

From Knowledge to AI Economy



East Asia Forum, 19 September 2024

Stephanie Hung, CIO and Director General, ITD
Asian Development Bank

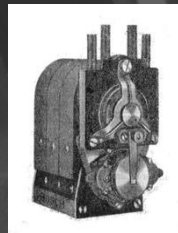
History of Inventions



Printing Press
1439



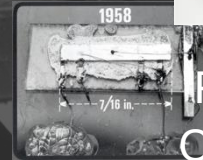
Steam Engine
1698



Internal Combustion Engine
1859



Alternating Current (AC)
1887



Integrated Circuit
1958



Personal Computer
1974



IBM Deep Blue
1997



Deep Mind Alpha Go
2016

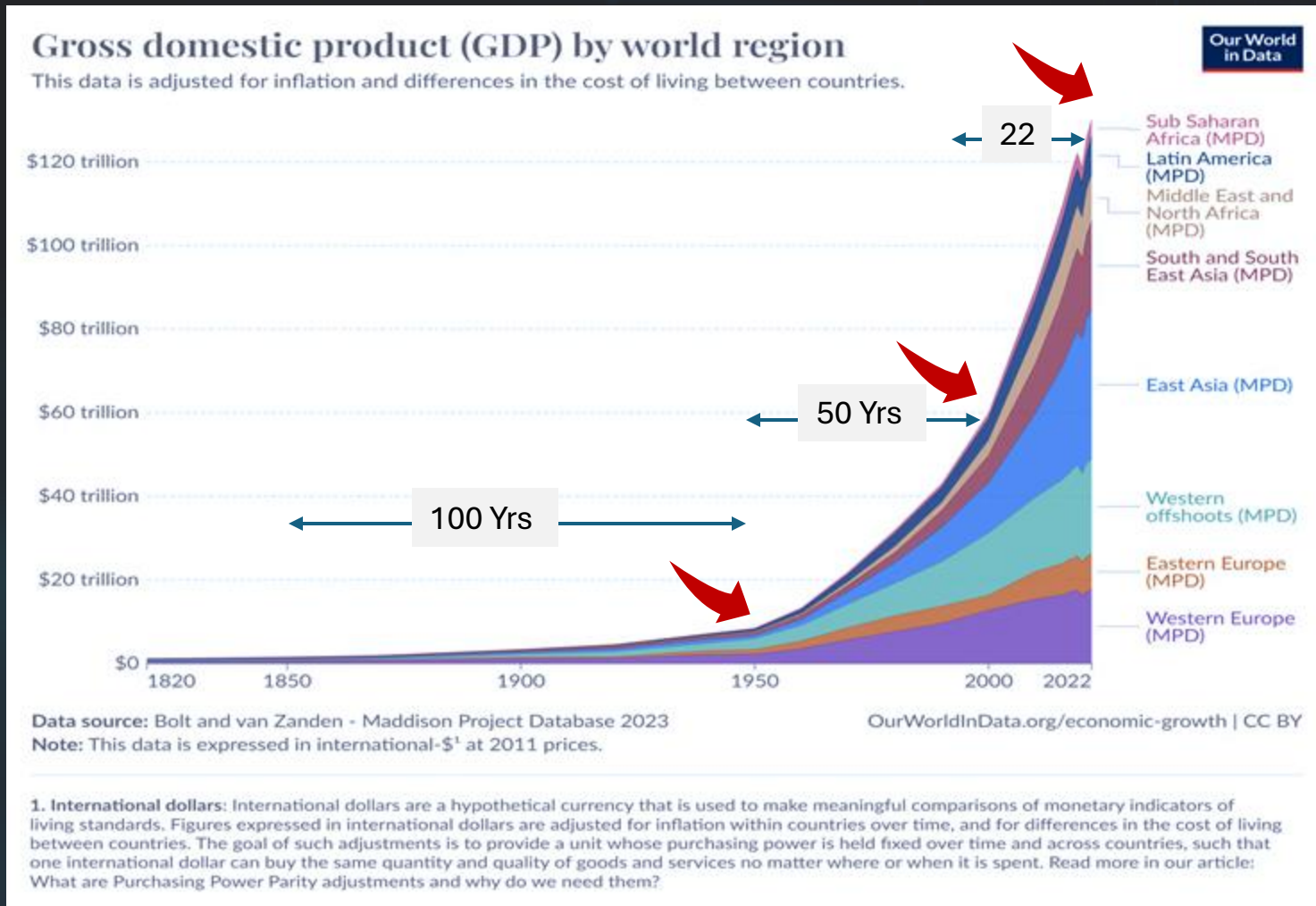


ChatGPT
2022



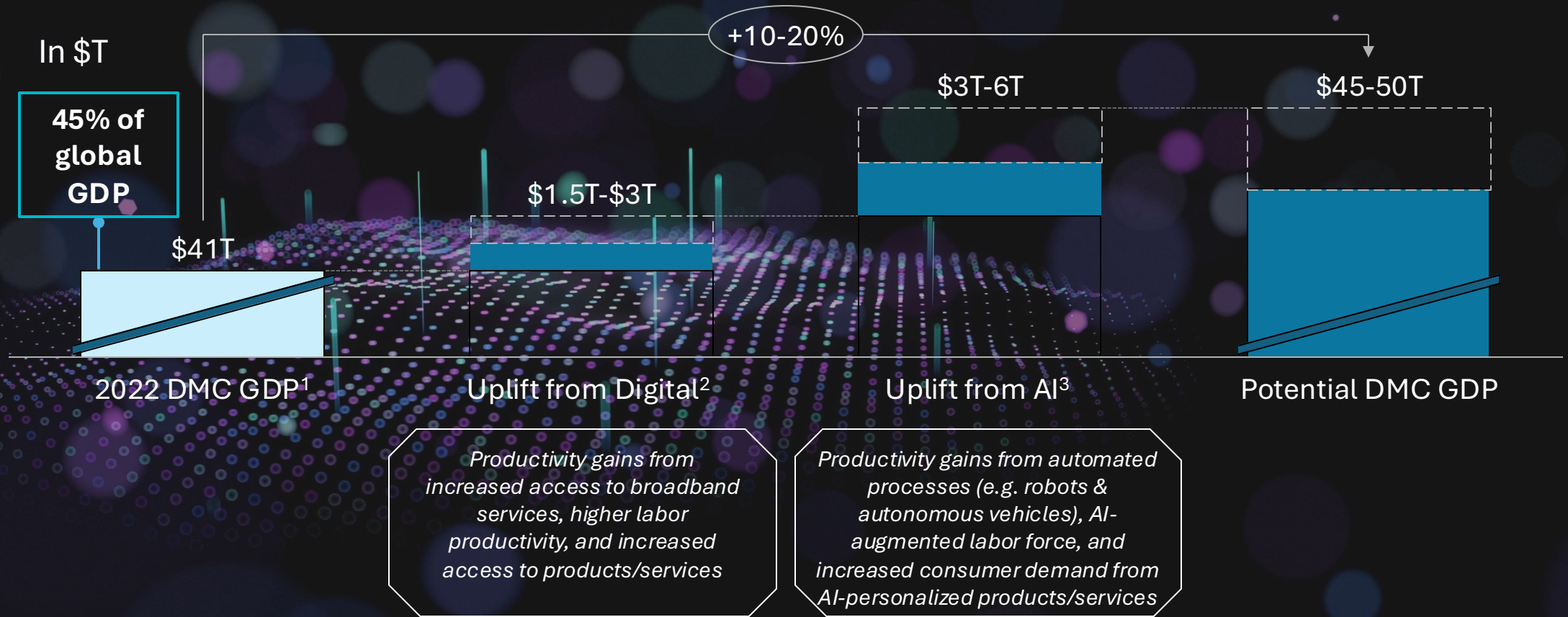
ChatGPT

Entering the scenario of exponential growth with artificial intelligence



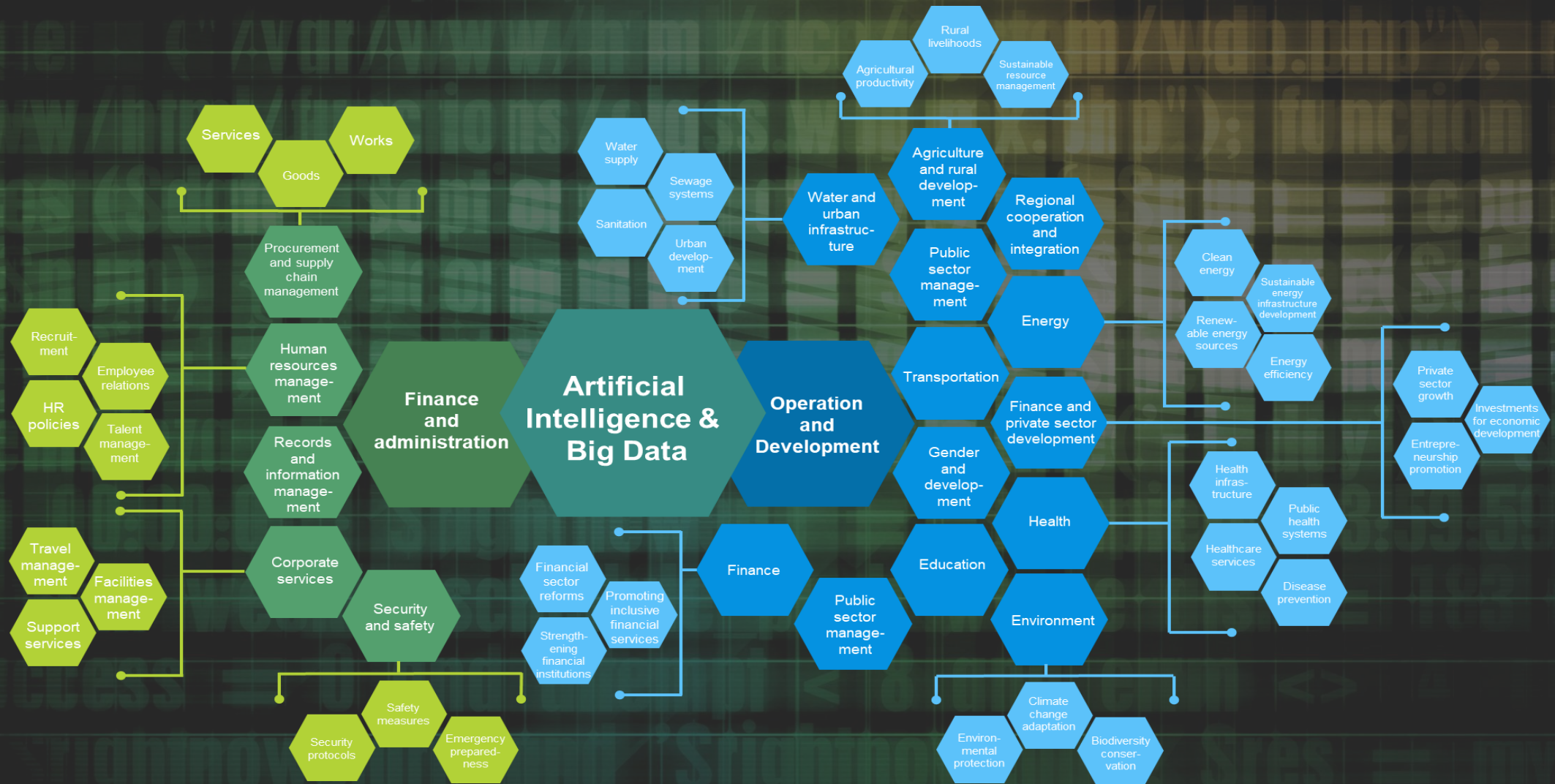
- ❑ **Industrial Revolution (1820-1950):** Marked by the shift from manual labor to machine-powered production.
- ❑ **Computerization (1950-2000):** The transition from analog to digital formats, particularly in computing and communication.
- ❑ **Digitalization (2000-2022):** The increasing integration of digital technologies into all aspects of society and business.
- ❑ **“Intelligentization” (2022 onward):** The emergence of intelligent systems, such as artificial intelligence and machine learning, that can learn, adapt, and perform tasks previously requiring human intelligence.

