

Medical Technology - Industry Assistance in Queensland

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Introduction

The medical technology industry saves and improves lives by detecting diseases earlier, by providing effective treatment options for patients and the healthcare system and researching new medical technologies to improve patient outcomes and minimise hospital stay times. The industry comprises manufacturers, suppliers and importers of medical technology from emerging companies to global companies.

Facts and figures:

- Turnover of approximately \$10 billion in 2012
- Responsible for 41,292 medical devices listed on the ARTG (Australian register of Therapeutic Goods)
- Employs more than 19 000 people nationally
- 12% of companies located in Qld
- Imported goods to the value of \$4.4 billion and exported goods to the value of \$1.9 billion

Medical Technology Association of Australia

The Medical Technology Association of Australia is the national association representing companies in the medical technology industry. MTAAs aims to ensure the benefits of modern, innovative and reliable medical technology are delivered effectively to provide better health outcomes to the Australian community.

MTAA represents the manufacturers, exporters and suppliers of medical technology products in Australia. MTAAs represents companies which account for the majority of products listed on the Australian Register of Therapeutic Goods (ARTG) and approximately 75% of the higher risk implantable medical devices products listed on the Prostheses List and used in the Australian marketplace. The member companies cover the spectrum of the industry in Australia, from subsidiaries of major multinational medical technology companies to independent distributors and small to medium sized Australian innovator companies.

MTAA is pleased to have the opportunity to provide comment to the Queensland Competition Authority's investigation into the effectiveness of Queensland Government industry assistance and their contribution to the state's economic performance.

Building a sustainable medical technology industry

A robust medical technology industry is one of the keys to fostering economic and social growth. It is a highly innovative industry with significant investment in research and development which utilises high skilled manufacturing.

The medical technology industry is a growth industry with the potential to be part of the solution to major challenges facing Australia, such as our escalating health budget. Australia is facing an increase in the demand for hospital and aged care

services and healthcare staff. A wide range of medical devices have wireless capabilities and can be used to monitor patients in their homes, creating significant savings for the health care system as well as tailoring health care delivery to individuals. The conditions most suitable for home monitoring include many of those which are more prevalent with age, such as diabetes and cardiovascular disease.

Not only does the industry offer solutions to current healthcare needs but it is continually researching and developing solutions to the many health issues that Australia and the world face as people live longer. The industry looks not only at the health costs incurred "in the medical system" but looks to develop solutions to help keep potential patients out of the expensive healthcare facilities. This is particularly evident in such areas as early detection and potential cures for cancers and dementia.

Why industry assistance is important to medical technology development

Australia suffers an imbalance in trade in medical technology with most of the technology used in Australia imported and nearly all of the medical technology products manufactured in Australia exported. Australia has excelled in the development of niche products to supply the global market - Resmed's device to treat sleep disorders, Cochlear's electronic hearing device, Sirtex's Sirtex's liver cancer treatment and Cook Medical's cardiovascular stents and IVF solution to name a few. What Australia doesn't do well is invest in translational research measures - meaning that there is no strategic effort to ensure the medical devices and products developed from universities and research institutions are commercialised, manufactured in Australia and adopted in our health system. This means the Australian economy and community often misses out on the jobs, new export markets and potential access to state of the art technologies.

Queensland is home to many innovative successful medical technology companies including:

- **Tunstall Healthcare** - a leading provider of telehealthcare solutions including medical alarm units and 24 hour emergency response monitoring keeping older people out of hospital and residential care, saving costs and improving their quality of life
- **Cook Medical** manufacturers medical devices and products such as stents for use in surgical and minimally invasive procedures and IVF products to assist families;
- **Analytica** have developed an e-health treatment system for women who suffer Stress Urinary Incontinence, PeriCoach™ - the device evaluates activity in pelvic floor muscles and this information is immediately transmitted to a smartphone. From there it can be uploaded and accessed by physicians via cloud based portal
- **Impedimed** develop bioimpedance devices with a focus on medical applications notably in the assessment and monitoring of secondary lymphedema
- **Medigard** specialize in design and development of retractable safety medical devices for the global market

These companies are operating in Queensland, many of them investing in innovation, manufacturing and research, employing highly skilled staff in the absence of any strategic attention from government to establish an attractive business environment for the industry to flourish.

Australia has many of the right attributes to grow a strong domestic industry; a significant health and medical research capability, quality health system, highly skilled manufacturing workforce, stable financial system and access to the growing middle class markets of Asia. What's missing is attention from government policy makers enabling the private sector more scope to develop business opportunities.

