Clusters in South Australia

A publication by the Cluster Coordination Office, a part of Our Jobs Plan

www.statedevelopment.sa.gov.au
From 2005 to 2009, clusters in Europe experienced an average of:

- **15.7% job growth**, reducing to 11.2% during the recession
- **46.7% turn over growth**, reducing to 12.8% during the recession

*Source: OECD 2012/13 Cluster Scoreboard*
# Contents

**An introduction to clusters**  
2

**South Australia’s clustering activities**  
4
  - History of clustering activities in South Australia  
  4
  - Clustering and current economic policy  
  4
  - Cluster Coordination Office  
  5
  - Australian Cluster Observatory  
  5

**South Australia’s cluster programs**  
6
  - Defence (aerospace)  
  6
  - Creative industries (music)  
  8
  - Health and medical devices  
  8
  - Mining and resources  
  8
  - Clean technologies (water)  
  9
  - Food and wine  
  10

**Case studies**  
12
  - Australian Aerospace Alliance  
  12
  - Musitec  
  14
  - Water Industry Alliance  
  16
An introduction to clusters

**Definition of clusters**

Clusters are collaborative networks linking small and medium enterprises, large businesses, academia, finance, government and support industries which are located within geographical proximity and form a globally competitive specialisation.

These cross-disciplinary bodies maintain competitiveness based on innovation and specialisation, finding long-term success through the ongoing commercialisation of intellectual capital.

“Clusters are geographical concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions ... in particular fields that compete but also cooperate.”

Professor Michael Porter

---

Actors in a cluster - Professor Göran Lindqvist, Stockholm School of Economics
Clusters and government intervention

Although cluster development must be driven by the private sector, there is a crucial role for government in facilitating the establishment of innovation clusters. This is particularly so during the developmental stage, as businesses in Australia are less likely to form clusters without government intervention.

The potential role of government in improving the success of clusters includes educating industries, collecting and disseminating information, providing funding for initial activities associated with cluster development and building trade and investment opportunities for the cluster.

Clusters versus precincts

Precincts are focused geographically, while clusters have broader regional boundaries. Many of the collaborative aims are the same for clusters and precincts. They also both benefit from the scale and scope necessary to take advantage of trade and investment opportunities, but a cluster can link a precinct to a broader geographical spread of capabilities.

Benefits of clusters

• Higher employment growth (not only employment in the cluster but also within the region in which the cluster resides).
• Increased number of businesses.
• Increased number of patents.
• Increased levels of innovation and entrepreneurship.

Source: Professor Michael Porter in “Clusters and the New Economics of Competition”
South Australia’s clustering activities

History of clustering activities in South Australia

South Australia’s first wave of clustering occurred in the late 1990s in northern Adelaide and the Barossa Valley. These activities centred on food and wine, engineering and defence, and included the Water Industry Alliance, the Defence Teaming Centre and the Upper Spencer Gulf Resource Industry Cluster. It also included industry precincts such as Science Park at Mawson Lakes and a $300 million investment in Techport at Osborne, which provides an advanced infrastructure for the maritime industry. These award-winning and internationally regarded clusters have helped spark new interest in cluster and precinct developments in South Australia.

Through professional advice and training from international cluster experts, including Ifor Ffowcs-Williams, Örjan Sölvell and Göran Lindqvist, as well as the support and intellectual guidance of Professor Göran Roos, South Australia is now seeing a second wave of cluster development. Many of the collaborative organisations formed from the first wave are now drilling further down into specialisations.

Clustering and current economic policy

The South Australian Government has made a commitment to long-term economic change and growth through innovation. One of the core activities to facilitate this change has been cluster development based on the principles of smart specialisation.

In March 2013, the Government released its Economic Statement, which clearly identified South Australia’s strengths and opportunities for growth and jobs. The Economic Statement identified growth opportunities linked to four of the state’s strategic priorities – growing advanced manufacturing, creating a vibrant city, premium food and wine from our clean environment, and realising the benefits of the mining boom for all South Australians.

Further to this, in January 2014 Premier Jay Weatherill released Our Jobs Plan, the State Government’s response to the impending closure of GM Holden’s Elizabeth plant in 2017. This plan includes measures to accelerate advanced manufacturing by supporting new smart specialisation clusters and precincts where future industries can work together to innovate, create jobs and secure export growth. The State Government’s contribution to this initiative was $7.5 million over a four year period (2013-2017).

