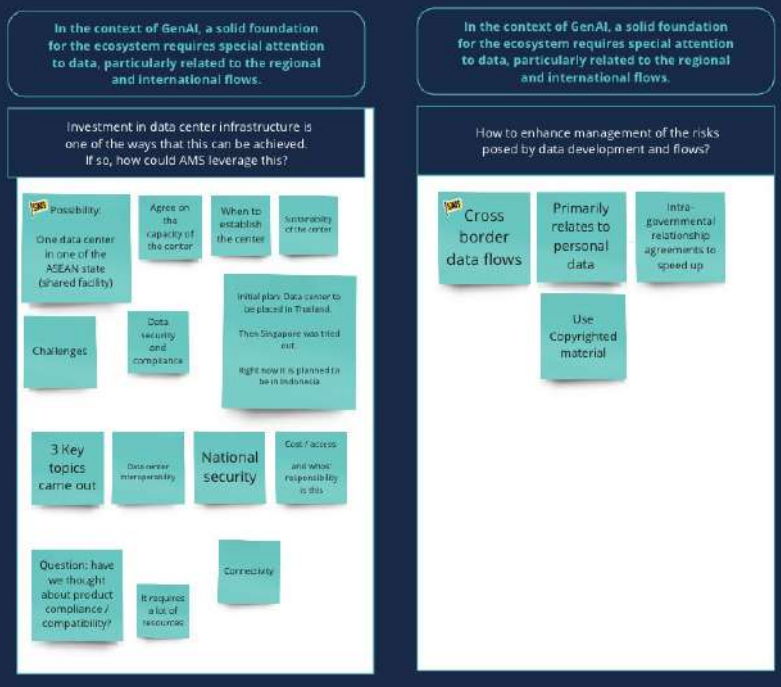
Reflections on data center infrastructure

- Participants strongly agreed on the relevance of establishing a shared data center within one of the ASEAN states. As one participant noted, the initial plan was to set up a data center in Thailand, with subsequent consideration shifting to Singapore. Currently, the plan is to establish it in Indonesia.

- The importance of careful consideration regarding center capacity, establishment timelines, and ensuring sustainability was highlighted. Discussions centered on key aspects such as cost-sharing, delineating responsibilities, and determining access protocols

- Several participants emphasized the significance of considering data center interoperability, emphasizing its pivotal role in fostering effective collaboration

- Despite the consensus on data center infrastructure, participants acknowledged challenges such as national security concerns or resource limitations.



Interoperability

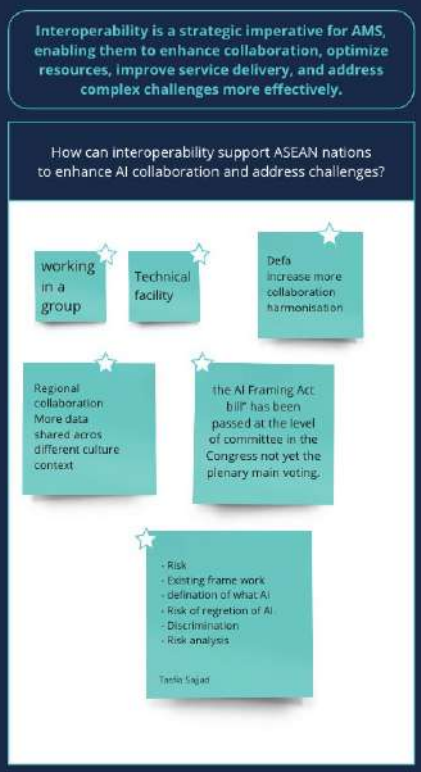
Question: Interoperability is a strategic imperative for AMS, enabling them to enhance collaboration, optimize resources, improve service delivery, and address complex challenges more effectively.
How can interoperability support ASEAN nations to enhance AI collaboration and address challenges?

- Language, culture and politics were highlighted as barriers for regional and international interoperability. The participants appraised Singapore and the US's recent development on the interoperability of their AI framework as potential models for other AMS.

- Participants stressed the importance of conducting a comprehensive risk assessment, comparing risks against the existing framework and definitions of AI. The discussion centered on evaluating the current infrastructure and frameworks in place within AMS to gauge their effectiveness in supporting AI interoperability.

- Participants agreed on the need for a Working Group and **AI Technical Assistance** Facility to address challenges and facilitate collaboration. It was emphasized that the AI Technical Assistance Facility needs to have a role in supporting the academic sector and helping AMS to build awareness on AI-related issues.

- The importance of regional collaboration, harmonization, and increased data sharing across different cultural contexts was highlighted as a key factor toward interoperability.



Implementation

Question: 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). Are these the critical implementation elements? Are there any additional points ASEAN should consider while implementing these?

Reflections on proposed action items

- Participants underscored the significance of considering case studies of regional GenAI products like SEA-LION, citing them as valuable examples to understand the challenges associated with adopting GenAI models in the ASEAN region.

- Additionally, participants proposed that ASEAN members could benefit from a "treaty" or guidelines to promote a collaborative approach in the deployment of GenAI applications. Such a "treaty" could align with future certification systems.

- The G7 Hiroshima process on GenAI was also highlighted as a potential source of learning for ASEAN.

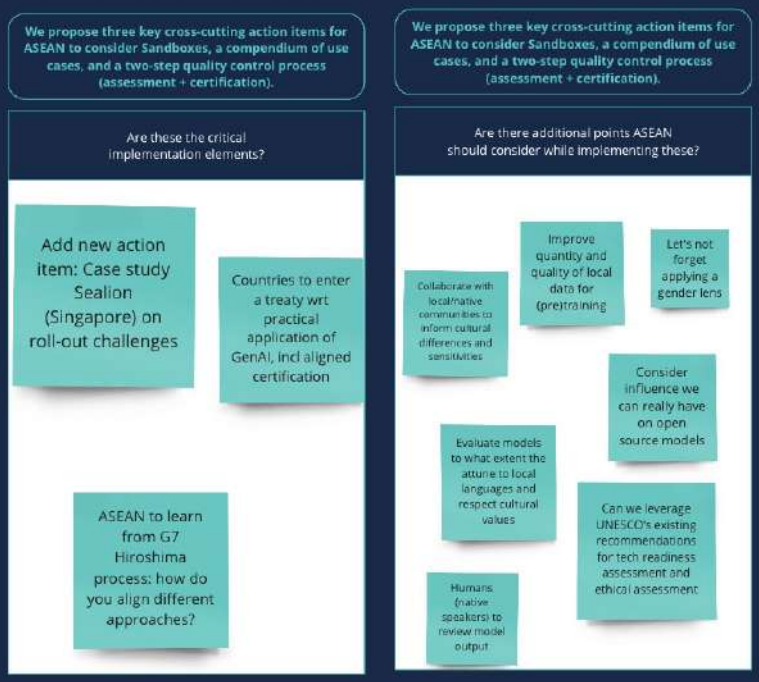
Additional action items

- Participants stressed the need to assess the extent to which GenAI models are fine-tuned for specific languages or cultural values. The consideration of human reviewers to fact-check the model's output was strongly recommended.

