Australian Aid

THE AUSTRALIAN APEC STUDY CENTRE
Asia-Pacific Economic Cooperation

In partnership with RMIT UNIVERSITY

Access Partnership

STANDARDS Australia

LEVERAGING AI STANDARDS FOR INNOVATIVE AND INCLUSIVE AI

AI is crucial for the emergence of next-generation products and services contributing to the dynamism, inclusivity, and competitiveness of ASEAN's digital economies. To this end, AI standards help ensure AI grows and matures in a fair, secure, and interoperable manner.

WHAT IS AI?

AI is a general term for computing systems that emulate human cognitive functions, such as identifying patterns to solve problems.

Comprising machine learning, deep learning, big-data analytics, automation, and some types of robotics, AI improves productivity, streamlines processes, and optimises resources. It can also address complex, longstanding socio-economic issues such as hunger, poverty, inequality, discrimination, and climate change.

KEY TRENDS

Trend 1: The need for a harmonised approach to AI

The way AI is defined and approached is largely fragmented across the ASEAN region, with no single, unifying regional governance framework to facilitate collaboration within and across member states. A harmonised approach to AI is vital for ASEAN to effectively become a global and regional AI powerhouse.

Trend 2: AI will be key to ASEAN's post-pandemic recovery

Different facets of AI were used in numerous manners to mitigate the negative effects of the COVID-19 crisis (contact-tracing efforts, virus detection protocols, supply chain rationalisation, etc.). Now that the tourism-led economies of ASEAN are looking at the post-pandemic horizon, it is time to operationalise AI in a more durable manner.

Trend 3: AI requires strong policies and regulations

As promising and transformative as AI may be for ASEAN, it cannot grow or mature without conducive policies and enabling regulations in place. Indeed, AI brings complex, inter-connected policymaking challenges to the forefront of digitalisation agendas, and these need to be considered and addressed if AMS want innovative AI ecosystems to emerge.

Trend 4: AI must be made ethical, transparent, and trustworthy

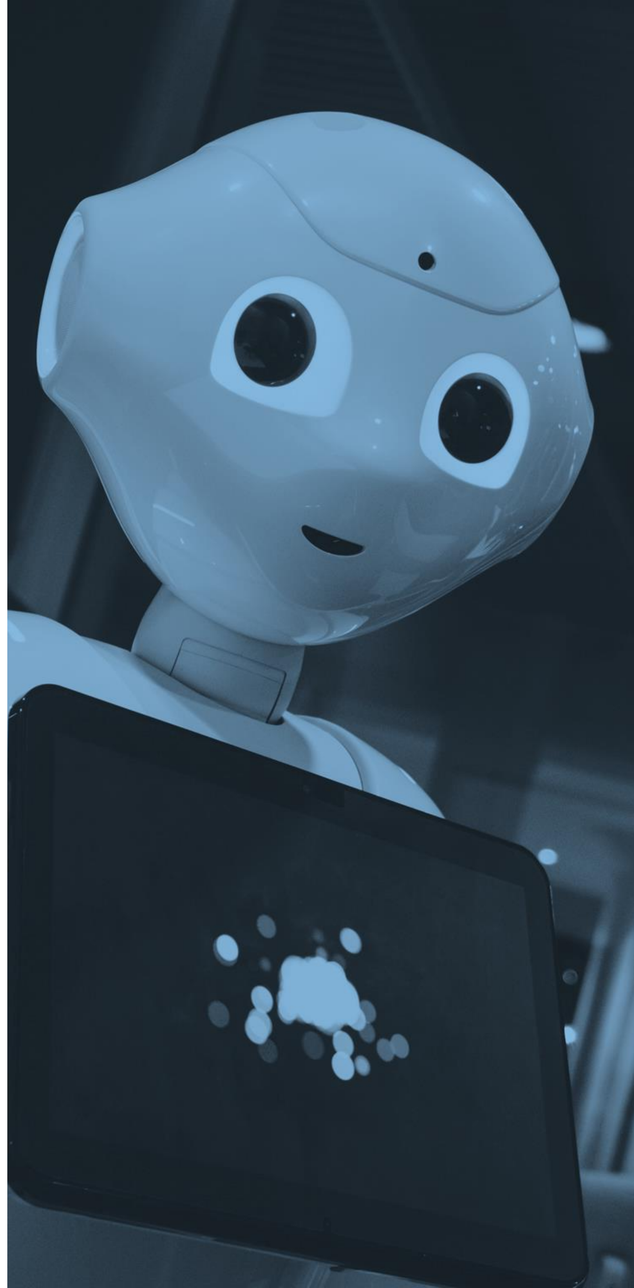
For AI to grow and deliver on its promises, it must be designed and deployed in a manner that earns and keeps the trust of individuals, organisations, and governments. Making AI trustworthy entails applying ethical standards, principles, and guidelines to every facet of AI systems, ensuring they act in a fair, inclusive, and humane manner.

CREATING ECONOMIC AND SOCIAL DEVELOPMENT OPPORTUNITIES FOR PEOPLE FROM MARGINALISED SOCIAL GROUPS

AI makes businesses and governments more efficient, but it can also provide opportunities for people who are less visible or represented in society.

