



## DIRECTOR'S VIEWPOINT: RE-IMAGINING THE ROLE OF THE KNOWLEDGE BROKER

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Ms. Ros Hore is the Director Strategic Engagement CSIRO. She has been with CSIRO since

2005 and has held five roles in that time; Assistant Chief Operations for the Division

of Molecular and Health Technologies; Deputy Director of the Future Manufacturing Flagship; Director Melbourne Precincts; Director Strategic Initiatives and Collaboration and her current role Director Strategic Engagement. In her current role Ros leads a number of CSIRO's key relationships across government, universities and industry and represents CSIRO on a number of external Committees. Prior to joining CSIRO Ros spent 10 years at Deloitte as National Human Resources Director. She has diverse experience working across different industry sectors being hospitality, retail, professional services and research.

In September 2014 the Australian Government Chief Scientist at the time, Professor Ian Chubb released his acclaimed report titled 'Science, Technology, Engineering and Mathematics: Australia's Future.' Never has a report resonated with me as much as this one. Science and innovation are recognised internationally as key to boosting productivity, creating more and better jobs, enhancing competitiveness and growing an economy. Yet here were statistics stating Australia ranked 81st as a converter of innovation into the outputs business needs. Across the 35

OECD countries Australia ranked 27th on business to research collaboration for small to medium enterprises (SMEs) and 28th for large firms. Of Australia's large firms, only 3.3% were engaging with research organisations and only 2.3% of Australian SMEs. How could this be, given Australia's strength in research? As a nation, what a compelling call to action.

Fast forward to 2017 and the Australian Government Office of Innovation and Science Australia released an Issues Paper providing advice about the innovation, science and research system guiding the development of their 2030 Strategic Plan. The Issues Paper nominated six challenges, one of which was "Maximising the engagement of our world class research system with end users." Three years on, and it seems industry and research engagement remains a compelling call to action.

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to unlock their innovation potential by matching them with the world-class expertise and capabilities of Australia's research sector. CSIRO's SME Connect team consists of seven members and is one provider delivering this program. In the last financial year alone, SME Connect facilitated over 177 research projects nationally, injecting \$25 million into research and development, and connecting 143 SMEs with over 11 Australian research organisations, 25 universities and CSIRO. In addition, SME Connect facilitated the placement of 22 Australian University graduates to be employed by Australian SMEs to work on research projects. This activity has been very successful for Australian SMEs with outcomes ranging

from new products for local and export markets, local job creation and translation of businesses to new markets.

The Innovations Connection program is based on successfully brokering innovations and knowledge across sectors. The role of the SME Connect team member is to be the knowledge "broker" actively working at the intersection of the relationship between the SME and the research capability. It's through the relationships the SME Connect team members develop with individuals within Australian Universities and Publicly Funded Research Organisations (PFRO) that they are able to identify the appropriate capability to meet the SMEs' needs.

Winch (2007) explores the role of an innovation broker, utilising a series of case studies of organisations dedicated to innovation broking from around the world. He defines innovation brokers as organisations founded specially to undertake an intermediary role, rather than performing that role as a by-product of their principal activities.

His findings indicated that brokers need access to the latest research to effectively carry out their role in broking the diffusion of new ideas, but they do not need to be active participants in research. However, close links with universities were essential in carrying out the role. Sources and users of new ideas have a collaborative relationship that is mediated by the brokers. The universities use the brokers to seek partners for their externally funded research programs while the firms use the brokers to shape research programs to meet the perceived needs of the industry.

