

Indonesia

National Strategy for Artificial Intelligence

Indonesia published the National Strategy for Artificial Intelligence (*Stranas KA*) in August 2020.⁴⁴⁴ The National Strategy is aimed at advancing the Indonesian economy through leadership in AI, through the year 2045.⁴⁴⁵ The AI Strategy for Indonesia is intended to implement *Visi Indonesia 2045*, the country's economic, social, governance and technology development strategy. The National Strategy for AI also follows *Making Indonesia 4.0*, a government sponsored program, announced in 2018, to promote the automation of the Indonesian society. Through investments in AI, robotics and technology-based Indonesian firms as well as encourage investment from leading Japanese, Chinese and Korean tech firms.⁴⁴⁶

The Indonesia National AI Strategy identified four key focus areas: (1) Ethics and Policy, (2) Talent Development, (3) Infrastructure and Data, and (4) Industrial Research and Innovation. In the focus area of Ethics and Policy, the goals include implementing data sharing ethics, establishing a Data Ethics Board, strengthening laws to crack down on the abuse of technology and the misuse of data privacy.

Indonesia has already made progress in AI.⁴⁴⁷ A 2018 International Data Corporation survey found that Indonesian companies had the highest rates of AI adoption in Southeast Asia; a number of state projects employ AI, to anticipate state fires for example; and some government agencies are promoting AI development and technology-based tools at schools and other learning institutions.⁴⁴⁸ However, the guidelines cite data misuse as a hurdle and note that the country has neither the provisions to regulate AI, nor an

⁴⁴⁴ *KA Menuju Visi Indonesia 2045: Pusat Inovasi Kecerdasan Artifisial Indonesia*, <https://ai-innovation.id>

⁴⁴⁵ Made Anthony Iswara, *Indonesia Sets Sights on Artificial Intelligence Strategy*, The Jakarta Post (Aug. 14, 2020), www.thejakartapost.com/news/2020/08/13/indonesia-sets-sights-on-artificial-intelligence-in-new-national-strategy.html

⁴⁴⁶ <https://www2.investindonesia.go.id/en/why-invest/indonesia-economic-update/making-indonesia-4.0-indonesias-strategy-to-enter-the-4th-generation-of-ind>

⁴⁴⁷ <https://www.globalgovernmentforum.com/indonesia-publishes-ai-strategy/>

⁴⁴⁸ *The Journey of AI Adoption in ASEAN Countries*, People Matters (Oct. 23, 2018), <https://www.peoplesmattersglobal.com/article/technology/the-journey-of-ai-adoption-in-asean-countries-19636>

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official agency to oversee AI development. They recommend establishing a data ethics board that would set national standards for AI innovation.

AI Initiatives

According to the OECD, Indonesia considers the availability of an integrated trustworthy health data system a key challenge for trustworthy AI in the health sector.⁴⁴⁹ The Indonesian government is also facilitating the development of public cloud services that will provide AI services for the wider public. The services will also provide shared infrastructures and platforms through which digital companies can distribute metadata, data examples, computing and learning services that are free to use by AI developers. Indonesia is also fostering a quadruple helix collaboration in AI research and innovation initiatives.

According to the United Nations E-Government Development Index (EGDI), the country is lagging behind in the implementation of digital services.⁴⁵⁰ The country's president, Joko Widodo made the promise to create a "citizen-centric digitised service government (Pemerintahan Digital Melayani) in the next five years." After winning his second term in April 2019, President Widodo announced that government agencies have been ordered to replace top civil servants with AI during 2020. This would consolidate the current top four tiers into two tiers.⁴⁵¹ Bureaucratic reform was also revisited in the National AI strategy, in which it is one of the five priority areas.⁴⁵²

Another priority area is smart cities and mobility. There are currently 98 smart cities and 416 smart districts planned under Indonesia's 100 Smart Cities Plan. In 2019, President Widodo announced a new capital on the island of Borneo, to replace Jakarta. It is planned to be a smart city

⁴⁴⁹ OECD G20 Digital Economy Task Force, *Examples of AI National Policies* (2020), <https://www.mcit.gov.sa/sites/default/files/examples-of-ai-national-policies.pdf>

⁴⁵⁰ United Nations: Department of Economic and Social Affairs, *2020 United Nations E-Government Survey* (July 2020), <https://www.un.org/development/desa/publications/publication/2020-united-nations-e-government-survey>

⁴⁵¹ Reuters, *Indonesia aims to replace some top civil service jobs with AI in 2020* (Nov. 28, 2019), <https://uk.reuters.com/article/us-indonesia-economy/indonesia-aims-to-replace-some-top-civil-service-jobs-with-ai-in-2020-idUKKBN1Y20AE>

⁴⁵² Kecerdasan Artifisial Indonesia, *AI towards Indonesia Vision 2045*, <https://ai-innovation.id/stranas-ka>

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that will “rely heavily on sustainable smart city systems, cleantech and infrastructure run by emerging technologies such as 5G, AI and IoT (Internet of Things).”⁴⁵³

Jakarta Smart City Initiative

In a bid to solve Jakarta’s traffic gridlocks, flooding, and waste management, the city has turned to AI. The Indonesian government launched the Jakarta Smart City (JSC) initiative.⁴⁵⁴ Built on six pillars, the program uses AI to tackle the city’s governance, people, living, mobility, economy, and environmental issues. The Smart City initiative encourages public comment to promote transparency of the local government’s work and better public services. At the same time, data misuse remains a hurdle given that country has neither the provisions to regulate AI, nor an official agency to oversee AI development.