- Specific considerations on gender and vulnerable communities were mentioned as well.

- Approaches such as UNESCO's tech readiness assessment and ethical assessments were suggested as factors to explore in the governance framework for AI and GenAI.

- The pivotal role of open-source GenAI models was acknowledged, and participants recommended that ASEAN should study the influence of such tools in the adoption of this technology.



From Concept to Action

Peter Brimble from the AIAPI then presented a summing up of likely 2024 action items that will ensure responsible development and use of AI and GenAI in ASEAN. Three overarching and ongoing initiatives create the context for the development of the ASEAN AI Ecosystem: the ASEAN Digital Masterplan, the ASEAN Digital Economy Framework Agreement, and the Draft ASEAN Guide on AI Governance and Ethics.

Going forward, the elements of the overall strategy to build the ASEAN AI ecosystem need to be fully coordinated to ensure measures move forward effectively, including the development and implementation of the Discussion Paper on the Responsible Development and Use of Generative AI in ASEAN and the completion of the USAID/ DCCP AI Research Brief and Roadmap activity to serve as a key diagnostic and monitoring tool.

Participants were asked to fill out a form with their feedback on the Workshop.

Roger Moyes, Chief of Party of the ASEAN-USAID IGNITE Project, provided closing remarks to the Workshop.

Update: The 4th ASEAN Digital Ministers' Meeting, held from 1-2 February 2024, endorsed the ASEAN Guide on Artificial Intelligence (AI) Governance and Ethics, which sets out ASEAN's approach towards governing and leveraging the power of AI. The Meeting also welcomed the recommendation to set up a new Working Group on AI Governance, including initial work on generative AI.

Main Takeaways and Insights

- To showcase the potential benefits and underscore prevalent risks associated with GenAI, the entertaining launch video capturing inputs from the Discussion Paper that was largely created by GenAI.

- The enlightened and balanced perspective provided during the fireside chat on AI's potential transformative potential for humanity, especially in light of the cultural diversity in the ASEAN region. The critical need that was highlighted for greater participation in conversations on AI, and for ASEAN populations to become better informed and to have a stronger voice on AI matters.

- The Mentimeter survey on participants' views on the benefits and concerns of GenAI, which revealed some interesting perceptions – concerns (security, misinformation, privacy) and benefits (productivity, accessibility, convenience).

- On the ASEAN AI Technical Assistance Facility, participants recognized the urgency and identified the specific need for supporting the academic sector and helping AMS to build awareness on AI-related risks.

- On global governance, participants called for adopting the principle of ASEAN centrality and the need to account for ASEAN's distinct risk perception, values, and cultural considerations in the region's approach to AI governance.

- On regional AI models, participants enthusiastically accepted the AI-Singapore Large Language Model (LLM) called SEA-LION, which provides an AI model that is specifically pre-trained and instruct-tuned for the Southeast Asian (SEA) region, citing it as a valuable tool to understand the challenges associated with adopting GenAI models in the ASEAN region.

- On digital literacy, participants highlighted the urgency of establishing a digital information literacy framework for ASEAN countries, covering both the science and application of GenAI, along with essential digital skills.

- On the digital divide, participants advocated for enhanced collaboration between businesses and academia, particularly in solving real-world problems with GenAI.

- On data governance, participants emphasized the importance of addressing risks associated with cross-border data flows and personal data.

- On ethics, participants stressed the importance of the ethical responsibility of businesses, and the need to contextualize GenAI development within the moral values of ASEAN countries' citizens.

- On interoperability, participants identified language, culture and politics as key barriers for regional and international interoperability. They recognized the importance of regional collaboration, harmonization, and increased data sharing across different cultural contexts as key enablers for interoperability.

- Lastly, the tremendous potential for ASEAN to work together to coordinate the elements of the ambitious overall strategy to build the ASEAN AI ecosystem.

Workshop Feedback

Participants praised the workshop as very productive, suggesting a USAID AI education program for marginalized communities in ASEAN member countries. They valued the Mentimeter board, appreciated the workshop's relevance, and suggested longer breakout discussions. Feedback indicated a commitment to follow-up contributions (81%), positive views on speaker knowledge (96%), as well as the scope of participation and interaction (92%) during the workshop. Additionally, workshop participants recommended more sessions and knowledge sharing on AI and GenAI.

Attachments

1. Workshop Agenda.
2. Video based on the Discussion Paper on the Responsible Development and Use of Generative AI in ASEAN.
3. Workshop Pre-Read Material: Responsible Development and Use of Generative AI in ASEAN.
4. Workshop Presentation on the Responsible development and Use of Generative AI in ASEAN.
5. Workshop Participants.

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

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AI ASIA PACIFIC INSTITUTE

Workshop Agenda

7 December 2023, 14:00 pm (GMT+ 7)
Virtual – Zoom Platform

14:00 - 14:05	**Opening remarks** USAID
14:05 – 14:10	**Moderator** Introductions and setting the stage
14:10 - 14:30	**Fireside chat** Generative AI - the opportunities and challenges
14:30 - 14:35	**Short poll or activity**
14:35 - 15:00	**Recap the Findings of the Discussion Paper (AIAPI Team)** • What's new with Generative AI and global trends • Generative AI development in ASEAN - Status and challenges • Proposed measures to promote responsible development and use of Generative AI in ASEAN • Q and A
15:00 - 15:45	**Breakout group discussions** Facilitated brainstorming to consider issues surrounding the key challenges and emerging problems facing ASEAN regarding Generative AI, and potential policy and governance solutions
15:45 - 16:00	**Group reports** Each group's representative will share key takeaways from their discussion, back to the plenary group
16:00 - 16:15	**Summarize and next steps** The Moderator invites all participants to share feedback on the group reports, summarizes the content and shares next steps
16:15 - 16:25	**Workshop feedback**
16:25 - 16:35	**Closing remarks** IGNITE representative

Discussion of emerging policy approaches to generative AI, including an examination of regulatory gaps related to AI in ASEAN

The workshop convenes leading AI and Generative AI experts to discuss usage and regulation, exploring implications for ASEAN with participants ranging from specialists to business leaders.