Digital and AI technologies could bring ~\$4.5 – 9T of economic uplift to development members countries (DMCs) by 2030

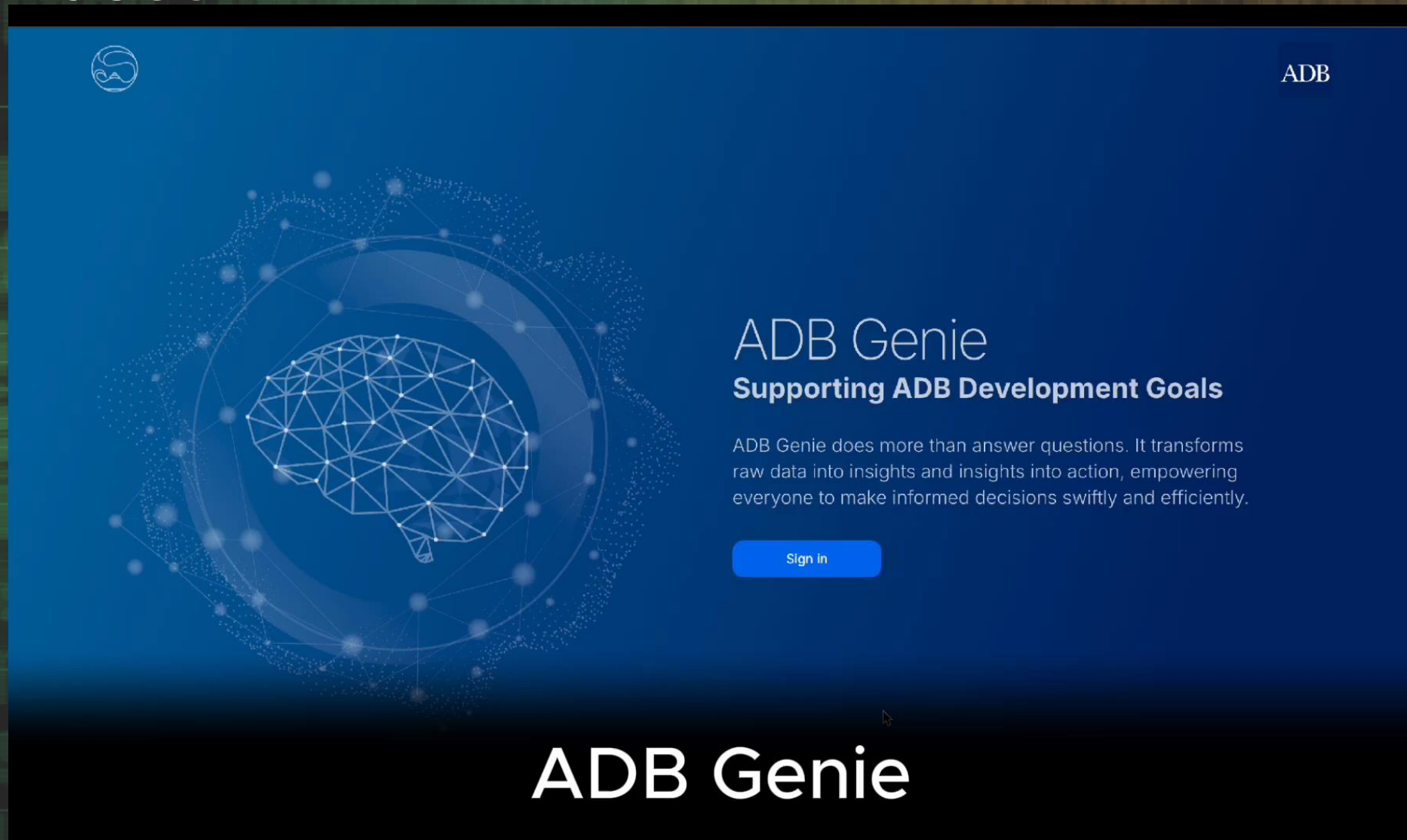



1. Incl. Armenia, Azerbaijan, Bangladesh, Bhutan, Cambodia, Micronesia, Fiji, Georgia, India, Indonesia, Kazakhstan, Kiribati, Kyrgyz Republic, Laos, Malaysia, Maldives, Marshall Islands, Mongolia, Myanmar, Nauru, Nepal, Pakistan, Palau, Papua New Guinea, China, Philippines, Samoa, Solomon Islands, Sri Lanka, Tajikistan, Thailand, Timor Leste, Tonga, Turkiye, Turkmenistan, Tuvalu, Uzbekistan, Vanuatu, Vietnam. 2. Based on RICOH's 3.4% estimate and ITU's 7% estimate. 3. Based on Goldman Sachs' 7% estimate and PwC's 14% estimate