Sousa (2008) argues that knowledge

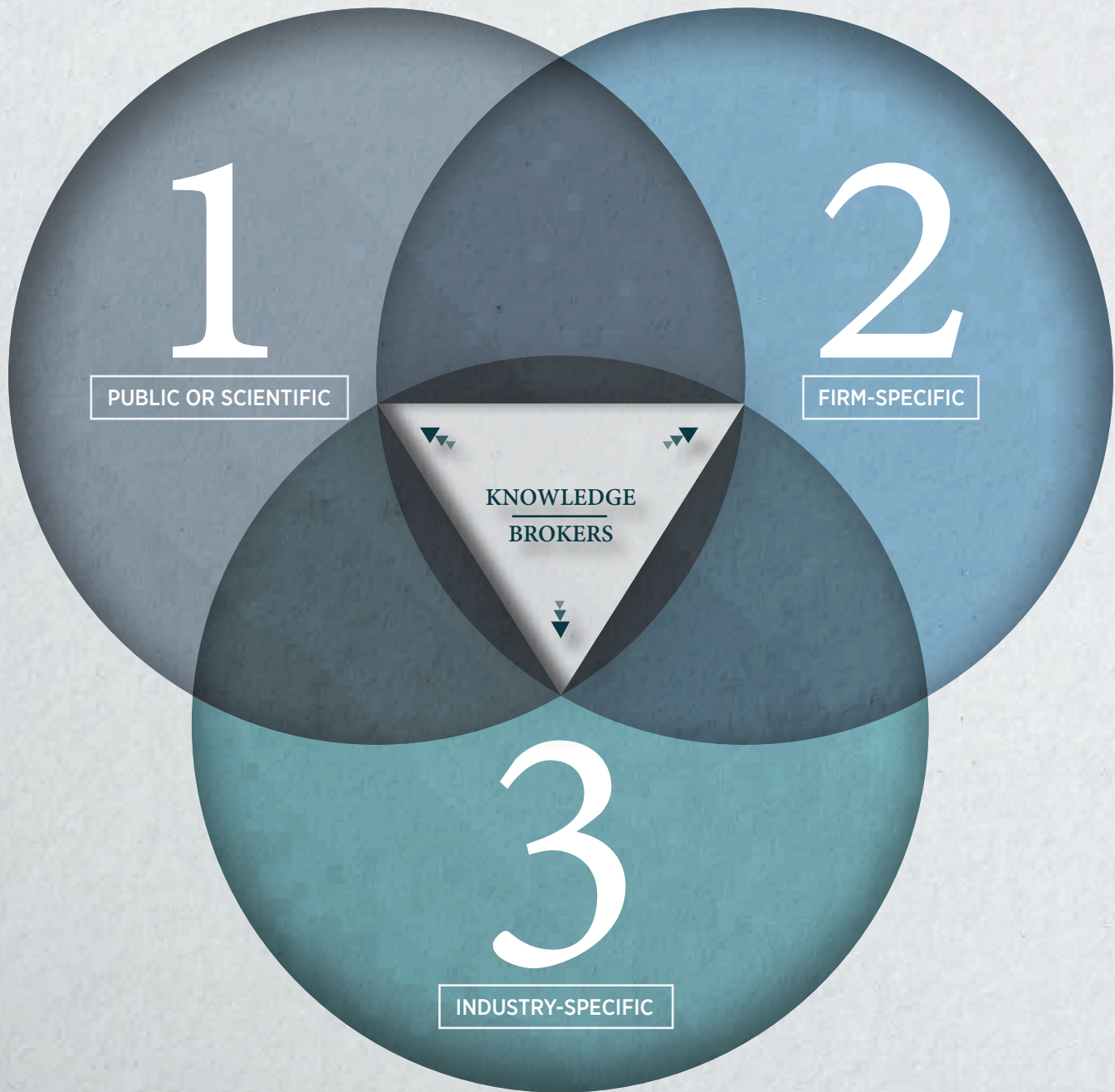


FIGURE 1: KNOWLEDGE BROKERS AND KNOWLEDGE SHARING OF DIFFERENT TYPES OF KNOWLEDGE



brokers are distinguished by the active role they play in providing the links and the development of relationships that address the innovation needs of their customers (refer diagram below).

A number of roles in Australia have titles that indicate the people occupying them are working as an intermediary between research and industry, such as engagement managers, business development managers, liaison officers, technology transfer officers, to name but a few. With research institutions focused on measuring the “impact” and “outcomes” of their research, along with the need to improve research and industry working together, we can only assume an increase in such roles appearing in Universities?

We need to re-imagine what skill sets, experience and career paths are necessary to make SME Connect facilitators successful brokers. On a number of occasions, I have participated on the recruitment panel for the SME Connect roles. There is not a “typical” career path for knowledge brokers in Australia, as it is unusual for people to have gained career experience working with both research or technology and industry, combined with a high level of interpersonal skills.

To provide an example of the diversity of the career experience of the SME Connect team, the backgrounds of two of the SME Connect team members are as follows; one has a background in materials engineering research, working in large and small manufacturing companies, with roles in R&D, engineering and management, in industries including plastics, automotive, medical devices and recycling. He has also worked as an independent consultant and project manager including working in

three start-up companies. The other SME Connect facilitator has experience working in the pharma, biotech and medical technology industries in Australia and the UK starting his career in a pharmaceutical manufacturer before moving into business development for a drug and patent information company. He then became the Asia area manager for a UK-based pharmaceutical business before moving to Australia where he worked for UK Trade & Investment facilitating collaborations between Australian and UK organisations. As you can see from these two examples they have very diverse and different career experience.

The similarity of the two team members lies in their interpersonal skill set. Each displays a high degree of emotional intelligence. They are both resourceful self-starters who are able to diagnose industry problems and assess the appropriate research solution as they genuinely want to make a difference to the companies they work with. Both team members have the ability to develop relationships swiftly and get along with all sorts of different people who have different drivers and motivators for working together.

Brokering is also important at scale. In 2012, I attended ‘The Competitive Institute’ (TCI) conference in the Basque Country of Spain. According to its website, the TCI is the global practitioner’s network for competitiveness, clusters and innovation. The conference was my first exposure to the role of a ‘Cluster Manager’ and the idea that the role of managing the interaction of research institutions, government and industry (or a combination thereof) was a recognised professional role. Since 2012 there has also been a substantial increase

in the services offered by the TCI network, including a range of cluster courses such as the International Cluster Course being run by the Quercus Group and Oxford Research and the European Foundation for Cluster Excellence: The Essence of Cluster Excellence Management and Gold Cluster Excellence Manager to name just two.

So, if the role of the knowledge broker is important for Australia to achieve its 2030 vision to be counted within the top tier of innovation nations known and respected for its excellence in science, research and commercialization, a key question is ‘do we have the number of people ready and ably skilled to fulfil these knowledge brokering, connecting roles?’ And are universities up to the task of meeting the challenge of developing these skills in their future graduates?

## REFERENCES

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