The Responsible development and use of Generative AI

Recognized regional or international experts/speakers and AI Asia Pacific Institute (AIAPI) team.

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Project Profile

Responsible Development and Use of Generative AI in ASEAN

Crafting a Comprehensive Discussion Paper on the Responsible Development and Use of Generative AI in ASEAN

Project objectives

The project aims to identify the most urgent policy, legal and regulatory gaps in Generative artificial intelligence (AI) implementation within ASEAN and provide recommendations on how to address them, to encourage multi-stakeholder participation in Generative AI policymaking within ASEAN, and to produce the discussion paper on the responsible development and use of Generative AI in ASEAN to govern the development and implementation of Generative AI within the ASEAN context.

Generative AI

Generative AI is a type of artificial intelligence system capable of generating text, images, or other media in response to prompts. One common form of Generative AI is Natural Language Processing (NLP), the field of artificial intelligence where computer science meets linguistics to allow computers to understand and process human language.

Project activities

To achieve the project objectives, the team will undertake the following actions

1. Prepare a research brief on the governance of Generative AI, providing recommendations aligned with ASEAN's values and objectives for growing innovation and the digital economy.

2. Organize workshops to share findings and solicit inputs.

3. Analyze the research findings, combined with workshopresults, to develop the draft The Responsible Development and Use of Generative AI in ASEAN (Discussion paper).

Discussion paper

The Discussion Paper on the responsible development and use of Generative AI in ASEAN will complement and enhance the ASEAN Guideline on AI governance and ethics and will be developed to assist ASEAN Member States in thinking about what needs to be included and prioritized in Generative AI governance and policy. The discussion paper will guide the development and use of generative AI, offering suggestions for ASEAN, and the timeline to ensure maxmum impact and implementation.

Partners

The project is managed by the ASEAN-USAID IGNITE project, in close partnership with the ASEAN Secretariat and the ASEAN COSTI. The IGNITE project is implemented by Nathan Associates, now part of the Cadmus Company under contract to USAID. The project has contracted AI Asia Pacific Institute to prepare the ASEAN Generative AI discussion paper by the end of 2023.

ASEAN COSTI

The ASEAN Committee On Science, Technology and Innovation(COSTI) is responsible for operationalizing the key elements of the ASEAN plan of action on science, technology and innovation (APASTI) 2016-25. COSTI focuses on creating public awareness of regional science and technology activities and their contribution to economic development and maintains close relations with ASEAN dialogue partners and other collaborators.

ASEAN SCMIT

The IGNITE project works closely with the Sub-Committee on Microelectronics and Information Technology (SCMIT), which seeks to develop and enhance the capabilities of ASEAN member countries on microelectronics and ICT, and its related areas from down-stream to up-stream technologies, including artificial intelligence. SCMIT is organized as a component subcommittee of COSTI.

ASEAN-USAID IGNITE

USAID's flagship project working under the ASEAN economic pillar, the ASEAN-USAID Inclusive Growth in ASEAN through Innovation, Trade and E-Commerce (IGNITE) Project provides technical assistance to ASEAN sectoral bodies in trade facilitation, digital economy, and science, technology, and innovation. IGNITE also promotes the cross-cutting objectives of support for micro, small, and medium-sized enterprise (MSME), and gender mainstreaming.

AI Asia Pacific Institute (AIAPI)

The AIAPI addresses the social, legal and ethical risks of AI to advance its potential to build a sustainable world, in particular through international cooperation. AIAPI has extensive experience in the governance of AI, having published the annual trustworthy Artificial Intelligence in the Asia- Pacific region' report. AIAPI has closely engaged the private sector in the implementation of AI guidelines and frameworks from the public sector. visit : https://aiasiapacific.org/.

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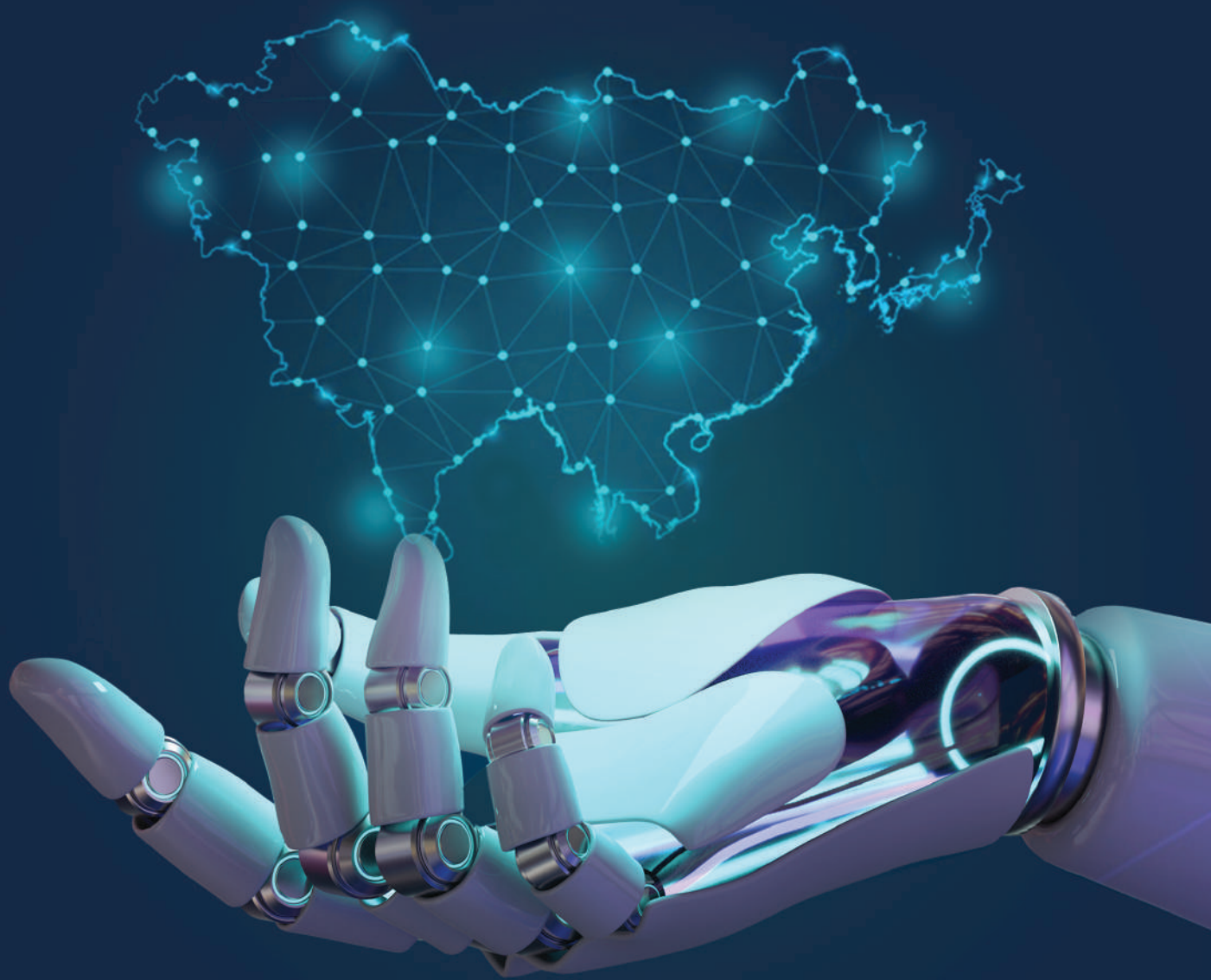
Responsible Development and Use of Generative AI in ASEAN

