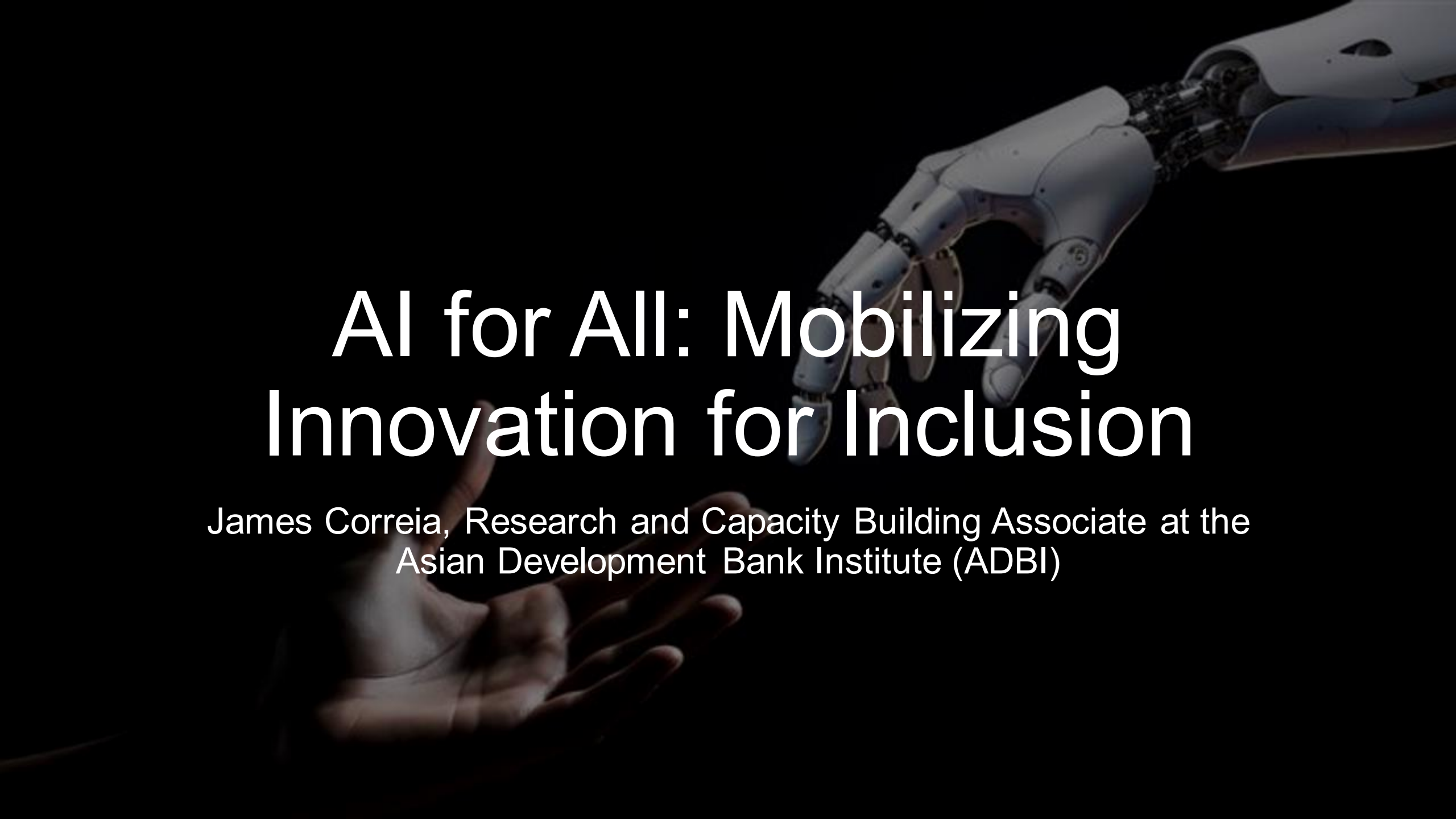


AI for All: Mobilizing Innovation for Inclusion

James Correia, Research and Capacity Building Associate at the Asian Development Bank Institute (ADBI)

Setting the Scene: AI Megatrends

- **Rapid expansion of data infrastructure:** the number of data centres has risen from 500,000 in 2012 to more than 8 million today.
- **Increasing commercial activity:** the amount of AI-related patents has increased from 3,833 in 2010 to more than 122,000 in 2023.
- **Growth engine:** investment has surged from $6-$130 billion since 2013, and the digital economy in ASEAN is due to triple between 2023-2030.
- **Research and development:** scientific publications have increased from 100,000 in 2019 to 1.5 million in 2023.
- **Rising public attention:** at least 69 countries have adopted almost 1,000 pieces of AI-related legislation and policy, starting in 2017.

