



Government of South Australia
Department for Innovation and Skills



HI-TECH SECTOR

Discussion Paper

Visit **www.yoursay.sa.gov.au**
and submit your feedback by
5pm Friday, 28 February 2020.



The Department for Innovation and Skills acknowledges Aboriginal people as the state's first peoples and Nations of South Australia. We recognise and respect their cultural connections as the traditional owners and occupants of the land and waters of South Australia, and that they have and continue to maintain a unique and irreplaceable contribution to the state.



A Message from the Minister

South Australia's hi-tech sector is fundamental to the state's future economic success.

Over the next ten years, the scale of technological change is set to transform our world, improve existing business, create new products and services and drive job creation.

As South Australia's economy diversifies, and new and emerging industries grow, such as the defence industry and space, digital, cyber security, artificial intelligence, health and renewable energy, there will be an increased demand for skilled workers.

The Marshall Liberal Government understands the importance of supporting our industries to expand and grow, which is why we have launched Growth State: our plan for prosperity. The plan, which identifies the hi-tech sector as one of nine priority sectors for growth, aims to lift the state's annual economic growth rate by three per cent to accelerate the state's economy, productivity and competitiveness.

The jobs of the future will require people with specialised skills in areas such as research, design, creativity, entrepreneurship and innovation.

Research shows that technology workers will grow nationally by 100,000 between 2018 and 2024, with the fastest growth predicted in health care whose technology workforce will grow by more than 50 per cent.

With more businesses embarking on digital transformation than ever before, now is the time to capitalise on growth opportunities for business and the economy and identify how South Australia can tap into its competitive advantages to develop new products and services for global markets.

The State Government invites you to share your ideas on how we can focus our efforts in the hi-tech sector to identify burgeoning capabilities, emerging technologies, research specialisations and barriers to industry-research collaboration.

With the state's growing capabilities in defence and cyber security research, robotics and machine learning, and top technology companies calling South Australia home, our hi-tech sector is ripe and ready for success.

It is on all of us to ensure we support the entire hi-tech sector to be the best it can be and prepare the next crop of young tech talent. If you're an industry leader, researcher, academic, technician or innovator we want to hear from you to help set the direction for this sector in 2030.

Hon David Pisoni MP

Minister for Innovation and Skills

Growth State

Growth State is our plan to promote industry growth by responding to their needs and leveraging South Australia's competitive advantages. Through a co-ordinated government commitment to real actions and deliverables we will encourage investment to achieve sustainable growth, prosperity and optimism across our state.

Growth State will drive this by ensuring the South Australian Government stays focused on what matters to business, to encourage confidence and further investment, and address barriers to growth.

The South Australian Government has set an objective to lift the sustainable economic growth rate in the state to an average of three per cent per year.

A South Australian economy growing at an annual rate of three per cent will bring our state back into line with other parts of Australia that have outperformed and outgrown us over the past 20 years. It will provide a foundation for more prosperity for South Australians and for achieving even higher growth in the longer term so that we match our enviable lifestyle with a strong economy.

Industries and businesses must continue to do the heavy lifting and the government will encourage them to do so by providing much more effective cooperation and support. We need to equip our businesses with tools and the confidence to grow their operations, create jobs and sell their products on the world stage.

Many are already doing it, but more need to join them.

Growth State is the partnership that will ensure this happens.

About this paper

This discussion paper seeks industry and academia involvement into the development of the Hi-Tech Strategy 2030. This forward-looking plan aims to unlock new growth through investment, exports, innovation, collaboration and new jobs.




Get involved

We want to hear your ideas on how we can focus our efforts within the hi-tech sector and how we can increase innovation and exports.

Submit your comments to this paper by **5pm Friday, 28 February 2020.**

Discussion points

- How would you define the hi-tech sector in South Australia?
- What are the benefits of growing the hi-tech sector in South Australia?
- What goals or vision would you establish for the hi-tech sector in South Australia?
- Who are the key players in the hi-tech sector?

A man with dark hair, wearing a dark sweater over a collared shirt, is smiling and looking towards the camera. He is positioned in the foreground. In the background, there is a large, industrial robotic arm with blue lighting, suggesting a high-tech or manufacturing environment.

Frontier, emerging and platform technologies that address societal and environmental challenges have the potential to create new growth opportunities for business and the economy. South Australia has many competitive advantages that could be applied to develop new hi-tech products and services for global markets.



Potential hi-tech opportunities

South Australia has many competitive advantages that could be applied to develop new hi-tech products and services for global markets. These include:

- **Global industries** – South Australia has well established export markets in the food and agribusiness, energy and minerals, tourism and international education sectors. Future opportunities for global growth and technological innovation include defence and space, health and medical and the creative sectors.
- **World-class research** – South Australia has the third-highest level of research spending in Australia as a share of the economy. It's also boasts the highest number of machine learning researchers in the nation and leads a number of industry-led initiatives, including:
 1. The University of Adelaide's Australian Institute for Machine Learning is at the forefront of computer vision and machine learning
 2. The University of South Australia's Computational Learning Systems Laboratory conducts research in machine learning including computer vision, sequence learning and recognition, autonomous decision-making and neurobiological learning
 3. Flinders University's Computational Cognitive and Behavioural Science, Artificial Intelligence and Cognitive Science group is conducting research in human-machine interaction.
- **Entrepreneurship** – the Future Industries Exchange for Entrepreneurship (FIXE) strategy is helping entrepreneurs to build their businesses from concept to creation.
- **Collaboration infrastructure** – Lot Fourteen is one of many innovation precincts supporting collaboration between industry, research and government within South Australia.
- **Digital infrastructure** – GigCity is South Australia's high-speed internet network that will connect more than 300 businesses across 27 innovation precincts.
- **Skills and workforce** – The South Australian Government in partnership with the Australian Government has committed \$200 million to fund 20,800 new apprenticeships and traineeships over four years. Many of these jobs will be in technology-based industries such as cybersecurity, defence and manufacturing (industry 4.0).





Discussion points

- What other hi-tech research specialisations currently exist in South Australia that could be expected to grow commercially over time?
- What other 'hot spots' of globally competitive hi-tech capability do we have in South Australia?
- What emerging technologies do you believe will grow globally over the next 10– 15 years?

‘We have an opportunity to put the state firmly on the global map and become leaders in entrepreneurship, particularly in rapidly growing future industries such as space, defence and cyber security.’

Jim Whalley
South Australia's
Chief Entrepreneur

Key challenges

The following challenges may need to be addressed to unlock new growth opportunities in South Australia:

- skills development and talent attraction
- research and commercialisation
- trade and exports
- capacity to scale for global markets
- access to investment capital
- collaboration networks



Discussion points

- What are the barriers in research and development collaboration between researchers and industry, particularly in the development of hi-tech products and services?
- What are the challenges to growing the hi-tech sector in South Australia? And what should be considered as high priority for industry and government?
- What successful examples or lessons learned can you provide of industry, government and research collaboration to support growth in the hi-tech sector?

Have your say

We want to hear from you on how we can focus our efforts in the hi-tech sector.

Visit **www.yoursay.sa.gov.au** and submit your feedback by **5pm Friday, 28 February 2020.**

