



UK Science & Innovation Network Country Snapshot:

Singapore

Science and Innovation Landscape

Singapore has a population of 5.7 million people, a stable political system and a strong education system. It has invested heavily in infrastructure and positioned itself as a regional hub for trade, finance and knowledge. It is ranked 1st in World Economic Forum's Global Competitiveness Index (2019) and has been successful in attracting international investment and talent. Latest figures (2017) indicate gross expenditure on R&D of S\$9.09Bn (£5.07Bn) or about 2.0% of GDP, of which about 59% is from the private sector. R&D expenditure has remained steady since 2015.

Singapore position in the
2019 Global Innovation
Index:

8th

Position of UK in
Singapore's international
collaboration, 2014-2018:

4th

Singapore's Research, Innovation and Enterprise Council (RIEC) is chaired by the Prime Minister and provides strategic direction and high-level coordination for Singapore's research and innovation strategy. The RIEC underscores the political commitment to and importance placed on the R&D agenda. The National Research Foundation (NRF) acts as the secretariat to the RIEC and is responsible for planning, coordinating and executing the national R&D strategy. The Agency for Science, Technology and Research (A*STAR) is the other main government organisation involved in driving Singapore's research agenda. A*STAR works more closely with industry and has a range of research institutes with many scientists holding dual appointments at local universities. Both NRF and A*STAR also actively support the development of scientific talent.

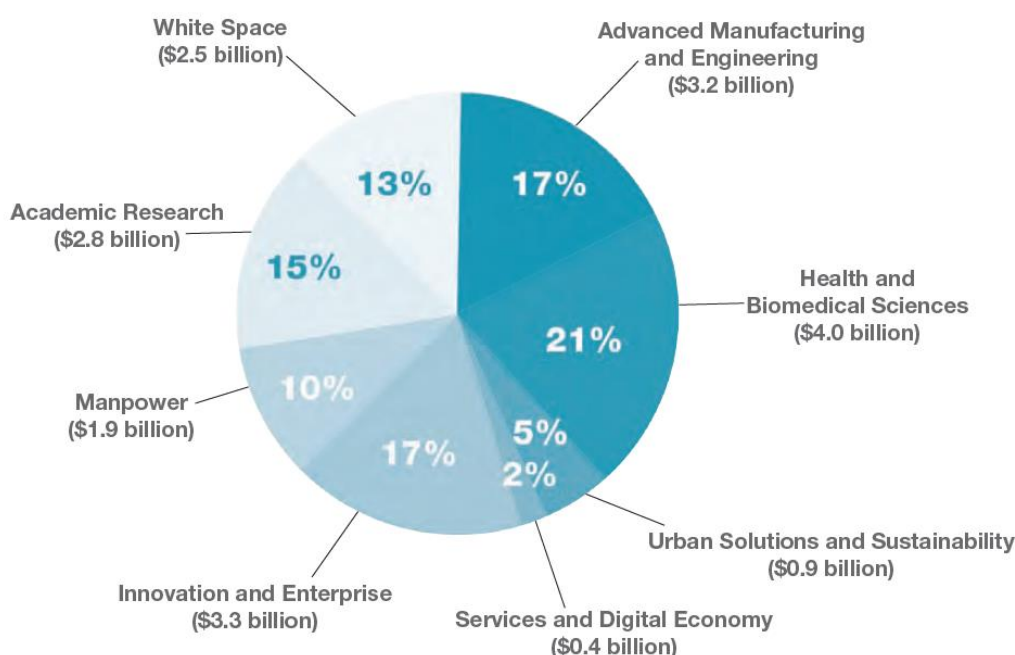
Singapore's R&D strategy is set out in five year plans. The latest plan, 'Research, Innovation and Enterprise 2020 (RIE2020)', budgeted S\$19Bn (£10Bn) from 2016 to 2020 to support R&D, enhance innovation capability, and leverage science and technology to address national challenges in four strategic technology domains:

- Advanced Manufacturing and Engineering
- Health and Biomedical Sciences
- Urban Solutions and Sustainability
- Services and Digital Economy

These domains are supported by three cross-cutting programmes:

- Academic Research
- Manpower
- Innovation and Enterprise





Distribution of Singapore's RIE budget (source: National Research Foundation, <http://www.nrf.gov.sg/rie2020>)

NRF coordinates a number of cross-government 'National Innovation Challenges', harnessing multidisciplinary research to develop practical solutions to Singapore's challenges which would also provide commercial benefits in wider markets. The challenges include energy (2011), land and liveability (2013) and ageing (2015). National R&D programmes have been launched in Cyber Security (S\$130m, 2014), Marine Science (S\$25m, 2016), Artificial Intelligence (S\$150m, 2017), Synthetic Biology (S\$25m, 2018), and Food Security (S\$144m, 2019).

In the February 2020 budget statement, Singapore pledged S\$5Bn (£2.8Bn) towards a new coastal and flood protection fund to tackle the risk of rising sea levels due to climate change, as well as S\$1Bn (£0.6Bn) towards enhancing the nation's cyber and data security capabilities.