AI Summit 2020

In November 2020, the Indonesian government held the Artificial Intelligence Summit 2020.⁴⁵⁵ Speakers from several different countries representing the industry, science, academia and government took part in discussions on AI. One of the national keynote speakers spoke on “Ethics of using health data for training data on the use of artificial intelligence.” Another spoke on “The trustworthy, policy and talent development for Indonesia artificial intelligence technology.”

Pancasila Values

The National Strategy states that Indonesian AI policy should be based on Pancasila values. Pancasila is the philosophical theory that is the foundation of Indonesian government and policy. It is comprised of five principles: (1) Belief in The One True God, (2) A fair-minded and civilized humanity, (3) Unity of Indonesia, (4) Democracy (from the people) led by Wisdom of consultation (of the) representatives (of the people), and (5) Social justice for every person in Indonesia.⁴⁵⁶ The AI Strategy sets out the

⁴⁵³ Forbes, *As Jakarta sinks a new futuristic capital city will be built on Borneo*, (Jan. 20, 2020), <https://www.forbes.com/sites/jimdobson/2020/01/20/as-jakarta-sinks-a-new-futuristic-capital-city-will-be-built-on-borneo/>

⁴⁵⁴ <https://techwireasia.com/2020/10/ai-to-be-a-us366b-industry-in-indonesia-by-2030/>

⁴⁵⁵ Kecerdasan Artifisial Indonesia, Speakers, <https://ai-innovation.id/jadwal-ais2020>

⁴⁵⁶ Wikipedia, *Pancasila (politics)*, [https://en.wikipedia.org/wiki/Pancasila_\(politics\)](https://en.wikipedia.org/wiki/Pancasila_(politics))

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importance of establishing public trust through transparency, social and ecological welfare, robustness and technical safety, diversity, justice and non-discrimination, amongst others. The Strategy emphasize the importance of AI being reliable, safe, open and accountable. Synergy between stakeholders is also mentioned as a means to ensure that policy is relevant and helpful.

AI Oversight

According to reports, there is currently no national data protection authority. However, certain sectors have their own authorities to ensure compliance with the regulatory regime. For example, the Indonesian Financial Services Authority ('FSA') has the authority to act as the regulator of data privacy in the capital markets sector and with regard to banks' customer data privacy issues.⁴⁵⁷ At the moment, the Minister of Communication and Informatics (the MoCI) is responsible for overseeing compliance with the data protection regime.⁴⁵⁸

The National Human Rights Commission of Indonesia, Komnas HAM, is an independent institution that carries out studies, research, counseling, monitoring and meditation of human rights.⁴⁵⁹ Komnas HAM was established in 1993 by Presidential Decree and in 1999 the Law Number 39 established its “existence, purpose, function, membership, principles, completeness, duties and authority.” Komnas HAM also has the authority to conduct investigation into human rights violations and supervise of regional and central governmental policies. The goal of Komnas HAM is to “improve the protection and enforcement of human rights in order to develop the whole Indonesian human person and the ability to participate in various fields of life.”

Public Participation

According to the *Jakarta Post*, AI providers and experts have lauded the move to establish a foundation for AI development while urging the

⁴⁵⁷ DLA Piper, *Data Protection Laws of the World: Indonesia* (Nov. 2020), <https://www.dlapiperdataprotection.com/?t=law&c=ID>

⁴⁵⁸ Lexology, *Q&A: the data protection legal framework in Indonesia* (Aug. 2020), <https://www.lexology.com/library/detail.aspx?g=430e1444-ba8d-43d0-82dc-86ed44d416bc>

⁴⁵⁹ Komnas Ham, *Legal Foundation*, <https://www.komnasham.go.id/index.php/about/1/tentang-komnas-ham.html>

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government and other stakeholders to improve on the strategy, fix current flaws and anticipate risks.⁴⁶⁰ University of Indonesia AI and robotics professor Wisnu Jatmiko described AI as an “extraordinary challenge.” He told *The Jakarta Post* that the country needs to nurture high-quality talent in the field of AI and to bolster infrastructure, including fixing internet connection issues and developing its own cloud computing system to prevent the leak of confidential information. Big Data and AI Association chairman Rudi Rusdiah and Institute for Policy Research and Advocacy researcher Alia Yofira Karunian said the national strategy should uphold principals of fairness, accountability and transparency as pillars of AI implementation. Karunian called on government to detect and iron out biases in automated decision-making through human intervention, and to ensure people have the right not to have AI make decisions about them. “We must learn from the mistakes of other countries,” she said.