Workshop Pre-Read Material

7th December 2023



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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

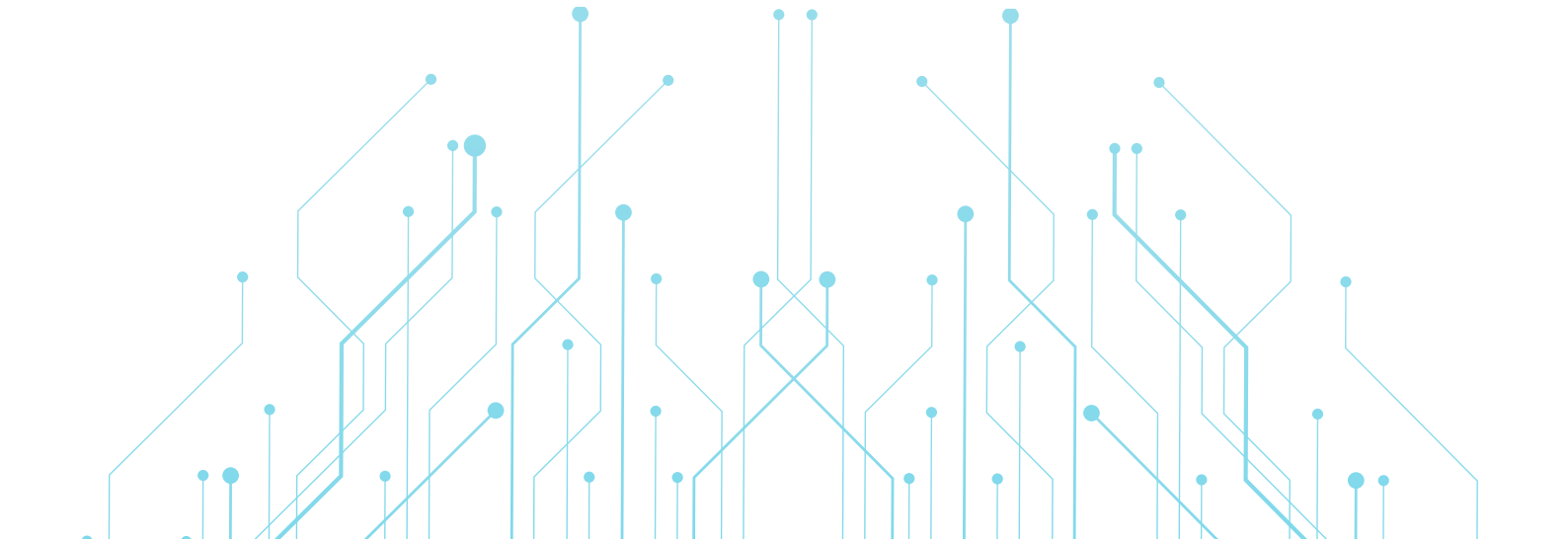
Considerable efforts are required to raise awareness of accompanying the commercial use of AI with rigorous governance and ethics frameworks to manage the risks. This must be accompanied by efforts to educate the population at large about the risks and benefits and opportunities of AI, as well as to 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

General Question

We propose that there are three leading AI global governance powers US, China and EU. If so, how should ASEAN respond and what are the practical implications for policies?

The Digital Divide

We propose that if responsibly developed and used, AI or GenAI can be a strong tool to address the digital divide, as opposed to increasing it. As a response, it is proposed that digital literacy and awareness should serve as a foundation. How could ASEAN foster these?

Data Governance

In the context of GenAI, a solid foundation for the ecosystem requires special attention to data, particularly related to the regional and international flows

1. How to enhance management of the risks posed by data development and flows?
2. Investment in data center infrastructure is one of the ways that this can be achieved. If so, how could AMS leverage this?

Interoperability

Interoperability is a strategic imperative for AMS, enabling them to enhance collaboration, optimize resources, improve service delivery, and address complex challenges more effectively. If so, how can interoperability support ASEAN nations to enhance AI collaboration and address challenges?

Implementation

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).

1. Are these the critical implementation elements?
2. Are there additional points ASEAN should consider while implementing these?

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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

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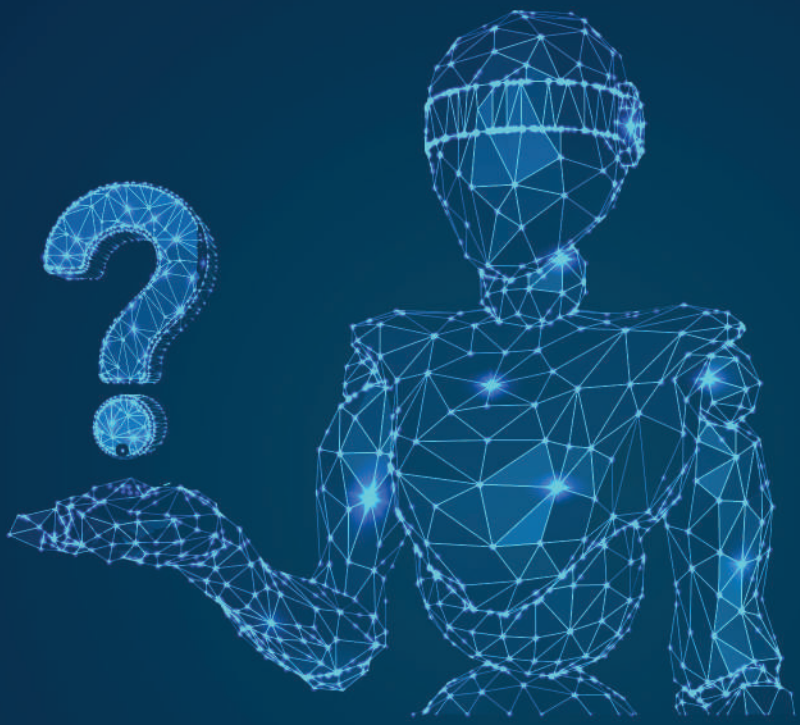