The Government’s direction was further cemented with the announcement in August 2014 of South Australia’s ten economic priorities, which includes a focus on innovation for future prosperity.

SOUTH AUSTRALIA’S COMMITMENT TO CLUSTERS IS BY FAR THE MOST SIGNIFICANT IN THE ASIA PACIFIC REGION.

Cluster Coordination Office
Through the establishment of a Cluster Coordination Office, the South Australian Government provides support for industry and the research community to establish and grow these clusters and other identified opportunities across the state. The office is responsible for clustering activity across government and develops tools and techniques to support industry clusters, run education and awareness programs and monitor and evaluate cluster initiatives.

Australian Cluster Observatory
In December 2014, the University of Adelaide’s Entrepreneurship, Commercialisation and Innovation Centre (ECIC), with the support of the South Australian Government, partnered with the Stockholm School of Economics to establish the Australian Cluster Observatory in Adelaide.

Based on best-practice research from Europe and North America, the Australian Cluster Observatory is an information hub, informing and educating local business on international best practice, researching and linking measures of local cluster development to international benchmarks, and finding opportunities for global competitiveness.

The Observatory helps demonstrate the economic benefits of clusters and links South Australia to an international network of cluster professionals.

This initiative is a first of its kind in Australia and further strengthens South Australia’s position as a budding centre of excellence in cluster development and research.

“The Australian Cluster Observatory will help fill a gap in our knowledge about what regions are emerging so we can look to exploit specialisations in particular industry sectors.”

Dr Allan O’Connor, Project Leader, Australian Cluster Observatory

Cluster Coordination Office
Contact details:
Gavin Artz, Principal Project Officer Innovation, Department of State Development
Email: gavin.artz@sa.gov.au
Phone: +61 8 8303 2242
www.statedevelopment.sa.gov.au/industry/innovation/clusters

Australian Cluster Observatory
Contact details:
Dr Allan O’Connor, Project Leader, Australian Cluster Observatory
Email: allan.oconnor@adelaide.edu.au
Phone: +61 8 8313 7512
www.clusterobservatory.com.au
The South Australian Government is focused on cluster development to drive greater innovation and collaboration within industry. It is recognising and leveraging existing competitive advantages unique to South Australia, facilitating the establishment of smart specialisation clusters that are managed by industry, for industry. These clusters are aimed at promoting productivity improvement, product and process innovation, and securing new export business, leading to economic and employment growth.

The South Australian Government’s cluster programs are coordinated by the Department of State Development (DSD) and Primary Industries and Regions SA (PIRSA) and focus on existing, globally-competitive specialist areas in:

- defence (aerospace)
- creative industries (music and technology)
- clean technologies (water)
- health and medical devices (medical lasers)
- mining and resources (internet of things)
- food and wine.

Due to the success of the initial clustering activity, $2 million across four years was allocated to establish the Specialist Vehicle Alliance.

**Defence (aerospace)**

**Australian Aerospace Alliance**

- Established mid-2013
- Managed by Defence Teaming Centre Inc
- Coordinated by the Department of State Development

The Aerospace Alliance is a collaborative project between the Defence Teaming Centre, South Australia’s defence industry and the Department of State Development. Work commenced in mid-2013 and continues with significant progress made in establishing an Aerospace Alliance cluster. The approach to date has drawn on best practice for other, similar industrial cluster development activities internationally. It has also involved working with key stakeholders within Australia to foster high levels of commitment from companies to develop a national Advanced Manufacturing Aerospace Alliance. This has been predominantly based on the work of Ifor Ffowcs-Williams, an international specialist in this area.

**Australian Aerospace Alliance members:**

- AEA Aerospace Group
- Airspeed
- APC Technology
- Axiom Precision Manufacturing
- BAE Systems
- Broens
- Cobham
- EAS Toolcraft
- Levett Engineering
- Mincham Aviation
- Ultra Electronics
- TAE
- Cablex
- Universal Composites

*Note that membership fluctuates in line with market conditions.*
Specialist Vehicle Alliance

- Established early 2014
- Managed by Defence Teaming Centre Inc
- Coordinated by the Department of State Development

The purpose of the South Australian Defence Industry Automotive Integration Project (SADIAIP) is to investigate and then facilitate South Australia’s automotive industry transition into the state’s defence industry. The alliance will pursue opportunities for the specialist vehicle industry in the Australian, New Zealand and South East Asian marketplaces in the key sectors of defence, mining and resources, motor sport, and search and rescue.