Sources: PwC AI Analysis Sizing the Prize Report; Goldman Sachs Report; RICOH-issued Opinion and CEBR report; The economic contribution of broadband, digitization and ICT regulation, Katz, R. and Callorda, F. (2018), ITU Publication; BCG analysis

AI (and big data) opportunities for ADB's development operations, sectors and thematic groups, insight-driven and intelligent applications



Demo Videos





ADB

ADB Genie

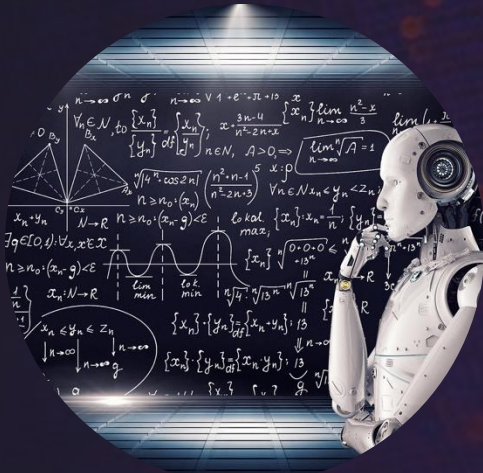
Supporting ADB Development Goals

ADB Genie does more than answer questions. It transforms raw data into insights and insights into action, empowering everyone to make informed decisions swiftly and efficiently.

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ADB Genie

Challenges and considerations



- Ethical Implications
- Financial, Brand and Reputational Risks
- Responsible Use AI



- IP, Copyrights, and Misuse (Misinformation)
- Deepfake (Disinformation)



