QUEENSLAND

ROBOTICS

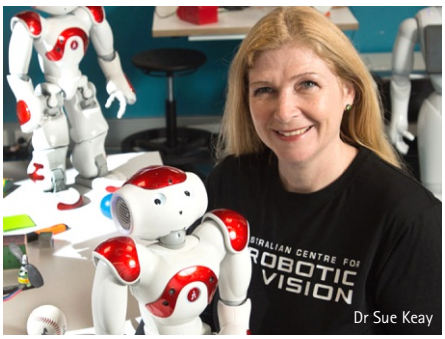
Australia is one of few countries with the opportunity to pursue and progress industrial robotics as a productivity driver and an export capability. This is due to Australia's ideal combination of quality research institutions, educated workforce and concentration of industry that stands to benefit, including mining, agriculture and oil and gas. In July 2018, a core group convened by BHP and Woodside discussed the merits of an industry-led robotics cluster. It was agreed to continue to meet and progress its establishment. Queensland was identified as the initial hub due to the level of existing support and commitment. Over the past 18 months, the Queensland Robotics Cluster has focused on strengthening the quality of its internal linkages, attracting early public sector support and attracting talent that reinforces the cluster's specialisations.

An ambitious long-term vision

Queensland is well placed to take advantage of global trends in automation and robotics. Increased adoption of automation has the potential to transform the Queensland economy, adding $7.7 billion in gross state product (GSP) and an additional 500,000 jobs[1]. In the short term, potential economic gains from automation are largest in capital heavy industries such as mining, agriculture and manufacturing. These sectors accounted for more than 20% of Queensland GSP in 2017[2].

There is a clear pull for robotics capability from Queensland industries, with mining and agriculture in particular seeking to unlock productivity by addressing the challenges of safety, productivity and remoteness. These real world challenges provide opportunity for the development of best in class industrial robotics and remote asset management capabilities that can be exported throughout the world.

[1,2] 'The robotics and automation advantage for Queensland: How the State can harness the benefits and adapt its workforce to the new robot economy' Synergies Economic Consulting, June 2018



Dr Sue Keay

QUEENSLAND ROBOTICS CLUSTER

The Queensland Robotics Cluster is an industry-led organisation established to support emerging industrial robotics capability in solving real challenges across industries including mining, agriculture, logistics, oil and gas, construction, manufacturing, forestry, transport, defence and space.

The cluster is hubbed out of Brisbane where a significant concentration of the nation's robotics capability and talent resides. It is built on an ecosystems model and brings with it rich robotics networks from around the world.

The cluster acts as a neutral body which strengthens connections within the robotics ecosystem to accelerate Australia's capability in people, business and technology to support the unprecedented opportunity afforded by automation and robotics. Leveraging the strong foundations that exist within Queensland's robotics ecosystem requires aligning the key stakeholders in a mutually beneficial way:

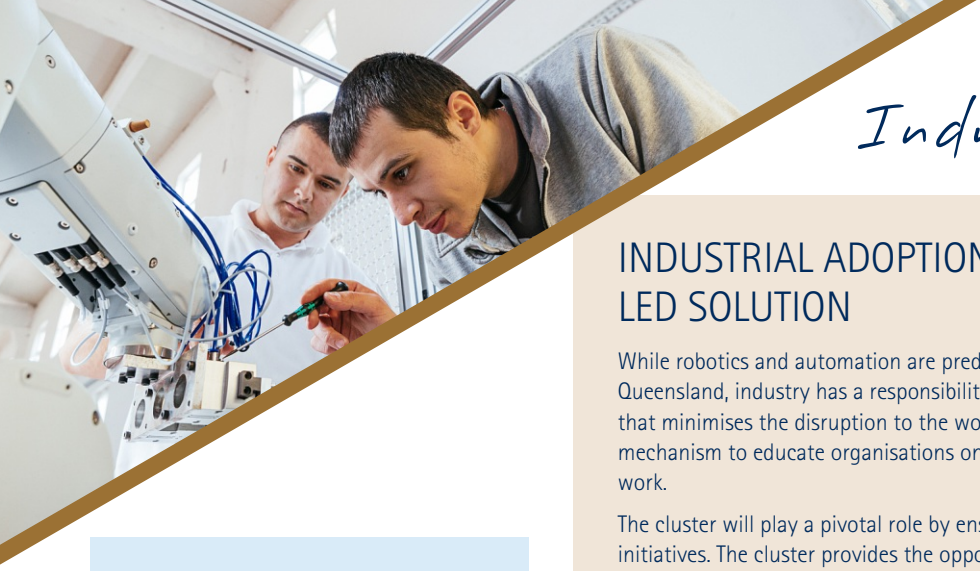
INDUSTRY: Industry end users are seeking leading solutions that will enhance productivity of internal operations and delivery of better products and services to their customers. To do so, they need access to a world-class talent pool and entrepreneurial innovations to tap into.

GOVERNMENT: The state is seeking to promote Queensland's economic and social development. They need to attract private investment and talent.

RESEARCH / EDUCATION: Universities and other research (CSIRO) and education (TAFE) bodies are seeking ways to commercialise their research and match education with jobs demand.

ENTREPRENEURS / START-UPS: Start-ups are vital in driving innovation. They will be attracted by the presence of industry end users of their products and services as well as access to start-up funding.

