

Newsletter

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Developments in Artificial Intelligence Healthcare Technology in Singapore

Singapore is rigorously exploring innovative artificial intelligence ('AI') healthcare solutions to tackle challenges brought by the aging population and the shrinking supply of local manpower.

Discovery AI, developed by the National University Health System ("NUHS"), was launched on 6 July 2018 at the recently concluded Singapore's first public healthcare AI datathon and expo. This AI system incorporates different AI tools and is capable of pooling and processing patients' medical data to facilitate clinical diagnosis and patient management. Its advanced functions include predicting patients' risk of re-admission and diagnosing appendicitis. The AI system has been tested at the National University Hospital, and is expected to be deployed in phases across NUHS institutions in the coming years.

Other AI tools that are currently under research or development include analytical tools that can discover abnormalities in mammograms and contactless vital signs monitor that can remotely discern patients' heart rate, blood pressure and breathing rate. The public sector is also looking into bringing more chatbot solutions into service. These AI powered chatbots are expected to perform simple triage functions. Whilst they do require some degree of customisation to understand the local healthcare system and colloquialisms, they can eventually assist with patient sorting based on the severity of the symptoms and clinical diagnosis.

The Singapore Government is keen on encouraging the collaboration between the medical technology providers and public sector healthcare professionals to develop AI healthcare solutions and pilot them within their respective institutions. The Robotics Middleware Framework for Healthcare, which aims to facilitate the adoption and coordination of robotics innovations, sensors and Internet of Things devices in the healthcare sector, is one of the Singapore Government's recently introduced initiatives. The Integrated Health Information Systems and the Centre for Healthcare Assistive and Robotics Technology are the organisations behind this research and development initiative.

More details of the above initiatives can be found in recent news articles published [here](#) and [here](#).

Biotechnology as the New Focus of an Innovative Economy

Senior Minister of State for Trade and Industry Koh Poh Koon has recently commented that biotechnology is expected to be one of the key drivers of Singapore's future economy. Dr Koh opined that the biotechnology sector, being rich in intellectual property and deep in technology, will play a crucial role as Singapore develops its new economy that centres on innovation.



The Singapore Government's increasing emphasis on biotechnology is also evinced in Temasek's shift of investment focus. The life sciences sector, together with the agribusiness sector, now constitutes 6 per cent of Temasek's net portfolio values. The 2018 Temasek Review has also revealed that Temasek has made significantly more new investments in the life sciences sector in 2017, with synthetic biology being the emerging focus. This is part of Temasek's overall strategy to foster innovation through capital injection to early-stage firms in agribusiness, healthcare and digital media.

The Temasek Review 2018 Overview can be found [here](#). More details may also be found in a news article published [here](#).

Public Consultation on Proposed Amendments to Infectious Diseases Act

On 27 June 2018, the Ministry of Health ("**MOH**") released the *Public Consultation Paper on the Proposed Amendments to the Infectious Diseases Act* (the "**Consultation Paper**").

The main areas which the proposed amendments target are the enhancement of infectious disease surveillance, the prevention of infectious diseases from entering Singapore, and the strengthening of infectious disease control within Singapore (the "**Proposal**"). The Proposal aims to safeguard public health and better protect the community against existing, new or re-emerging infectious diseases.

Important aspects of the Proposal include tightening the enforcement of isolation or movement restriction order by allowing Health Officers to take necessary measures to enforce the isolation in lieu of arrest. This proposed amendment is designed to more effectively reduce the risk in transmission of infectious diseases of the non-compliant high-risk individuals. The Proposal also introduces the risk-stratified management of cases or carriers of an infectious disease. This allows for a more calibrated approach in restricting the movement and occupational activities of cases or carriers, as compared to the blanket cessation of occupation, trade or business on cases or carriers that the current Infectious Diseases Act provides.

The public consultation exercise will be held till **7 August 2018**. MOH's Consultation Paper can be found [here](#).

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