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Workshop on

THE RESPONSIBLE DEVELOPMENT AND USE OF GENERATIVE AI IN ASEAN

Tuesday, 7 December, 2023

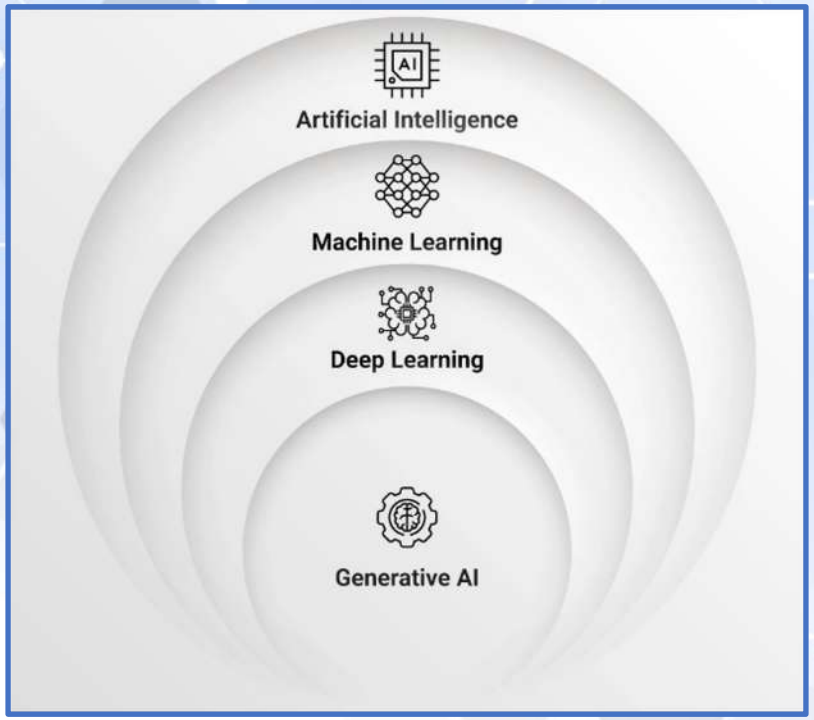
Contents

What is Unique about Generative AI?

GenAI 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.

One common form of Generative AI is **Natural Language Processing** (NLP)

Generative AI in the Context of AI



Traditional AI vs Generative AI

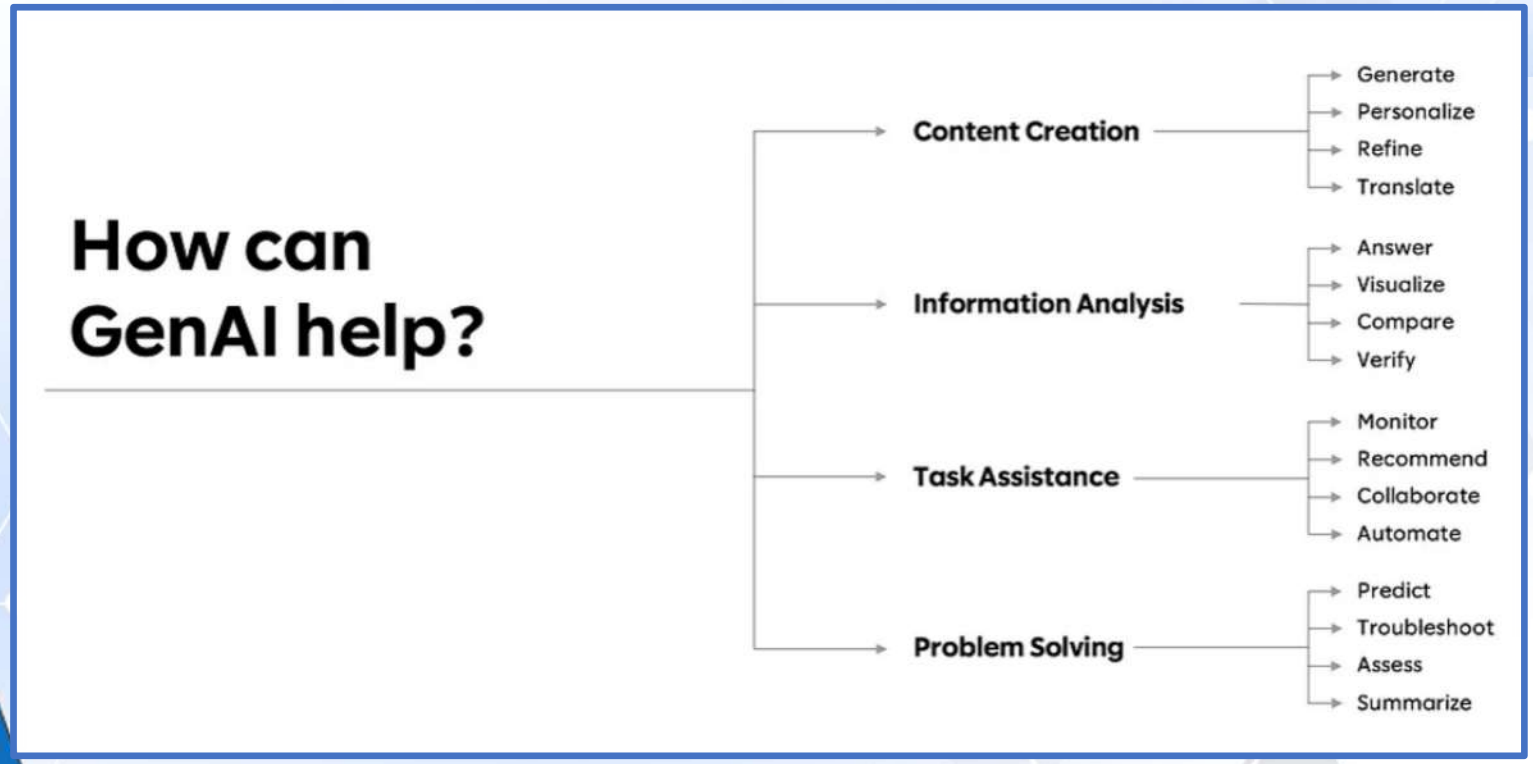
Traditional AI vs Generative AI

Unlike traditional AI systems that are designed to recognize patterns and make predictions, generative AI creates new content in the form of images, text, audio, and more.