UK Science and Innovation in Singapore

The UK-Singapore Partners in Science programme was initiated in 2004 and helped lay the foundations of our strong cooperation in science and research. The [Innovation and Research Partnership](#), signed by both Prime Ministers in 2014, took our cooperation to a new level. The Partnership envisioned the continuation of research activities, alongside an enhanced focus on applying the results to develop new ideas that would enable us to respond to global challenges, increase competitiveness and improve standards of living. The inaugural UK-Singapore Strategic Dialogue in Science and Innovation took place in Singapore in January 2017, and is a platform for both governments to develop and strengthen the bilateral relationship in Science and Innovation.

Our current priorities include **Big Data and Digital Economy, Food and Agri-Tech, Clean Growth, Cybersecurity, Future Mobility, Health and Life Sciences, Oceans, and Space.**



Key collaborations between the UK and Singapore include:

- **Joint Research and Innovation Programmes:**
 - £6 million joint programme on [Marine Plastics](#) (January 2020)
 - [EUREKA GlobalStars](#) competition between Singapore, Belgium, the Czech Republic, Denmark, the Netherlands, Spain, Turkey, and the UK – with UK match funding up to £1 million in support of successful UK-Singapore projects (May 2019)
 - £10 million joint programme on [Quantum Key Distribution](#) (September 2018)
 - £500,000 joint [Sustainable Urbanisation](#) competition (October 2015)
 - £2.4 million joint programme on [Cyber Security](#) (July 2015)
- **Joint Centres and Laboratories:**
 - Cambridge Centre for Energy Efficiency in Singapore (CARES) – based at the National Research Foundation's CREATE facility the centre hosts research collaborations between the University of Cambridge, Nanyang Technological University, National University of Singapore and industrial partners
 - Lee Kong Chian School of Medicine – a joint medical school established as a partnership between Imperial College and Nanyang Technological University
 - Singapore Phenome Centre – an interdisciplinary research platform funded by Nanyang Technological University in association with Imperial College and Waters Corporation
 - The Photonics Institute – Nanyang Technological University in conjunction with the University of Southampton's Optoelectronics Research Centre launched the S\$100 million institute in October 2014
 - Maritime Joint Laboratory – the S\$5 million collaboration opened in March 2014 to provide for joint R&D in Maritime and Offshore Engineering between Southampton's Marine and Maritime Institute and A*STAR's Institute of High Performance Computing
 - Rolls-Royce@NTU Corporate Laboratory – launched in July 2013, the joint investment of S\$75 million with the National Research Foundation and Nanyang Technological University focuses on electrical power and control systems, manufacturing and repair technologies and computational engineering. The Corp Lab was renewed in July 2019 with an additional joint investment of S\$88 million
 - Lloyd's Register Foundation Institute for the Public Understanding of Risk – a S\$37 million joint institute between Lloyd's Register Foundation and the National University of Singapore to enhance the public understanding of risk
 - NUS Saw Swee Hock School of Public Health – there has been close collaboration between the National University of Singapore and the London School of Hygiene and Tropical Medicine in establishing this new school of public health with a regional remit, formalised through an MoU in October 2011
- **Joint Agreements:**
 - UK's Government Digital Services (GDS) and Singapore's GovTech signed an MoU in 2019 to deepen collaboration in digital public services
 - National Biofilms Innovation Centre signed two MoUs with the Singapore Centre for Life Sciences Engineering (SCELSE) and the Singapore National Biofilm Consortium (SNBC) in 2019
 - Innovate UK and the Intellectual Property Intermediary (IPI) Singapore signed an MoU in 2018 to promote technology transfer and R&D collaboration



- The Centre for Secure Information Technologies (CSIT) at Queen's University Belfast signed an MoU with NRF in 2018 to facilitate R&D in Cybersecurity
- The UK's National Physical Laboratory (NPL) signed an MoU with the Centre of Excellence for Testing & Research in AVs – NTU (CETRAN) in 2017 to partner on the development of Autonomous Vehicles
- **UK Universities in Singapore Network** – an initiative that aims to facilitate engagement by UK universities with Singaporean organisations and a strengthened connection to collaboration opportunities in research, innovation and education. The Network is supported by the British High Commission Singapore, Department for Business, Energy and Industrial Strategy (BEIS), British Council and Universities UK International (UUKi).

SIN South East Asia

The South East Asia regional SIN team, based in Singapore, working with Embassies and High Commissions throughout the region, develops and supports cooperation on research and innovation with local partners in South East Asia and with partners across the UK. We work through programmes including the [Newton Fund](#), [Prosperity Fund](#), and the [UK-Southeast Asia Knowledge Partnership](#).

SIN Singapore Contacts

Southeast Asia Science & Innovation team – SEAsiaSI@fcdo.gov.uk

- **Nicola Willey**, Regional Director South-East Asia, UK Science and Innovation Network
Contact: Nicola.Willey@fcdo.gov.uk
- **Hanbin Zheng**, Senior Science and Innovation Officer
Contact: Hanbin.Zheng@fcdo.gov.uk
- **Jade Chung**, Science and Innovation Officer
Contact: Jade.Chung@fcdo.gov.uk
- Regional Research and Innovation Coordinator (Newton Fund)
Contact: Newton.SEAsia@fcdo.gov.uk