VENTURE CAPITAL (VC): VC companies are seeking attractive investment opportunities in start-ups with a promising addressable market.



Industry-led solutions

INDUSTRIAL ADOPTION REQUIRES AN INDUSTRY-LED SOLUTION

While robotics and automation are predicted to have a net positive impact on job creation in Queensland, industry has a responsibility to coordinate its introduction in such a manner that minimises the disruption to the workforce. Presently there is no industry-led mechanism to educate organisations on how to prepare for a technology-enabled future of work.

The cluster will play a pivotal role by ensuring an education component to each of its initiatives. The cluster provides the opportunity for industry, government, research, education and entrepreneurs to partner in a meaningful way to:

- **Enhance Australia's economic competitiveness and create meaningful jobs**
- **Reduce the risk of workers being placed in hazardous conditions**
- **Build national capability in robotics and its application to heavy industries with a particular specialisation in remote servicing**
- **Encourage new talent and investment to Australia**
- **Become a home for leading robotics companies, energised by start-ups and entrepreneurs**
- **Change the narrative around robots and jobs.**

These networks can be leveraged to provide visibility on the capabilities that exist domestically and internationally and to accelerate the development of robotics capability and capacity in our home market of Queensland. The cluster is closely aligned to Perth-based cluster, AROSE (Australian Remote Operations for Space and Earth) and the Queensland and SEQ METS (Mining Equipment Technology & Services) clusters to leverage existing knowledge and capabilities, accelerate progress and avoid duplication of effort.

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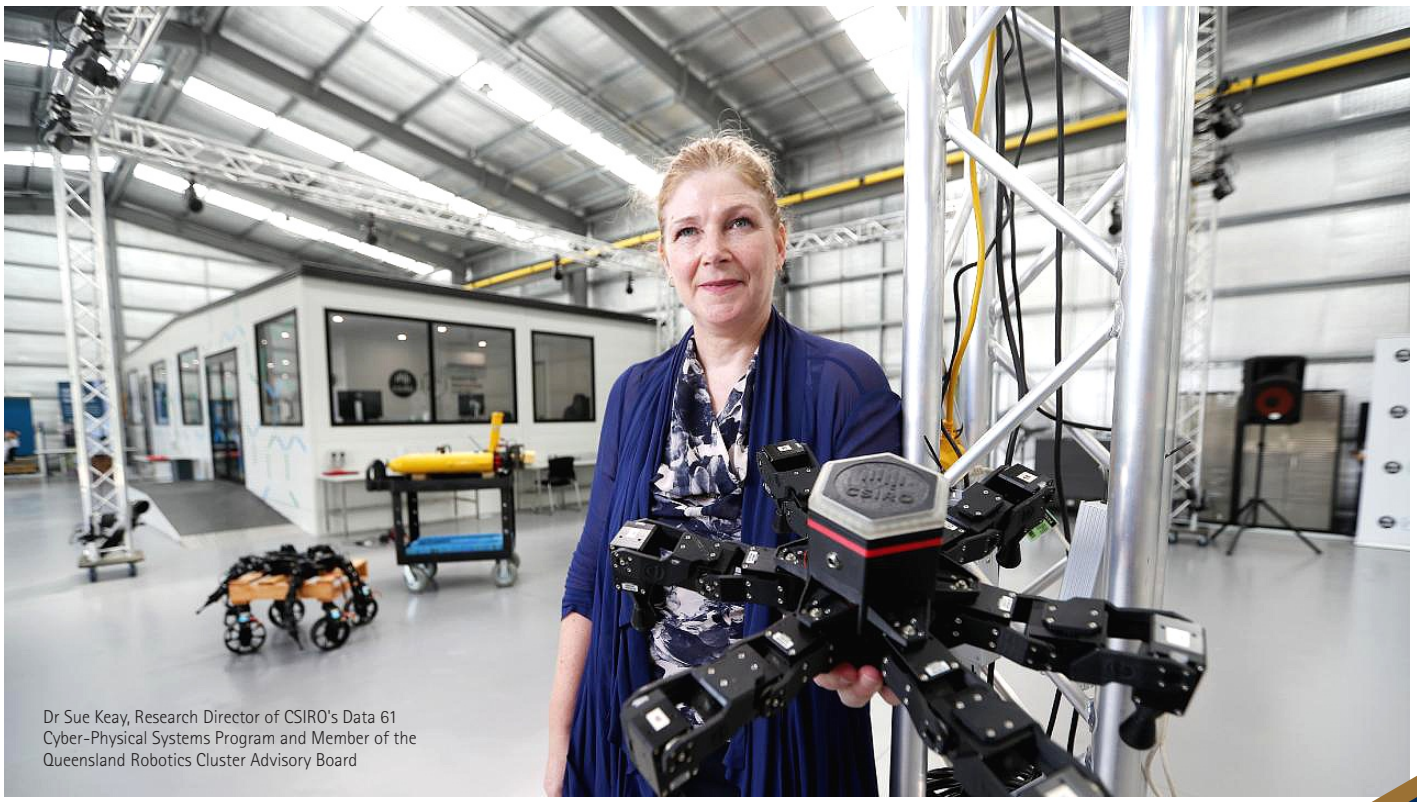

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Regional Development Australia BRISBANE

An Australian Government Initiative

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