- Data Protection and Security
- Cybersecurity Risks and Adversarial Attacks

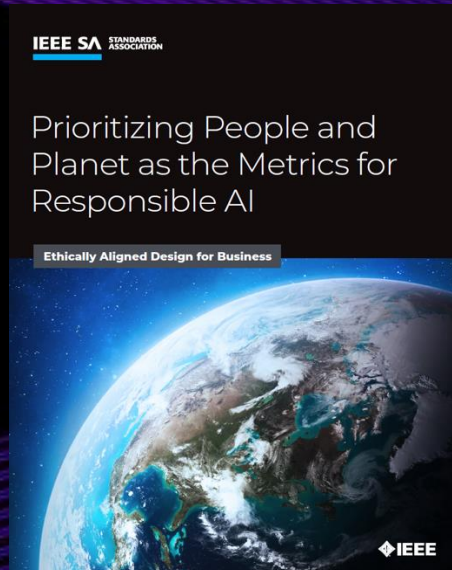


- Skill Gap and Upskilling
- Jobs Displacement vs New Jobs Creation

References on AI Governance



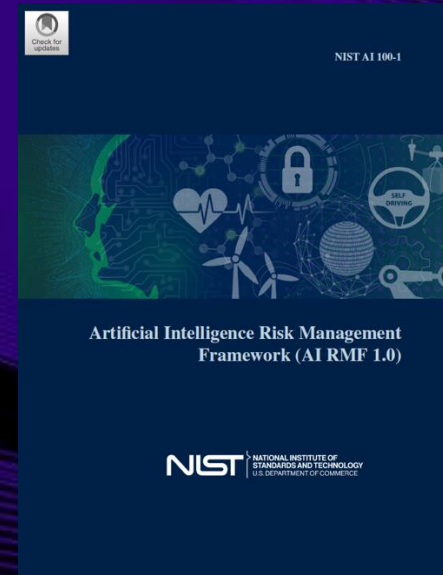
[Ethics guidelines for trustworthy AI | Shaping Europe's digital future \(europa.eu\)](https://european-council.europa.eu/media/en/press-operations/infographic/docs/ai-ethics-guidelines/EN_AI_Ethics_Guidelines.pdf)



[IEEE SA - Autonomous and Intelligent Systems \(AIS\)](https://www.ieee.org/standards/publications/prioritizing-people-and-planet-as-the-metrics-for-responsible-ai)



[SG PDPC AI Model Governance Framework \(2nd Edition\)](https://www.pdpc.gov.sg/~/media/SGD-IIM-pdpc-AI-Governance-Framework-2nd-Edition)



[AI Risk Management Framework | NIST](https://www.nist.gov/ai/rmf)



[IEC and ISO work on artificial intelligence](https://www.iso.org/standard/72431.html)

Latest Update: Launch China's [Global AI Governance Initiative \(GAI GI\)](https://www.gaiqi.org/) on 24 Oct 2023

ADB's Responsible AI Framework



Harm Avoidance



Privacy & Security



Transparency



Explainability



Fairness



Data Integrity



Accountability



Reliability & Safety

'Harm avoidance' through the framework, references the ADB Safeguard Policy and Operational Risk Assessment criteria to ensure consistent application with ADB overarching policies

In evaluating harm in ADB's AI Use Cases, we will zoom in on the evaluation criteria for the "Harm avoidance" principle using the Acceptable Use Risk Scoring Matrix.

Principle	Evaluation criteria
Harm Avoidance	Have we ensured this AI solution adheres to the principles of harm-avoidance with regards to individuals, society and planet?
	Have we ensured the AI solution upholds fundamental societal values pertinent to impacted stakeholders?
	Have we identified if the AI tool adoption will not cause a harmful disruption to our current workforce. (e.g. does not replace humans)

The evaluation criteria from the Scoring Matrix points us to Section 6.1.5. of the framework for detailed understanding of harm assessment

The assessment requires additional guidance and frameworks to ensure consistent application of ADB's Safeguard Policy and the Operational Risks Assessment Criteria.

Excerpt from ADB's Safeguard Policy

Excerpt from Operational Risks Assessment Criteria

Bringing Responsible AI to life

Next steps →

The ADB Responsible AI framework
The ADB responsible AI framework sets the principles, policies and expected processes. It informs you of the process and considerations towards design controls to use AI safely, and once implemented enables you the mechanisms to continuously use AI responsibly, in a risk measured way.

The acceptable use scoring tool
Based on the framework, the acceptable use scoring tool, is a mechanism to operationalise the framework, enabling ADB teams to assess the risks and identify controls that exist or require to be built, across 5 common types of use cases:

1. Building new AI driven tools
2. Procuring tools with AI capability
3. Publishing and advising using AI tools
4. Consuming AI tools
5. Providing advice incorporating AI as a solution

Operationalising the framework
The framework and scoring tool alone, is not enough to sufficiently manage Responsible AI. Next steps have been suggested to operationalise the framework.

ADB's role in bridging the digital and AI divide



- Jobs displacement and creation
- Skill transition and upskilling for higher value jobs



- Access to technology and AI
- Digital public goods



- Economic growth
- Distribution and inclusiveness



- Globalization and interdependence
- Geopolitical tensions and multilateral development



“Logic is the beginning of wisdom, not the end.”

Spock, Star Trek “The Final Frontier”