	Traditional AI	Generative AI
What Happens during Preparation (the Input phase)	**Specialized and targeted data**	**High-data availability**, allowing the model to learn patterns, representations, and nuances from a broad range of examples.
What Happens Inside (the Model phase)	**Different models for different tasks** • Potentially faster to train • Perhaps easier to understand decision-making	**One model that adapts to various tasks** • Requires significant computational resources and large datasets • Limited ability to understand and explain how a model makes decisions or generates specific outputs
What Goes Out (the Output phase)	**Targeted for specific application** • Potentially more reliable due to application focus	**Offers use for combined and wide variety of applications (text, video, etc.)** • Possesses the ability to deduce or derive knowledge from different domains or areas of expertise, providing additional understanding or insight beyond its initial training scope • Prone to information infringement/hallucinations due to several factors inherent in its training and functioning

The benefits of Generative AI

Harnessing the Potential of Responsible Generative AI



High-Level Benefits:

- Enhancing accessibility
- Development and consolidation of infrastructure
- Centralization of research and development

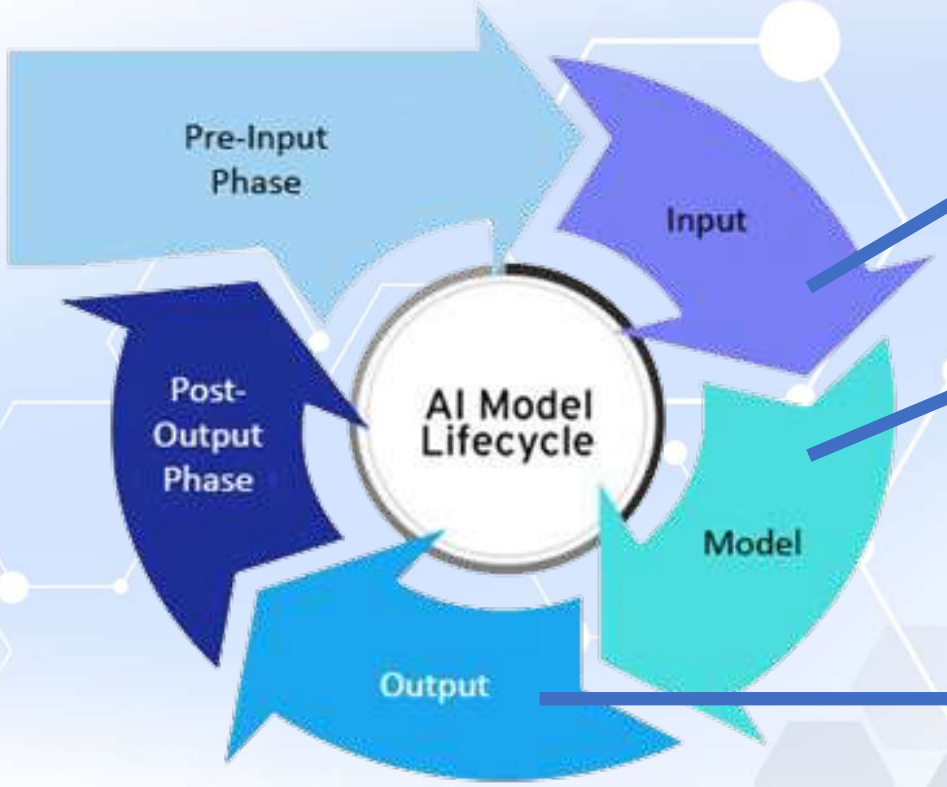
A Closer Look: Balancing Quality and Utility

Specific Needs: The assessment of GenAI's potential should be conducted on a sectoral basis;

Responsible Development and Use: The development and use of GenAI responsibly enables the harnessing of the genuine advantages that this technology presents.

The Risks of Generative AI

Managing the Downside of Generative AI along the AI Lifecycle



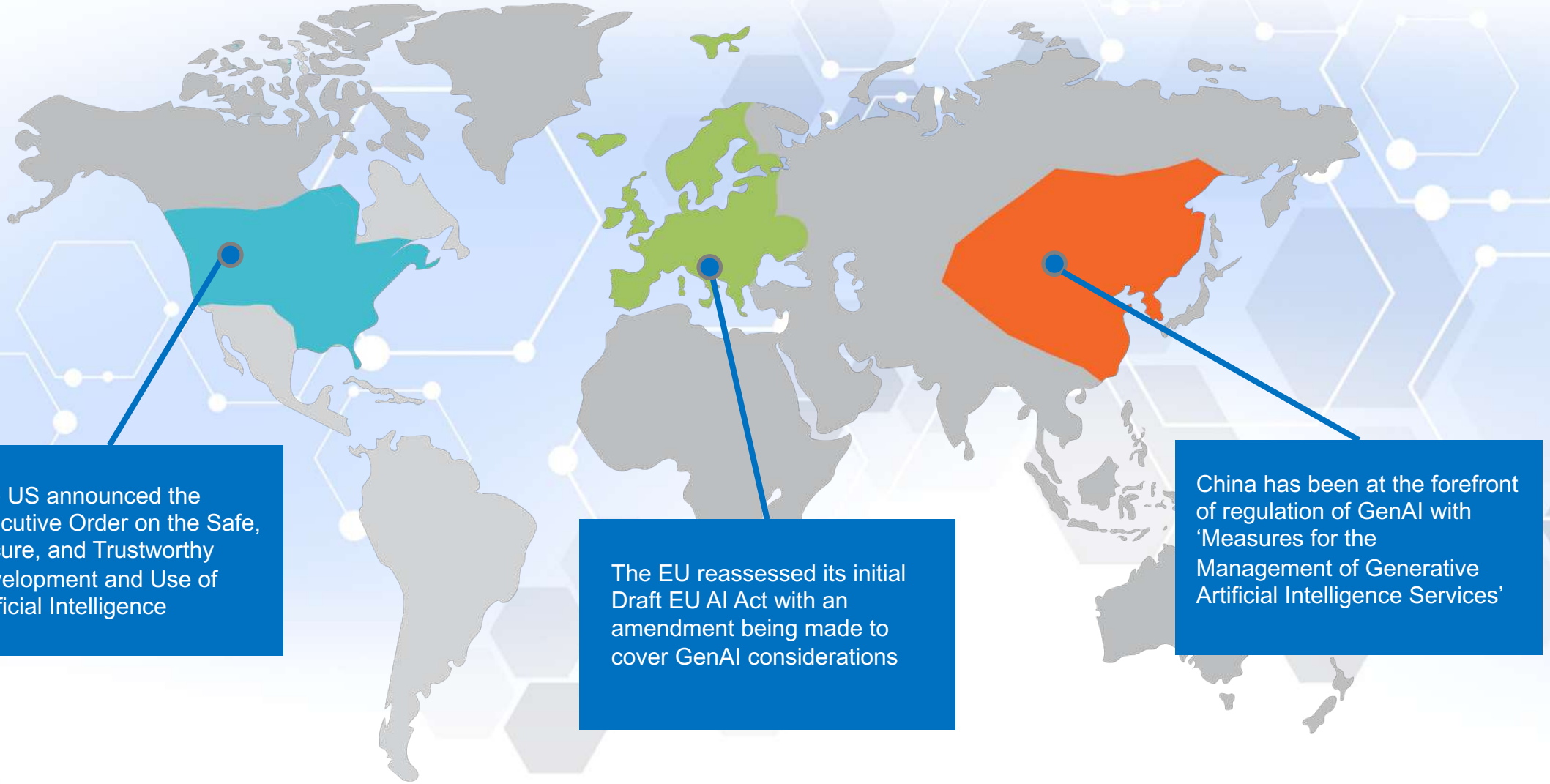
- Privacy and data governance
- Fairness and equity
- Security and safety