MTAA sees the role of the Queensland government to engage strategically with the medical technology industry and work in partnership to identify and develop a policy framework growth strategy. Some suggestions are:

- Use government procurement as a tool to drive innovation
- Capitalise on the role of government as a facilitator and establish collaborative networks made up of industry, academia and the healthcare system, improving translational research from academia to bedside, driving growth in health care solutions in response to health care priorities
- Invest in workforce training ensuring innovative companies have access to highly skilled and highly trained staff
- Derive benefit from our proximity to Asia and set up export programs that target emerging economies with a desire for improved health care
- Consider what barriers and red tape exist in public service delivery and work in partnership with industry to make it easier to do business in Queensland
- Remove / minimise the red tape hindering the local commercialisation of products developed locally

Brisbane Technology Park was a former Queensland Government initiative set up to facilitate interaction between technology and research-focused national and multi national companies at the one convenient location. Cook Medical is based at this location in the absence of any targeted government strategy or initiative to drive industry collaboration with government, academia and the health system. MTAA argues the Queensland government should use this opportunity to develop a plan to form an industry cluster, which are being formed in many countries all around the world, in an effort to establish a pathway for industry development growing innovative and entrepreneurial activities. Some examples could be reciprocal exchange programs between academia and industry, business mentoring programs and intern programs for university students.

What other countries are doing

In this context, it is important for state and territory governments to be aware of the significant competition Australia faces from countries in our region and further afield offering significant incentives for innovative companies to set up manufacturing and business operations. One example is Singapore who offer competitive tax environments including a headline corporate tax rate of 18%, far lower than Australia, the United States and many other countries in Europe. In addition, Singapore invests heavily in education, spending more than 3% of its GDP on public education. With the manufacturing sector contributing to 28% of Singapore's GDP, the country produces over 15 000 engineers and engineering science graduates per year, approximately 40% of the total number of graduates. Since the 1980's Singapore has strengthened its expertise in electronics, precision engineering and materials sciences.¹

¹ Economic Development Board of Singapore EDB Year 2011 in Review <http://edb.gov.sg>

In more recent times the UK has reduced the company tax on the income derived from patented product commercialized in the UK from the normal rate of 23% to 10%

This is critical for medical technology companies which engage in both product development and manufacturing. A number of small industries also support the diverse medical technology sector, including electronic manufacturing services, plastic components, metal forming and casting, ceramics, surface treatment and cleansing, packaging and sterilization.

For example if an Australian medical device company were to establish their manufacturing operations within a medical technology cluster arrangement in Singapore they would access a very competitive corporate tax rate, highly skilled employees and programs that help identify and grow new medical devices bringing them to market. In addition they would receive the benefits of strategic investment by the government to foster collaboration between scientists, entrepreneurs and researchers as well as access to state of the art facilities to accelerate the commercialization and business development process.

Clearly there are some government incentives in competitor nations that we simply cannot compete with in Australia, such as a corporate tax rate of 18%. However, it is critical that we capitalise on the competitive advantages we do have and create incentives for innovative companies to maintain and grow their businesses in Australia.

What other states and territories are doing

NSW

Knowledge Hubs

The NSW Government are working to develop industry led 'knowledge hubs' in five sectors (transport and logistics, finance, creative and digital, energy and medical devices) to ensure local industry has access to world leading knowledge, building capabilities in industries with growth potential to underpin the long term competitiveness of the state.

Each knowledge hub is led by an industry association or group of industry stakeholders, the medical device hub will be led by MTAA with a committee of industry stakeholders to prioritise a business plan for how to position the sector for future development and growth.

Medical Device Seeding Fund

The Medical Device Seeding Fund was established to promote new and innovative medical devices and technologies that may have a global benefit. The fund provides support to individuals, companies, public and private hospitals, medical research institutes, universities, other public sector research organisations, and the medical devices industry, to take local innovation to market and increase the uptake of NSW medical devices by the health system where they are cost effective and contribute to improved patient outcomes. Funding will be in the range of \$50,000 to \$5 million, depending on the product's stage of development over a period of one year to three years.

Tech Vouchers Program

TechVouchers provides opportunities for small and medium enterprises (SMEs) to create research collaborations with public sector research organisations to help their business become more innovative and competitive.