The Agency for the Assessment and Application of Technology, coordinated the development of the National AI Strategy. The development was carried out with help of a “wide variety of public and private sector organization” who “contributed to the plan including government ministries, universities, industry associations and national telecom providers.”⁴⁶¹

There is a website that is dedicated to the National AI Strategy. It illustrates the strategy, provides information on and material from the AI Summit 2020 and displays work done by poster session participants from the summit. It further, provides an Artificial Intelligence Map that maps and describes the research institutes, universities, industry, and communities, who develop and utilize innovative Artificial Intelligence in Indonesia.

The Jakarta Smart City initiative also encouraged community participation and government responsiveness through social media, public figures and a public reporting system. Further, the “management of

⁴⁶⁰ Made Anthony Iswara, *Indonesia Sets Sights on Artificial Intelligence Strategy*, *The Jakarta Post* (Aug. 14, 2020), www.thejakartapost.com/news/2020/08/13/indonesia-sets-sights-on-artificial-intelligence-in-new-national-strategy.html

⁴⁶¹ Carrington Malin, *Indonesia National AI Strategy published this month* (Aug. 16, 2020), <https://www.carringtonmalin.com/2020/08/16/indonesia-national-ai-strategy-set-in-motion-this-month/>

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community complaints was conducted with effective coordination between the Jakarta Smart City team and various government departments.”⁴⁶²

Data Privacy Law

The Indonesian data protection regime comprises of several laws, however, there is no general law on data protection.⁴⁶³ The primary law is the law regarding Electronic Information and Transactions of 2008 (the EIT Law). There is a 2016 amendment and implementing regulations in 2019.

In January 2020, Indonesia’s government submitted a bill to parliament aimed at protecting consumer data. The bill includes a penalty of up to seven years in jail for distribution of personal data without consent.⁴⁶⁴ Data protection law is important, relevant in the global life as the economy has transformed lives in the digital era,” Communications Minister Johnny G. Plate told a news conference. Indonesia's Personal Data Protection Bill ("PDP Bill") was initially planned to be issued in October 2020. Its issuance and enactment were, however, delayed.⁴⁶⁵

The Indonesian government has not signed the Council of Europe’s Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data.⁴⁶⁶ Indonesia did however participate as an observer on the Council of Europe Convention 108 Consultative Committee.

⁴⁶² 1 World Connected, *Jakarta Smart City* (Sept. 1, 2020),

https://1worldconnected.org/project/asia_egov_jakartasmartcityindonesia/

⁴⁶³ DLA Piper, *Data Protection Laws of the World: Indonesia* (Nov. 2020),

<https://www.dlapiperdataprotection.com/?t=law&c=ID>

⁴⁶⁴ Jessica Damiana, *Indonesia to step up data protection with new bill amid booming digital economy*, Reuters (Jan. 28, 2020), <https://www.reuters.com/article/us-indonesia-data-idUSKBN1ZR1NL>

⁴⁶⁵ Freddy Karyadi and Novario Asca Hutagalung, *Personal Data Protection Bill To Address Privacy Issues In Indonesia*, Lexology (Nov. 20, 2020), <https://www.lexology.com/library/detail.aspx?g=b2417bcf-5548-4ba8-9592-1a0a299e7115>

⁴⁶⁶ Council of Europe, *Chart of signatures and ratifications of Treaty 108* (Status as of Dec. 4, 2020), <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/108/signatures>

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OECD/G20 AI Principles

Indonesia is a member of the G20 and endorsed the G20 AI Principles in 2019. According to the OECD, the implementation of the AI Principles is still pending completion of the National AI Strategy.

Human Rights

Indonesia has ratified the Universal Declaration of Human Rights. According to Freedom House, Indonesia is “partly free,” with well-established safeguards for elections and political rights but lower marks for civil liberties.⁴⁶⁷ Freedom House reports that “Indonesia has made impressive democratic gains since the fall of an authoritarian regime in 1998, establishing significant pluralism in politics and the media and undergoing multiple, peaceful transfers of power between parties. However, the country continues to struggle with challenges including systemic corruption, discrimination and violence against minority groups.”

Evaluation

Indonesia has endorsed the G20 AI Principles and is in the early stages of AI policy development. While there is substantial AI investment and several significant government undertakings, including the Jakarta Smart City Initiative, the government has not yet developed the regulations or created the agencies necessary for trustworthy AI.

⁴⁶⁷ Freedom House, *Freedom in the World 2020 – Indonesia*, <https://freedomhouse.org/country/indonesia/freedom-world/2020>