- Transparency and explainability
- Robustness and reliability
- Accountability and integrity

- Robustness and reliability
  - Mistakes and hallucinations
  - Privacy and confidentiality
  - Disinformation
  - Copyright
  - Embedded biases
  - Dependence issues

Global Trends in Generative AI

GenAI took the world by storm in late 2022 with the release of ChatGPT and, as the risks became more tangible, responses from regulators and policymakers became more pressing



The US announced the Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence

The EU reassessed its initial Draft EU AI Act with an amendment being made to cover GenAI considerations

China has been at the forefront of regulation of GenAI with ‘Measures for the Management of Generative Artificial Intelligence Services’

Key Lessons Learned from the ASEAN AI Experience

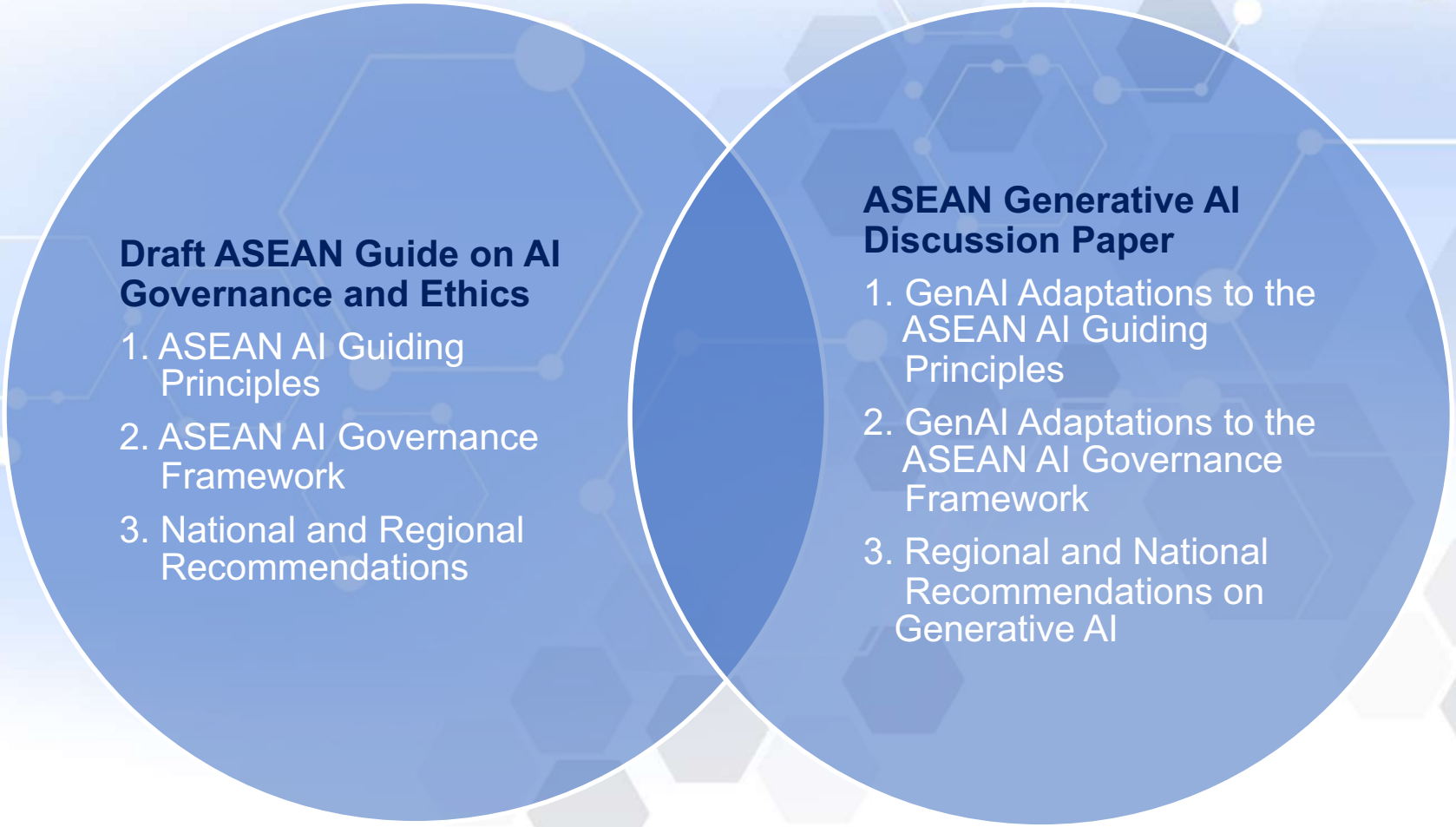
ASEAN nations are at very different levels of AI readiness and regional GenAI development is at a very nascent stage

Note: For GenAI, significant practical lessons are being learned through the development and roll-out of the AI-Singapore Large Language Model (LLM) called SEA-LION (Southeast Asian Languages In One Network) that is specifically pre-trained and instruct-tuned for the Southeast Asian (SEA) region.

