



**THE GOVERNMENT OF  
AUSTRALIA**



**THE GOVERNMENT OF THE  
REPUBLIC OF SINGAPORE**

**Memorandum of Understanding on Cooperation on Innovation and Science**

**13 October 2016**

The Government of Australia and the Government of the Republic of Singapore (“the Governments”):

*Reaffirming* the importance of the Comprehensive Strategic Partnership (CSP), concluded by the Prime Ministers of Australia and Singapore in 2015, as the framework for a new and dynamic partnership encompassing all aspects of bilateral relations;

*Recognising* the importance of innovation to create modern, agile and dynamic economies, which embrace change with confidence and optimism;

*Recognising* the need for leadership and inspiration in nurturing national cultures of innovation;

*Recalling* the longstanding and highly productive innovation and science links between Australia and Singapore, forged under the auspices of the treaty level *Cultural Agreement Between Australia and Singapore (1975)* and continued under the *Memorandum of Understanding for Cooperation in Defence Science and Technology (2015)*;

*Acknowledging* the depth and breadth of the science and technology relationship between our two countries and the strong innovation and science endowments of key national research institutions;

*Recognising* our complementarities in that Singapore provides a supportive, and consistent environment for research to flourish and nurtures an open and innovative culture for businesses and that Australia has a world class research system and outward-looking creative businesses ready to collaborate internationally;

*Noting* that our future prosperity depends on innovation to improve our economic competitiveness and productivity;

*Desiring* as close partners in our region to further enhance our cooperation through a new partnership on innovation and science to deliver valuable economic, social and academic outcomes to our nations, region and the world;

Have reached the following understandings:

### **I. Objective**

This Memorandum of Understanding (MOU) provides a framework to enhance practical collaboration on innovation and science between Australia and Singapore.

### **II. Innovation and Science Partnership**

The Governments commit to closer collaboration, exchanges, and agency-to-agency engagement to enhance innovation and science.

### **III. Lead Agencies and Participating Organisations**

The lead agency for the Government of Australia will be the Department of Industry, Innovation and Science. The lead agency for the Government of the Republic of Singapore will be the National Research Foundation (collectively the Lead Agencies).

Other agencies or institutions, including businesses, industry associations, scientific research institutions, and educational institutions may lead or participate in activities identified in this MOU (the Participating Organisations).

### **IV. Strategic Dialogues**

The Governments will hold Joint Strategic Dialogues to build on cooperation opportunities focused on innovation and science. These Dialogues will be the catalyst for a new phase of collaboration by assisting the Governments to:

- align their national innovation and science priorities and policies where appropriate;
- align their national innovation and science programmes where appropriate to assist Participating Organisations to match resourcing commitments;
- promote priority collaborative opportunities in innovation and science to potential Participating Organisations;
- identify and, where possible, remove impediments to innovation and science collaboration;
- exchange and disseminate information about best practice, funding, opportunities, and ways to overcome impediments;
- explore opportunities for closer engagement in relevant multilateral innovation and science fora;
- coordinate and make coherent efforts to promote innovation; and
- catalyse investment in innovation and support mobilisation of resources.

### **V. Priority Areas of Cooperation**

Priority areas of cooperation will be identified through bilateral processes including the Joint Strategic Dialogues and may include the specific initiatives already identified for cooperation as listed in the Annex, and others in:

- research and development (R&D) cooperation between key national research institutions;
- sharing of R&D facilities;

- business-to-business (B2B) research;
- promotion of regional science and research cooperation;
- Science, Technology, Engineering and Mathematics (STEM) engagement;
- cooperation on smart cities;
- promoting and facilitating the temporary entry of persons for innovation and science cooperation purposes, including bilateral researcher exchanges; and
- other areas as may be mutually decided.

## VI. Landing Pad

The Governments commit to the establishment by Australia of an innovation landing pad in Singapore for which Singapore will provide connections to its key institutions, universities and businesses.

## VII. Resourcing

Both Governments will provide adequate resourcing to support collaboration in innovation and science. Singapore will provide support worth about S\$25 million over five years. Australia will provide equivalent support from a variety of sources.

The Lead Agencies will explore opportunities to align innovation and science funding and resourcing programmes to assist Participating Organisations in each country to participate in cooperative activities in a mutually-beneficial manner, including through funding arrangements as determined by each Government.

Participating Organisations will be responsible for securing resources for their participation in cooperative activities from any sources available locally, nationally or globally. The Lead Agencies will ensure that the relevant information about their programmes is available to potential Participating Organisations in both countries.