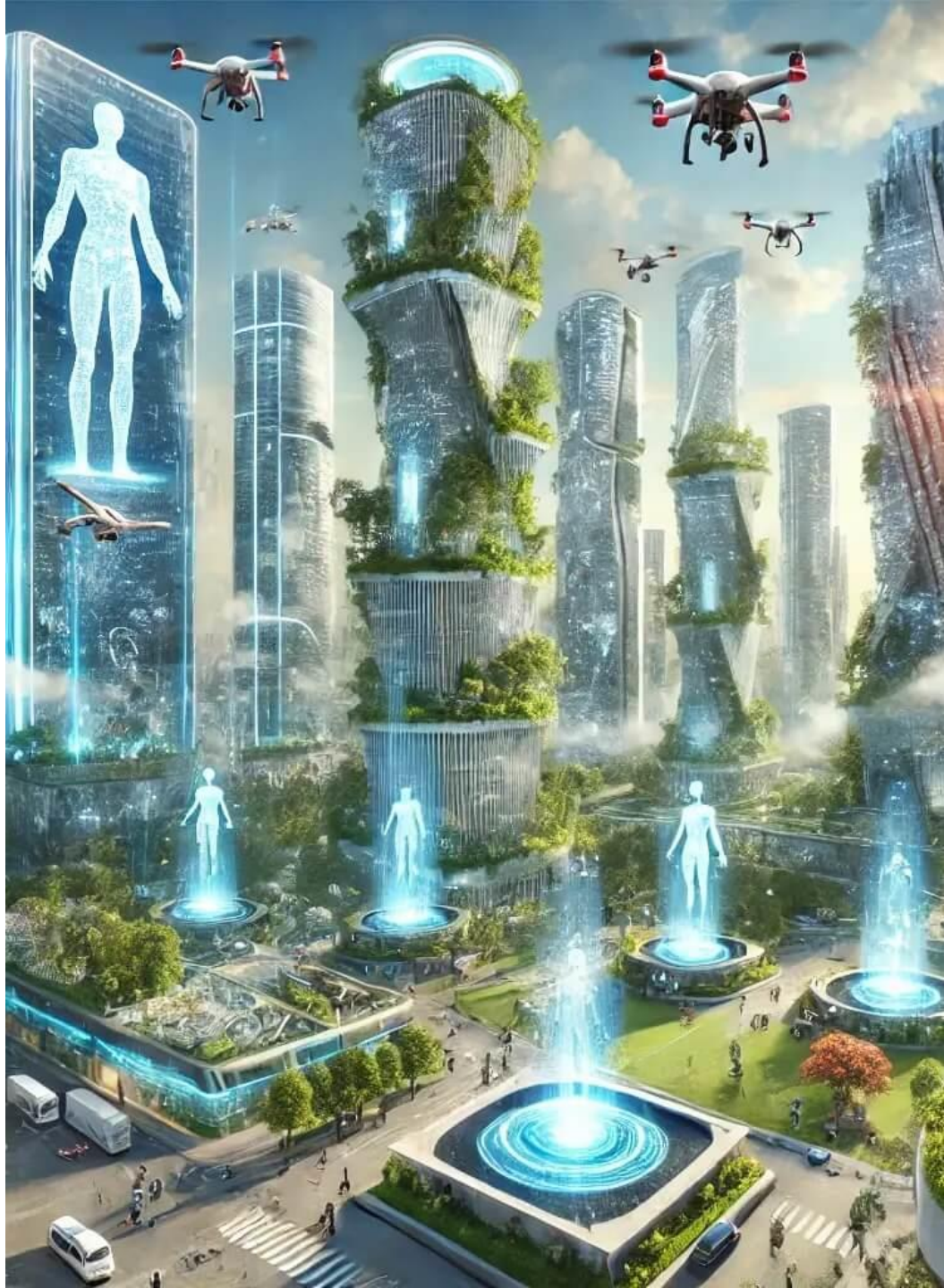
Definitions and Objectives: AI, Poverty, Development

- **Defining AI:** a technology that enables computers and machines to simulate human learning, comprehension, problem solving, and decision-making.
- **Key features:**
  - **Applicability:** AI is applicable across many domains of activity, policy areas, economic sectors and its production cuts across the supply chain.
  - **Adaptability:** AI is a 'complex adaptive system', that dynamically adjusts over time, including through machine learning.
  - **Autonomy:** AI self-manages through simulations, probabilistic models, and inference.
  - **Polymorphous:** AI takes a large and expanding number of forms, from chatbots to generative AI, integration into robotics and physical machines, and information systems.
- **Poverty:** multidimensional, deprivation of capabilities to function, situated within social circumstances and 'choice architecture'.
- **Sustainable development:** encompasses social, economic, and environmental dimensions, as well as considerations of present and future.