Across ASEAN, start-ups and research centres are developing AI solutions to support persons with disabilities, older people, the chronically ill, victims of abuse, or those experiencing poverty.

Across the region, there are platforms that provide automated support and assistance to those in need, as well as applications that precisely identify and target the needs of those who have a right to participate in and benefit from the digital economy.



KEY AI STANDARDS

Data Protection and Privacy

- The ISO/IEC 27000 family of standards is widely regarded as a baseline for data protection principles (ISO/IEC 27001 on Information Security Management and ISO/IEC 27002 on codes of practice for information security controls).
- ISO/IEC 27701 provides specific guidelines for the establishment, implementation, maintenance, and continual improvement of privacy.
- ISO/IEC 27010 specifically governs the sharing of information across organisations.

Cross-border Data Flows

- ISO/IEC 27000 also refers specifically to cloud processes with ISO/IEC 27017.
- IEEE 2301 addresses cloud interoperability and portability, which can be adopted to prevent uncoordinated implementations of cloud infrastructure or be taken as reference for more specific approaches at the regional level.

Data Quality, Ethics, and Management

- ISO/IEC SD 5259 on data quality for analytics and machine learning is currently under development.
- IEEE P2247.1 governs the classification of AI-driven adaptive instructional systems.
- IEEE P2660.1 covers practices for the integration of low-level automation functions and other software agents in industrial control platforms.
- ISO/IEC JTC 1/SC 42 working group oversees the development standards around AI ethics such as bias and transparency.

Major initiatives include: ISO/IEC DIS 24668 on Process Management Frameworks for Big Data Analytics, ISO/IEC DIS 23053 on a Framework for AI Systems using Machine Learning, and ISO/IEC NP 38507 on Governance Implications of the Use of Artificial Intelligence by Organisations.

- IEEE 7000-2021 addresses ethical concerns during system design, among others.
- ISO/IEC TR 24028:2020 on the trustworthiness of AI, covers issues like transparency, while ISO/IEC TR 24027 addresses bias in AI decision-making.
- In terms of inclusion and accessibility, ISO/IEC GUIDE 71:2014 addresses accessibility in standards, ISO/IEC 30071-1:2019 covers the accessibility of user interfaces, and ISO 21801-1:2020 tackles cognitive accessibility.

KEY RECOMMENDATIONS

Put inclusive AI high in ASEAN members' economic agendas and develop a common definition and approach to it

It is important that ASEAN adopts a common understanding of the many facets of AI, one that encompasses all the current complexities of the concept, accounts for all potential future ramifications, and aligns with national and regional priorities. This will then make it easier for ASEAN members to develop a common vision for inclusive AI, which will in turn open the doors to a regional strategy on inclusive AI. Developing a cohesive and holistic AI Agenda for ASEAN is key to ensuring greater economic integration and participation within the region.

Leverage AI for inclusive post-pandemic recovery and economic development

The power of AI and data processing can significantly bring ASEAN countries closer to economic recovery. AI has been a key technology supporting data mining for the purposes of monitoring and containing the spread of COVID-19. However, while capability of AI is huge, it is only with due consideration for data privacy and data sharing, as well as by preventing risks of discrimination, harm, or disadvantage for women, persons with disabilities, and marginalised social groups—areas for which the implementation of standards will be important.

Strengthen skills capacity, connectivity, and holistic collaboration

ASEAN member economies should proactively build skills and literacy in the use of AI, through talent development schemes tied to incentives which are inclusive and use a twin-track approach to disability inclusive development. Increasing engagement with NGOs and the private sector can also help refine inclusive AI policies and maximise their impact. A united position on AI standards and issues would also be ideal for the region to benefit from a sophisticated proliferation of AI.

Put inclusivity and accessibility at the heart of AI strategies

ASEAN economies should partner with persons with disabilities and organisation of persons with disabilities (OPDs) to ensure AI is developed and adopted in accordance with international standards that support equitable opportunities. This will not only increase the number of people who can participate in and benefit from AI, it will also signal a strong, united engagement towards making data-driven systems and technologies sustainably inclusive and durably accessible.

OPPORTUNITIES & CHALLENGES

Opportunities to seize

- Economic impact – AI enables automation and intelligent insights, leading to increased productivity gains, especially for SMEs.
- Government efficiency – AI can free up government staff and help overcome budget, resource, and manpower constraints.
- Social resilience – AI is a powerful tool for multiple sectors, with impact especially important in remote or rural areas.
- Universal Accessibility of AI – AI can help fight discrimination and contribute to the inclusion of persons with disabilities and marginalised groups.

Challenges to overcome

- Cross-Border Data Flows – Excessive constraints on data flows can impede AI innovation to spread.
- Privacy and Data Protection – The personal and organisational data that is vital to AI must be kept safe and secure wherever it is needed.
- Ethics, Transparency, and Accountability – AI must be developed and implemented in a responsible and accountable manner.
- Skills, Training, and Connectivity – Workers and businesses need the skills, knowledge, and confidence to both use and benefit from AI.