

RSIS Commentary is a platform to provide timely and, where appropriate, policy-relevant commentary and analysis of topical and contemporary issues. The authors' views are their own and do not represent the official position of the S. Rajaratnam School of International Studies (RSIS), NTU. These commentaries may be reproduced with prior permission from RSIS and due credit to the author(s) and RSIS. Please email to Editor RSIS Commentary at RSISPublications@ntu.edu.sg.

Artificial Intelligence for the Defence of Japan: Cautious but Steady Progress

By Tomida Haruka

SYNOPSIS

The Japan Ministry of Defense announced [the basic policy for the promotion of AI utilisation](#) for the first time on 2 July 2024. Although the ministry has already promoted various AI-related initiatives, the new policy will accelerate existing initiatives and create momentum.

COMMENTARY

Japan is facing its most severe and complex security environment since the end of World War II. China has been intensifying its activities across the entire region around Japan. North Korea has shown rapid progress in nuclear and missile development, and Russia has been deepening its cooperation with both China and North Korea.

Furthermore, in addition to conventional air, sea, and land threats, Japan now faces new threats from hybrid warfare which includes information warfare and asymmetric attacks leveraging the space, cyber, and electromagnetic domains and unmanned assets. This new threat environment has complicated discussions on the appropriate defence capabilities needed by all countries, including Japan.

To address the demands of the new security environment it now faces, Japan's latest [National Defense Strategy](#) has emphasised the need to "fundamentally reinforce" Japan's defence capabilities in seven key areas: 1) stand-off defence capability; 2) integrated air and missile defence capability; 3) unmanned defence capability; 4) cross-domain operations capability; 5) command and control and intelligence-related functions; 6) mobile deployment/civil protection; and 7) sustainability and resiliency.

To build these capabilities, Japan's defence planners must consider the country's serious demographic crisis and the lingering fiscal constraints. In this context, the Japan Ministry of Defense (JMOD) has perceived that artificial intelligence (AI) is a technology that can strengthen the above capabilities.

Why Now?

JMOD released the [first basic policy for the promotion of AI utilisation](#) on 2 July 2024. Since the major countries, such as the US, the UK, and France, had already issued AI policies in the defence sector several years before, JMOD's endorsement of AI to help build Japan's defence capabilities may seem relatively slow.

However, this new basic policy promoting the use of AI is a logical next step following JMOD's initiatives taken over the last several years, such as extensive research on the utilisation of AI technology to enhance collaboration between manned and unmanned aircraft, development of AI-enabled decision-making support systems for unit-level command and control, and development of AI-driven collection and analysis of open-source information.

In addition, there has also been a "revolution" of efforts in the civilian sphere, domestically and internationally, including formulating [AI Strategy 2022](#), a nationwide AI strategy announced in April 2022, the [Hiroshima AI Process](#) set up in May 2023, and [AI Guidelines for Business Ver1.0](#), which presented basic concepts regarding the efforts necessary for the development, provision, and use of AI in April 2024.

Furthermore, in light of the use of AI-enabled weapons in the ongoing wars in Ukraine and Gaza, discussions on such weapons have recently gained more attention amongst the public and were well debated in the last regular session of the Diet.

Against this backdrop, publishing the basic policy clearly shows that JMOD acknowledges the risks of AI and the importance of AI safety, and the "human-in-the-loop" approach could mitigate unnecessary concerns among the public and contribute to more vibrant discussions in the future.

On top of that, JMOD announced a comprehensive strategy for talent development in the cyber domain, "[Cyber Workforce Strategy](#)", at the same time as the basic AI policy. This may be an indication of JMOD's intention to promote various measures in cyberspace in parallel with its efforts to develop data cycles and a cloud that integrates and standardises the Japan Self-Defense Forces (SDF) systems, which is vital for AI adoption but could simultaneously generate new vulnerabilities in cyberspace at the same time.

Main Takeaways From the Basic Policy

First, the basic policy identifies seven specific priority areas for AI applications: 1) target detection and identification; 2) information gathering and analysis; 3) command and control (C2); 4) logistic support; 5) unmanned assets; 6) cyber security; and 7) improving paperwork efficiency. Specifying the JMOD's priority will increase the predictability of JMOD's future efforts and encourage private companies to participate in its initiatives. Moreover, considering that there are ongoing AI-related initiatives in

all seven areas, the new policy is expected to accelerate the progress of the existing initiatives.

Secondly, the new policy emphasises “AI enablers” such as data and talent development because of severe shortages in both aspects. In particular, the importance of changing the way of thinking about data itself, the development of cross-organisational data formats, the establishment of a data cycle, and cultivating workforce talent tailored to the specific mission, etc., are well explained in the paper, which suggests a solid will to transform JMOD into an “AI-ready” organisation.

Upcoming Highlights

Following the issuance of the basic policy, the following events are worth paying attention to.

First, Japan’s Acquisition, Technology and Logistics Agency (ATLA) established the Defense Innovation Science and Technology Institute based on a model like the US Defense Advanced Research Projects Agency (DARPA) and Defense Innovation Unit (DIU). The new policy aims to increase cooperation with the private sector and to leverage their talent and capabilities. It is expected to contribute to developing more innovative equipment using advanced technology based on ideas and suggestions from outside the ministry and accelerate the speed of adaptation of AI.

Second, as the new policy stated, JMOD will develop its first-ever original guidelines for the research and development of equipment using AI while referencing the AI Guidelines for Business Ver1.0 etc., besides discussions with other countries. While safety is especially important when it comes to AI adoption in the defence domain, it is strategically disadvantageous to be reluctant to use AI technologies as safety concerns can be reasonably managed. Guidelines are needed to balance innovation and safety and contribute to lowering barriers for private sectors to participate in R&D projects by presenting some metrics regarding required technologies and safety measures.

JMOD has no choice but to devote more resources to the AI domain and obtain more private-sector support to respond to a rapidly changing strategic environment. As the new policy states in conclusion, “JMOD is now at the crossroads whether it will be an efficient organisation and create its own future with utilisation, or will be an inefficient, old-fashioned organisation that lags behind”.

Tomida Haruka was a recent Visiting Associate at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore. She is an official at Japan’s Ministry of Defense (MOD). The views expressed here are her own and do not represent the views of the MOD or the government of Japan.