The Promise of AI in Asia and the Pacific

Asia and the Pacific has strong underlying fundamentals to make the most of AI, in terms of its skills base, industrial and infrastructural heft, and regional cooperation and integration.

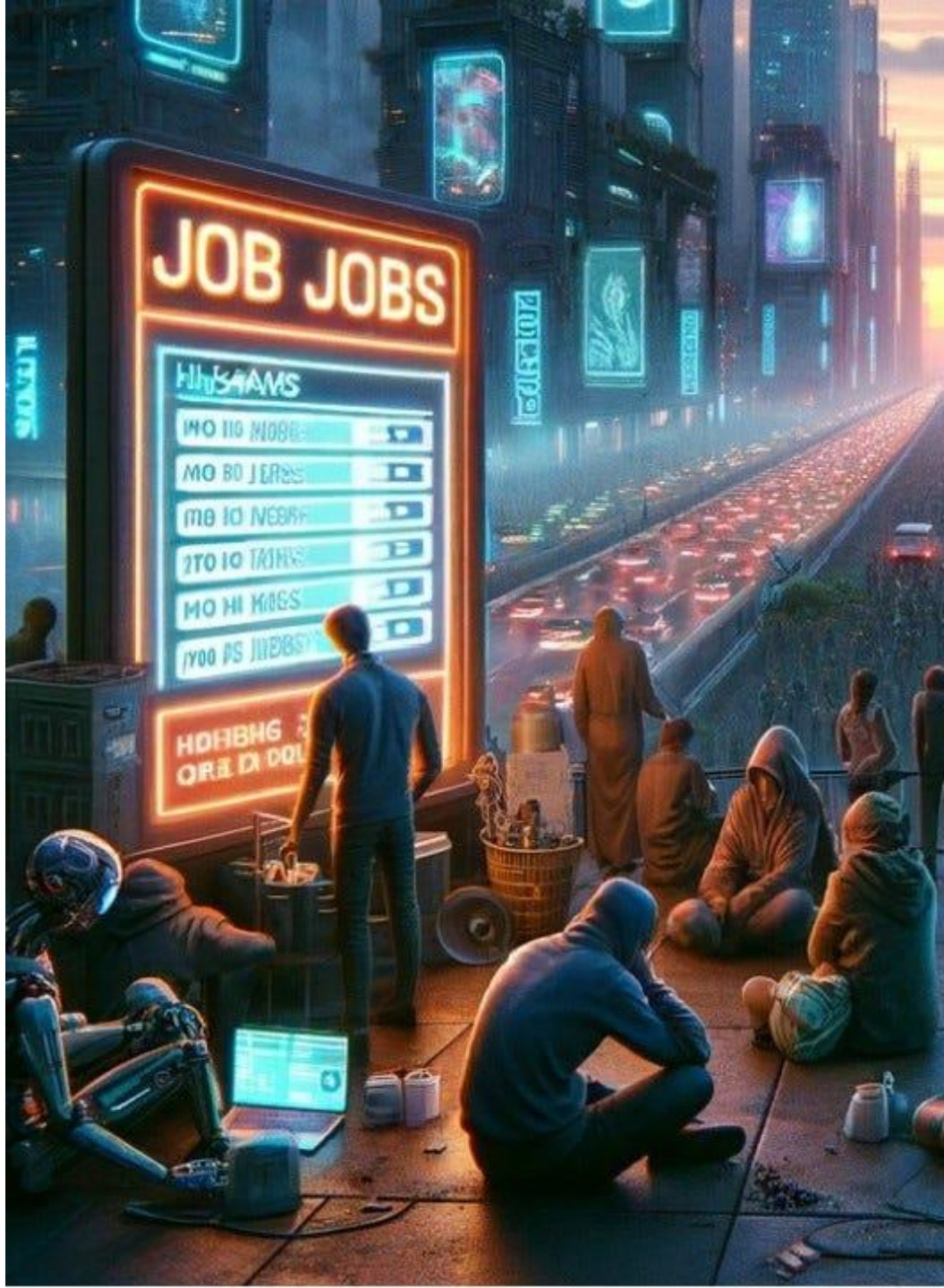
- **Increasing responsiveness and broadening coverage:** AI has the potential to improve awareness, access, and provision of social protection.
- **Tailoring to user needs and priorities:** AI can deliver targeted advice and support based on specific user characteristics and development objectives.
- **Unlocking efficiencies:** AI has the potential to boost productivity by 5-25%, with every 1% rise in digitalization associated with a $20 increase in digitalization in developing Asia.
- **Mapping patterns and trends:** AI mobilizes large datasets to map, predict, now-cast and forecast social, economic, and environmental dynamics, enabling more effective policy responses.
- **Bridging regulatory formulation and implementation:** improving transparency and effectiveness of governance, streamlining administration, and enhancing monitoring and enforcement of rules.