TechVouchers provides seed funding of \$15 000 to SMEs to assist them in developing research collaborations with public sector research organisations helping their businesses become more competitive. The program works by business proposing a project which will significantly benefit from a partnership with a research organisation either through further research, clinical trials, or access to equipment to support product development. Businesses that have not worked with universities before or businesses located in regional NSW are encouraged to apply.

South Australia Manufacturing Works

The South Australian government has released a ten year *Manufacturing Works* strategy which is about driving the transition of traditional manufacturing, with the decline of the automotive sector, to advanced manufacturing industries demonstrating growth, such as medical devices. The recommendations include a Small Business Innovation Research Pilot, designed to demonstrate the capacity of government procurement to stimulate economic growth through the purchase of innovative and cost effective products and services from small manufacturing firms. They are also administering a Reciprocal Exchange between Industry and Academics Program, focusing on developing opportunities for industry and academics to participate in workplace exchange programs to promote the understanding and application of knowledge to commercial challenges.

The Tonsley Park redevelopment is a key part of the strategy, an investment of \$253 million over twenty years to create a hub for advanced manufacturing at an old automobile site. The aim of the project is too:

- attract investment into high value-add manufacturing
- provide a focal point for the development of industry clusters based around lead customers and centres of excellence in industries such as mining and resources, medical and assistive devices and environmental industries
- support skills and workforce development, and provide links between industry and the applied research sector
- support technology and design-based innovation in manufacturing firms by offering space for experience based learning and experimentation.
- Flinders University is investing \$120 million in a new facility for its School of Computer Science, Engineering and Mathematics at Tonsley Park, from which a number of research programs will be delivered. These include the **Medical Device Partnering Program** which supports the development of medical devices through collaborations between researchers, industry, end-users and government. It provides a mechanism for the development of prototypes, proof of concept and/or commercialisation planning for potential Australian medical device products.

Victoria

The Market Validation Program links innovative SMEs with the public health sector facilitating industry collaboration with the potential to reduce health care costs and improve service delivery. The program works in three stages:

- Public health sector agencies are invited to identify specific challenges that could be solved by technology development
- The government invites the SME market to propose solutions to the identified public sector challenges
- SMEs submit proposals and successful ones receive a grant of up to \$100 000 to undertake a feasibility study for four months, successful studies lead to further funding to undertake R&D to progress to market

The Market Validation Program (MVP) supported over 40 projects partnering Victorian SMEs with Victorian Government agencies to jointly develop innovative solutions to technology challenges, including a device to treat lower back pain, a common condition which is estimated to cost the Australian economy more than \$9 billion each year.

The Driving Business Innovation Program is a new \$16 million grants program designed to build on the outcomes of the Market Validation Program. The program is similar in design but includes a fourth stage where, following proof of concept stage, SMEs are invited to submit a business plan to be assessed for matched funding up to the value of \$500 000 to undertake further activities to take the product to market.

Export assistance

The Victorian Government also offers a very user friendly website to assist companies at all stages of export, such as companies who are developing an export strategy, requiring market access information and trends about specific markets as well as information about teams who are responsible for each market. They also administer a Trade Mission Program providing funding to take Victorian companies to key overseas markets introducing them to potential buyers, investors and partners.

A strategy to assist companies tap into new export markets is a critical measure of support for innovative companies developing growth strategies.

Conclusion

These are just some examples of what other states and territories are doing to provide support to the medical technology industry.

MTAA argues the Queensland government should engage strategically with our association and member companies to develop a policy framework enabling the industry to flourish by developing some of the examples provided here. In particular, by using government procurement budgets as a market based instrument to drive economic growth rather than a traditional tendering role and to consider how the government can best capitalise on its role as a facilitator of partners who make up the medical device 'eco system' meaning academics, industry, the health system, industry development and venture capital firms.

Nurturing development of a medical technology industry will enable Australia to benefit from its strengths - a significant health and medical research capability, quality health system, highly skilled manufacturing workforce, stable financial system, and access to the growing middle class markets of Asia.

There is an opportunity for the Queensland Government to be bold and the first state in Australia to have a Medical Technology blue print. This blue print for Queensland is not about commoditised “widgets” . It is about a series of policies developing a vibrant industry, to the benefit of Queensland’s economy and its people.

With optimal business conditions and collaboration, the medical technology industry can create new education, research, manufacturing, sales, marketing and export opportunities. Above all, it would provide the Australian people with access to state of the art technologies, improving quality of life, allowing people to live and work longer.

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