Towards Responsible Development and Use of Generative AI in ASEAN

Adaptations to the Draft ASEAN AI Guide

Generative AI brings unique risks and the principles and components of AI Governance and recommendations defined under the Draft ASEAN Guide on AI Governance and Ethics need to be adapted to ensure the responsible development and deployment of Generative AI.



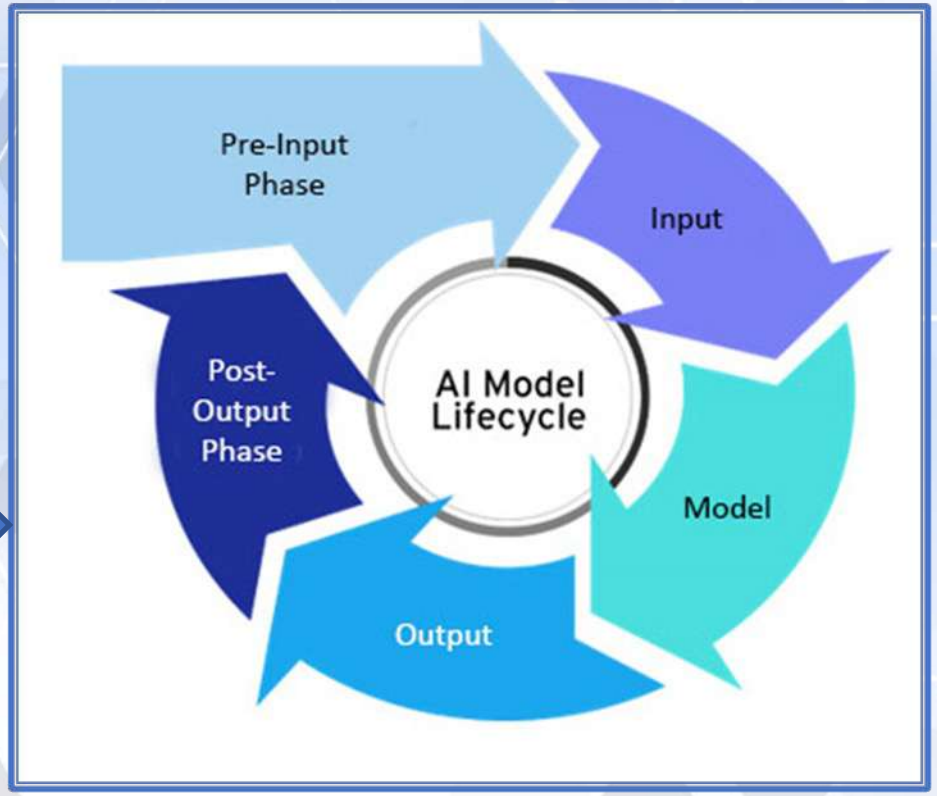
Adaptations to the AI Guiding Principles

Adaptations for the seven Draft ASEAN AI Principles are proposed to respond to the GenAI-specific challenges and guide risk assessments of GenAI applications.

Adaptations to the AI Governance Framework

Proposed critical adaptations 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



Recommendations:

To foster a strong ecosystem for the responsible development and use of Generative AI in ASEAN

All supported by an **AI Technical Assistance Facility** suggested to be funded and established under the proposed Working Group on AI Governance

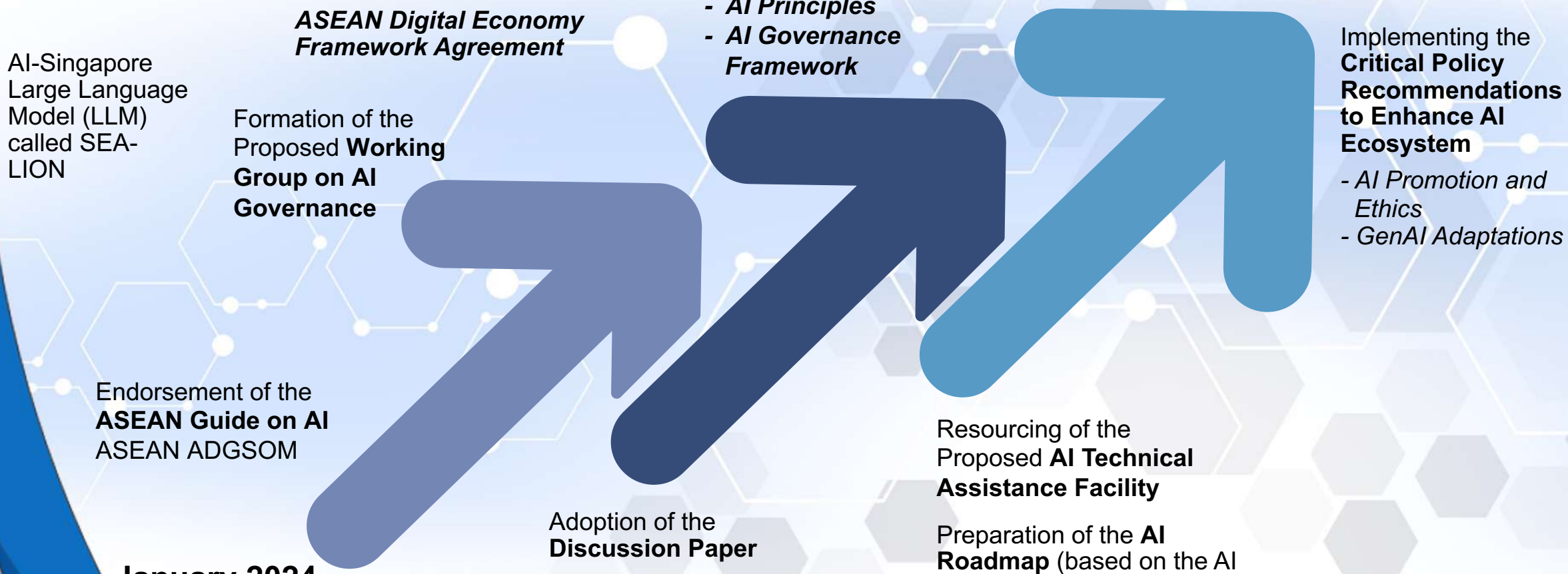
1. Building the institutional and regulatory foundations
2. Supporting data development and flows
3. Enhancing digital literacy and awareness
4. Strengthening regional cooperation
5. Driving interoperability
6. Supporting practical implementation through cross-cutting measures

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

- Establishment of sandboxes
- Compiling a compendium of use cases
- Mandating a two-step quality control process, comprising both assessment and certification processes

Building the ASEAN AI Ecosystem: From Concept to Action

Coordinated Efforts to Harness the Benefits of AI and Address the Risks



Thank You

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