The Perils of AI in Asia and the Pacific

However, a high and persistent reliance on coal and fossil fuels, vast inequalities in workforces and populations, and regulatory, infrastructural and developmental deficits present significant risks.

- **Resource intensity and computational power:** AI consumes six times as much water as Denmark, increases emissions and e-waste, and its electricity use is projected to double by 2030.
- **Amplifying economic inequalities and digital divides:** AI could accelerate and entrench existing inequalities, when a third of Asia and the Pacific remain entirely unconnected.
- **Labor market displacement and automation:** with effects most pronounced among already-disadvantaged groups, and particularly severe in a region where more than two thirds of people work in the informal economy.
- **Pacing and protection:** the evolution of AI outstrips policymakers' efforts to effectively regulate and manage its development, raising data protection, privacy, and cybersecurity vulnerabilities.
- **Algorithmic biases:** in healthcare, educational, social, and justice systems.



Surveying the Landscape: Country Approaches across Asia and the Pacific

- At least 16 countries across Asia and the Pacific have adopted legislation to unlock the benefits and manage the risks of AI.
- These vary in their scope, stringency, and substantive focus.
  - **Mandatory and state-led:** People's Republic of China (PRC).
  - **Market-driven industrial promotion:** Republic of Korea (ROK), Japan.
  - **Risk-based:** Viet Nam, Thailand.
  - **Soft, voluntary principles:** Malaysia, Singapore.
- These are shaped by international developments and external drivers, in the ASEAN Guide, OECD Principles, EU AI Act, and UNESCO Recommendation on the Ethics of AI.

