

# A government-driven approach is delivering results

Singapore has a rapidly-ageing population due to declining birthrates and rising life expectancy. Combine this with a high disease burden, especially for cancers as well as metabolic, cardiovascular and infectious diseases, and it's clear why the government expects a significant growth in public healthcare expenditure over the coming years. In response, it has developed a strategy for healthy ageing, digitalization in healthcare, and improving diagnostics and quality of life around priority diseases.

## Leader aspirations

The Health & Biomedical sector is one of the four domains in Singapore's current innovation strategy (RIE2020), and will continue to be a priority for RIE2025. The country has also allocated €313 million to AI-related R&D, with Healthcare one of the 5 key areas (along with Security, Smart Estates, Education and Logistics).

The national healthcare project focuses on chronic disease prediction and management. The aim is to get a better control over diseases like diabetes, hypertension and high cholesterol by developing and deploying AI-based tools both for patient self-management and to support clinical decisions. The Ministry of Health is also developing an AI Governance Framework specifically for the healthcare sector.

Singapore also plays an active role in the WHO-led global development of standardized AI assessments for health, diagnosis, triage and treatment decisions.

## From early detection to enhanced efficiency

One of the chronic diseases that Singapore is struggling with is diabetes. The Singapore National Eye Centre's (SNEC), Singapore Eye Research Institute (Seri) and the National University of Singapore's School of Computing have together developed a deep-learning system to recognize signs of diabetic eye disease. Selena+ (Singapore Eye Lesion Analyser Plus) scans photographs for signs of diabetic eye. The AI technology can also screen for glaucoma and age-related macular degeneration.

AI is also being used to increase efficiency within the health sector. IHiS (Integrated Health Information Systems, the technology agency for Singapore's public healthcare sector) and Tan Tock Seng Hospital have together developed a Command, Control and Communications (C3) system for healthcare that provides real-time visibility of the hospital's ground operations, and uses AI to predict situations and optimize resources allocation.

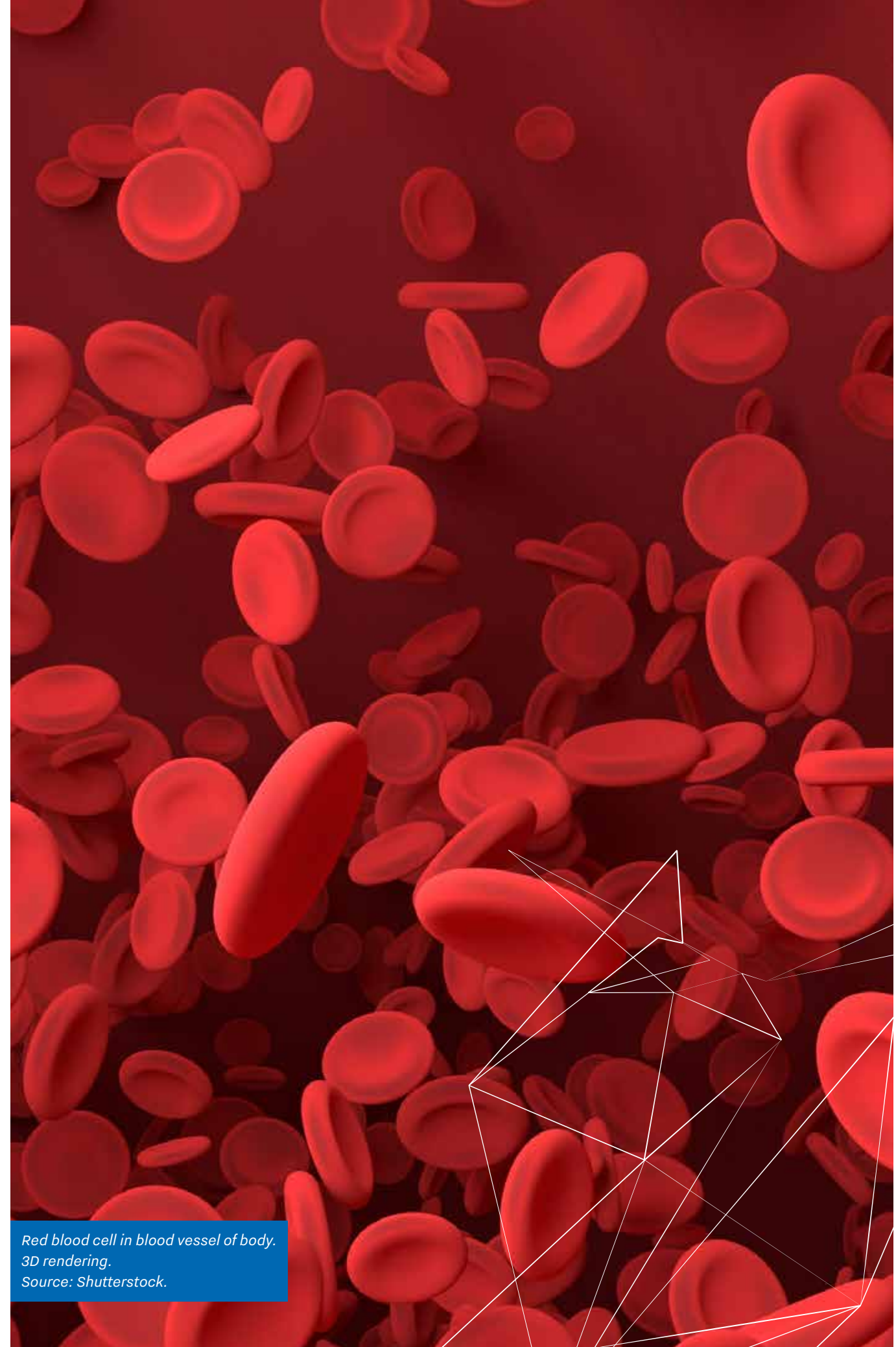
## Healthcare continues to be a top priority in Singapore's transition to a smart nation

### AI and Covid-19

The investments made in the health and biomedical sector in recent decades have equipped Singapore to respond rapidly to Covid-19. Three examples: first, temperature screening was a key part of Singapore's Covid-19 strategy from the start, using iThermo, a solution for automated temperature screening developed by local startup KroniKare, IHiS and the national accelerator AI.SG. Secondly, Singapore's national platform for drug discovery and development, EDDC, partnered with pharmaceutical company Auransa to leverage their predictive AI to fast-track the discovery of new therapeutics for viral pandemics. And finally, a multidisciplinary team of researchers at NUS developed 'IDentif.AI', a platform to identify effective combinations and dosages from billions of different drugs in order to combat infectious diseases.

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Red blood cell in blood vessel of body.  
3D rendering.  
Source: Shutterstock.