*Signed in Australia on 13 October 2016 in two original copies*

For the Government of Australia

For the Government of the Republic of  
Singapore



**The Hon Julie Bishop MP**

Minister for Foreign Affairs



**Dr Vivian Balakrishnan**

Minister for Foreign Affairs

## Annex

### Areas for Cooperation in Innovation and Science between Australia and Singapore

#### *1) Research and Development (R&D) Cooperation between Research Institutions*

Singapore and Australia both have strong R&D sectors and institutions, with high levels of domestic capability and international collaboration. This provides a suitable base for mutually beneficial R&D collaboration in a wide range of areas between a wide range of institutions. Examples include:

- Singapore's NRF and A\*STAR can facilitate collaboration with Australian institutions, including private sector institutions, in areas such as food and nutrition and tropical marine science.
- Institutional collaboration between Singapore institutes of higher learning such as the Nanyang Technological University, the National University of Singapore and the Singapore Management University and Data61 (CSIRO), focused on big data and the two countries' mutual interest in smart cities
- Continued and expanded institutional collaboration between the Australian Nuclear Science and Technology Organisation (ANSTO) and the Office of the Chief Science and Technology Officer (OCSTO) of the Singapore Ministry of Home Affairs (MHA) on research and commercial projects of mutual interest in radiological and nuclear security, including the possibility of ANSTO delivering a range of training course to Singaporean scientists, crime scene officers and first responders in nuclear forensics and radiological crime scene management.
- Institutional collaboration between the Australian Institute of Marine Science as well as the Sydney Institute of Marine Science (SIMS) and Singapore research institutions, including the Tropical Marine Science Institute, the Singapore Centre on Environmental Life Sciences Engineering, the Earth Observatory of Singapore, in a range of specific marine research areas, including collaboration under the World Harbors project, an initiative led by SIMS.

#### *2) Shared R&D Facilities*

Shared use of R&D infrastructure helps governments and institutions realise a greater return on their investments, reduces the burden on each country and institution and ensures that worldwide, all necessary research infrastructure is in place. It also allows researchers to improve their research through accessing a wider range of facilities and intellectual cultures. Potential opportunities for sharing the world-class research facilities of Australia and Singapore include:

- Examining opportunities to facilitate research progression across the synchrotron light source facilities in both countries, the Australian Synchrotron and the Singapore Synchrotron Light Source, including through discussions about the facilities' international access programmes.
- Singapore would be welcome to participate in the 2016 National Research Infrastructure Roadmap process to be led by Australia's Chief Scientist.
- Examining potential collaboration between supercomputing centres in both countries.

- Exploring potential Singapore interest in securing privileged access to CSIRO's Australian Animal Health Laboratory (AAHL), one of the few Biosafety Level-4 facilities in the world, and the only one in the Asian region.
- Examining opportunities for research infrastructure sharing across facilities covering environmental monitoring, open data, advanced materials and sustainable energy.

### **3) *Business-to-Business (B2B) Research***

Innovation often occurs when businesses cooperate to overcome mutual challenges. They may be partners in a supply chain, co-suppliers to the same customer, or even competitors. Economies of scale, access to a wider pool of resources, ideas, solutions and facilities, and other benefits of research collaboration apply just as much when the collaborators are businesses as when they are research institutions. Commercialisation is also more likely from collaborative research efforts. Possible opportunities for B2B research between Singapore and Australia include:

- Exploring opportunities in areas such as Advanced Manufacturing and Engineering, Food and Nutrition, Medical Technology, Clean Technology, Oil and Gas, Cyber Security and Urban Solutions, including discussing opportunities with the Chairs of Australia's Industry Growth Centres.
- Exploring possible SingTel interest in connecting the Optus cyber security centre with CSIRO's Data61 research hub at the Australian Technology Park in Sydney, as well as the nascent Cyber Security Growth Centre.
- Singaporean funding could secure a commensurate amount of beam time at the OPAL research reactor and the Centre for Accelerator Science facilities which could then be granted to Singaporean industries wanting to utilise these facilities.
- Subject to Singapore's interest and funding, CSIRO's ON Innovation Program could be extended to enable establishment of a deep-tech accelerator in partnership with Singapore-based incubators.
- Exploration of a commercialisation/research translation exchange, supported on the Australian side by the Entrepreneurs' Programme, and on the Singaporean side by SPRING.
- Examining potential new linkages between the Australian and Singaporean startup sectors by bringing Singaporean entrepreneurial, research and technical talent to Australia under the 3-12 month secondment element of the new Incubator Support Programme, a key initiative of Australia's National Innovation and Science Agenda. A possible reciprocal initiative could be discussed at an appropriate time.
- Singapore is to be the location for a Landing Pad under Australia's National Innovation and Science Agenda.

### **4) *Other Activities***

Other activities include:

- Examining ways of supporting the exchange of skilled STEM and ICT personnel between the two countries, in accordance with both countries' interest in attracting foreign entrepreneurial talent.

- Working to promote STEM for human capability development. For instance, the recent MOU between Questacon and the Science Centre Singapore Board provides a framework for cooperative work across a number of areas of mutual interest including exhibition development and exchange, skills development through market projects, citizen science research projects and regional science centre capacity building. Both centres are working to develop and exchange exhibitions and build capability through a staff exchange program.
- Under Australia's National Innovation and Science Agenda, Global Innovation Strategy activities provide the opportunity for seed funding for collaborative projects, and priming grants to develop institutional collaborations that include industry and other end users. These programmes include Global Innovation Linkages (major projects), Global Connections (SME-researcher links) as well as modest funding for regional collaboration activities such as under APEC auspices.