The Variety of Applications: Economic Development and Resilience

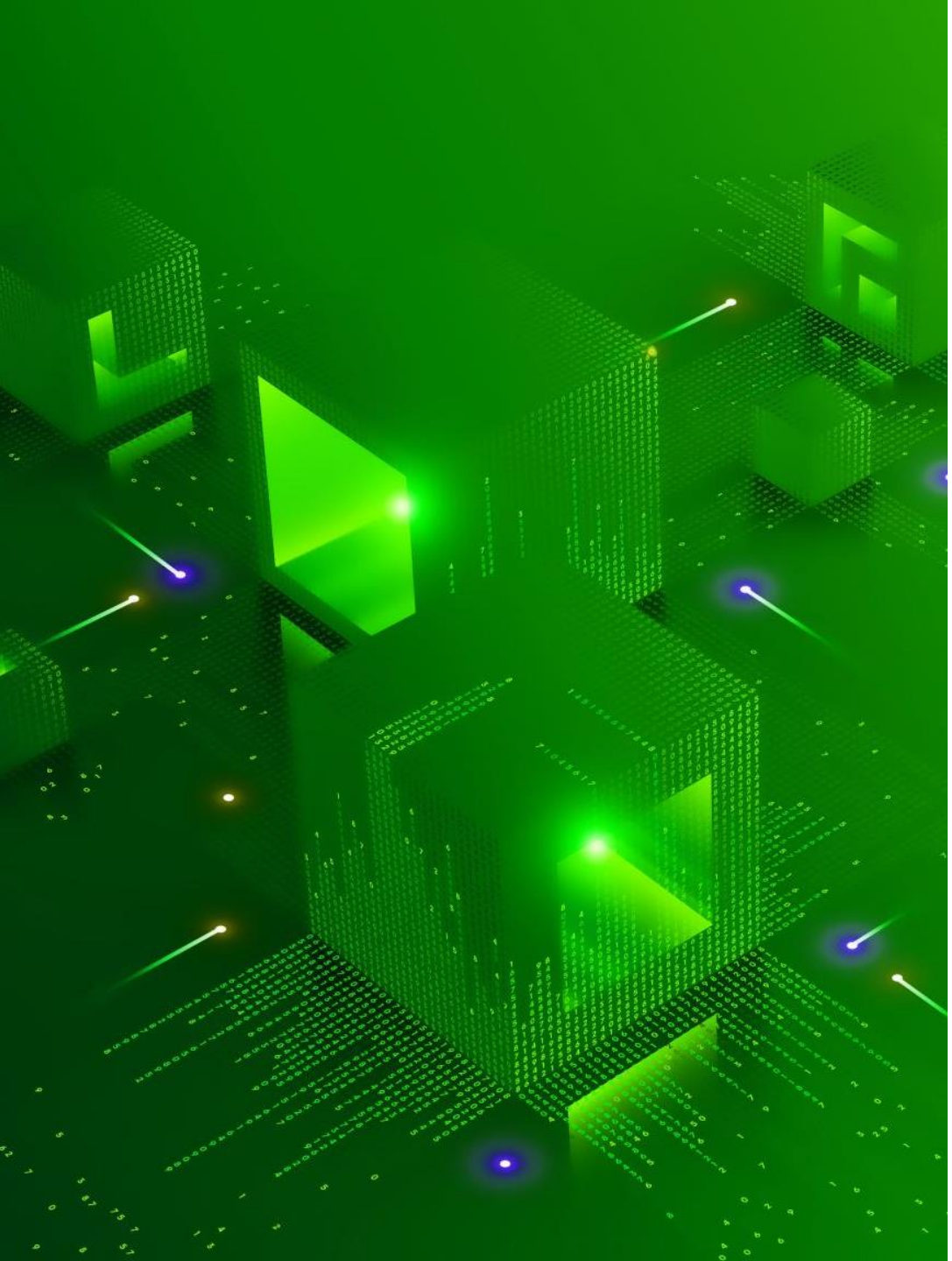
- **Enhancing service delivery:** Mongolia has aggregated over 1,200 digital public services within a single platform, and is actively exploring how AI can expand coverage and improve quality.
- **Decent work and labour markets:** improving matching of employees to jobs, boosting unemployment insurance in a region where only 13.5% of people have access to this form of support. ROK COMWEL uses AI in rehabilitating injured workers.
- **Agro-informatics and rural development:** AI can boost crop yields by 20-30%, critical in a region where 30% of the workforce is employed in agriculture. Longxian deploys AI to identify, standardize, and diversify crops.
- **Smart buildings and cities:** Jakarta Smart City is deploying technological solutions to track air quality, ease congestion, and support citizens in navigating social services.

The Variety of Applications: Social Inclusion and Protection

- **Public health**: AI can improve drug discovery and boost diagnostics, provide personalized treatment, and automate repetitive and administrative tasks. Indonesia is tapping AI to tackle tuberculosis and malnutrition, and doctor shortages.
- **Education:** broadening coverage to remote and rural areas, supporting teacher training and bridging student gaps. Singapore provides personalised learning to students and insights to teachers through AI.
- **Social protection:** facilitating targeting of beneficiaries through novel data forms, assessing claims, expanding and improving delivery of support.
- **Justice:** enhancing access to justice and legal guidance, managing caseloads, monitoring and identifying discrimination.

The Variety of Applications: Environmental Sustainability and the Green Transition

- **Mapping natural resources:** Indonesia and Malaysia are using AI to map forest carbon stocks and tackle deforestation, using drones that distribute seeds 100 times faster than humans.
- **Climate models, disclosure and sustainable finance:** AI can improve both the ability to make green claims and enhance their credibility, as demonstrated in environment, social and governance compliance in the Philippines.
- **Disaster risk reduction and insurance:** AI can help create early-warning systems, dynamically differentiate and adjust benefits based on exposure, and integrate real-time data and deliver insurance payments quickly during crises.



Policy Recommendations and Next Steps

- **Policy and governance:** establish an overarching framework and targeted regulations. The Philippines integrates AI into its national development plan and innovation strategy, and sectoral initiatives on AI-driven upskilling, green technology, and sustainable mobility.
- **Skills:** pursue whole-of-society capacity building to boost digital literacy among public policymakers, private firms, and citizens, in a region where 40% of people lack basic digital skills.
- **Infrastructure and connectivity:** close infrastructural deficits, narrow digital divides, and expand Digital Public Infrastructure (DPI).
- **Regional cooperation and integration:** from information-sharing to joint principles, toward regional frameworks for AI.
- **Digital, social, and sustainability alignment:** Japan's Green Growth Strategy requires data centers to rely on renewables for a portion of their energy use, and Singapore has introduced robust water, energy, and environmental performance standards for these facilities.