Australian water-tech commercialisation meets multiple obstacles - What can be done?

Dan Sullivan, CEO, Iota, South East Water weighs in.

Australia is home to a wealth of talent, ideas and expertise in research and technology breakthroughs. Australia's research capability is often considered world class but the process of converting research and innovations into social and economic capital and new business is highly challenging. Overall, the country is working in an environment where the value of IP imports exceeds IP exports and is therefore running a consistent IP trade deficit.

Dan Sullivan, CEO, Iota Services weighs in on the barriers and the breakthroughs from a water industry perspective. Combining an expertise in global water technology, a background in helping Australian business grow globally, and a passion for commercialising home grown Australian innovations, he plays an integral role in accelerating the transition to digital water utilities in Australia, and the world.

Australian innovation cultural conundrum

To date, Australia produced 15 Nobel Prize winners, however Australia did not capture the full value of many innovations such as the black box flight recorder, heart pacemaker, photovoltaic cells, X-ray crystallography and many others that were based on Australian research breakthroughs but commercialised overseas.

"We do have great ideas and creativity here, but they don't seem to translate well into business," he said.

Dan Sullivan believes that to prevent the next opportunities from falling through, there is a need for more support, collaboration, and infrastructure for Australian innovations with potential to scale and expand into global markets.

"I'd like to see more Australian companies reaching out beyond the comfort zone, build and scale and develop a global business, but to do so, we need to bridge the 'valley of death' gap between innovation and commercialisation at scale."

Looking to 2030, Australia will need to be competitive by scaling up more high-growth industries; commercialising more high-value products, technologies, and services; fostering talent; and tackling global challenges such as geographical distances and different time zones. "The tyranny of distance is real. Being distant from the customer

adds another layer of complexity and yet many growth opportunities for innovation technologies and products lie outside Australian shores," said Dan.

The challenges of commercialisation and scaling up

To remain competitive and avoid missing out on making the most of our world beating ideas, Australia needs to build the capacity for continuous research translation, commercialisation, partner collaboration and scalability.

If you could develop a home grown innovative technology or product, with the right product-market fit, how do you then successfully accelerate commercialisation and penetrate global markets without selling out to a partner across the ocean?

"There is a way, but there is a lot of road kill on the side, said Dan Sullivan. "You might have the right product, but the timing is not right. Even if you have the perfect market fit, it's still challenging from Australia. The more niche and specific the product, the smaller the market."

"You want to avoid selling out to a partner but its difficult getting the people and resources and enough of a momentum, even after securing the first customers. It's often the trickiest part of the business, but to truly grow you can't just look at Australia, you need to be thinking globally"

Barriers to commercialisation		Enablers to overcome the barriers
Low levels of cross-sector collaboration This hinders both the translation of science and technology research into commercial outcomes and the adoption of new ideas from one sector to another.		**Collaboration** This is both an enabler in its own right and an important way to achieve some of the enablers. Collaboration helps to support early-stage research, translate and commercialise emerging science and technology, and increase adoption.
Lack of comprehensive innovation strategy and targeted investment Prevents industry achieving greater commercial outcomes at scale from science and technology.		**Long term strategy and targeted investment** The most successful innovating companies have a clear innovation strategy that supports their strategy and prioritises targeted areas of investment.
Culture, risk aversion and incentives misalignment A risk-averse cultural environment, with misaligned incentives, is less likely to support and invest in innovation, trial new processes, and adopt and implement new technologies.		**Culture, risk sharing and alignment of incentives** Innovation 'starts at the top', and companies that address the cultural aspects of innovation projects, as well as the alignment of incentives, are more likely to see their projects progress.
Talent and skills capability mismatches Skillsets are underutilised and misaligned in areas needed for commercialisation of emerging science and technology opportunities.		**Skills, talent and capability building** These are all required to successfully develop and deliver an innovation project.

5

Unlocking-the-Innovation-Potential-of-Australian-Companies.pdf

A call for more collaboration

CSIRO's 2021 report on Unlocking the innovation potential of Australian companies tells us that major barriers to commercialisation of science and technology are low levels of cross-sector collaboration and "cultural challenges", including risk aversion to innovation and business-research incentives misalignment."

One of the cornerstones of an open innovative environment is the ability to collaborate. Collaboration between innovation centres, government and corporate bodies could be a viable engine for Australia's innovation and future growth.

But the OECD table puts Australia last out of OECD countries that report on collaboration between business and public research institutions on innovation. Australia's alarming collaboration ranking is a direct contributor to the poor performance at commercialising home-grown innovation and discoveries. Could changing our approach to collaboration and partnerships assist in commercialising innovative technologies and products?

In the case of the water industry renowned for its conservative, risk averse approach Dan advocates for a go steady - go slow approach and building a market in Australia first.

"In Australia water authorities are mostly publicly owned and there is often a preference for protecting values and risk rather than capital. There is a focus on CapEx vs. OpEx. Being part of a culture not wanting to fail, the industry is open to pilots but makes it difficult to scale and it requires a lot of partners."

"The risk is often pushed to the partners who compensate by jacking up the prices. As a result, the water industry often adopts solutions from other industries."

The collaborative role of Iota in the water industry

Commercialisation can be defined as a process that integrates knowledge, technology, and collaborative activities to generate new products, bring them successfully into markets, and transfer both technology and knowledge out of the organisation engaged in the process.

"Commercialisation takes time and patience, with the journey lasting years, and requiring both a strategic and operational capability. There are few short cuts or for rapidly gaining success."

Iota, a commercialisation hub in South East Water, and industry accelerator focuses on innovative technologies and products of highest value to the water industry that are field-tested and scaled at South East Water. It actively incubates and commercialises a portfolio of proven technologies for the global water sector.

Technologies are sourced from South East Water's research and development as it undertakes a digital utility transformation. It is commercialising intellectual property from sources such as universities and is open to innovations with potential for material global impact.

"We can help incubate and reach out to global technology partner to build bridges, but you need to have trust. The good news is that phenomenal innovation is happening across the sector that have huge potential to make a difference.

The collaboration friendly framework of Iota's ecosystem plays a unique role in helping water authorities adopt proven innovations. It collaborated with water authorities to pilot and scale technologies with significant implications on addressing urgent water challenges.

END