The project focuses on:
- providing familiarisation and awareness to automotive industry companies of defence and defence industry opportunities and requirements
- developing and operating an alliance of companies focused on specialist vehicles
- pursuing export opportunities in South East Asia for the Specialist Vehicle Alliance and the state’s defence industry.

Specialist Vehicle Alliance members:

- BAE Systems
- BT (Beattie Transport)
- Adlington
- Century
- Broens
- Multi Slide Industries – MSI
- Tenneco
- ROH Automotive
- Precision Component
- Sage Automation
- Trammel Tooling
- Kadego
- SCTEG - South Cross Trailers
- Williams
- CF Rail Services
- Applidyne
- Korvest
- Liebherr
- General Dynamics Land Systems
- Normet
- SMR

Note that membership fluctuates in line with market conditions.

“Cobham’s bid for the $640 million contract to supply, integrate, maintain and operate search and rescue aircraft for the Australian Maritime Authority was strengthened because its membership of the Aerospace Alliance, which supports industry collaboration with other businesses. Securing the contract was a win for Cobham, the Aerospace Alliance and ultimately the state.”

Cobham
Creative industries (music)

Musitec
- Established mid-2014
- Managed by Musitec
- Coordinated by the Department of State Development

In 2013, Martin Elbourne’s ‘Thinker in Residence’ report which focused on live music, attempted to define the local industry and develop recommendations for its development. One key recommendation was the establishment of a music industry cluster. A further government project building on the Elbourne report profiled the South Australian music industry from an economic perspective and established the St. Paul’s precinct for the music industry. This led to the establishment of Musitec to develop and manage a music industry cluster. The company has been established, management personnel appointed, administration processes set up and a three year plan has been approved and commenced.

Musitec leadership group:
- Philip Vafiadis – Vaf Research
- David Grice – Musitec
- David McLauchlan – Buddy Platform Inc & Bill and Melinda Gates Foundation
- Ted Cohen – TAG Strategic

Health and medical devices

MedDev SA Alliance
- Establishment underway
- Coordinated by the Department of State Development

The MedDev Alliance will focus on growing the medical device industry in South Australia. It will be industry focused, have expertise on the Board and have a number of trusted advisors to assist individuals, research organisations and others during all stages of development from product conception to commercialisation.

MedDev Alliance initial leadership group:
- Ellex Medical
- Austofix

Mining and resources

Internet of Things Cluster for mining and energy resources
- Establishment underway
- Coordinated by the Department of State Development
- Managed by the Australian Information Industry Association (AIIA)

Building on the work of the Department of State Development’s ICT Roadmap for Minerals and Energy Resources project, the IoT in Resources Cluster focuses on a specific specialisation to support internationally competitive businesses.
### Clean technologies (water)

**Wastewater for Regional and Decentralised Applications (WaRDA)**

- Established early 2013
- Managed by Water Industry Alliance
- Coordinated by the Department of State Development

WaRDA brings together a cluster of leading companies and experts within government who are leading the way in wastewater for regional and decentralised applications for South Australia and beyond.

As industry leaders in the planning, design, construction, operation, monitoring and maintenance of wastewater treatment plants for small communities, WaRDA is furthering the opportunity to access global markets, work internationally and provide expertise across the globe, positioning South Australia as a globally recognised hub of expertise in the field of regional and decentralised wastewater management systems.

**WaRDA Founding Members**

- Alano Water
- APC Integration
- Environmental Water Services
- Factor UTB
- Gayler Professional Services
- HDS Australia
- Health SA
- Tonkin Consulting
- Wallbridge and Gilbert

### Managed Aquifer Recharge (MARHub)

- Established early 2013
- Managed by Water Industry Alliance
- Coordinated by the Department of State Development

South Australia has long been a leader in research and application in the managed aquifer recharge (MAR) field. This has been reflected in the South Australian Government’s water policy ‘Water for Good’, which states that South Australia will aim to source more than 25 per cent of its water for Adelaide from stormwater schemes, primarily aquifer storage and recovery (ASR) by 2050.

Between the South Australian based universities and the CSIRO, it has been estimated that approximately 30 per cent of the academic papers written on this field originate from South Australian-led research.

South Australian companies have built expertise and global recognition in this field and have successfully implemented MAR with a range of aquifers, water sources and other constraints (e.g. space). MAR is currently being used in a range of scales for urban and rural irrigation and industrial purposes in South Australia.

**MARHub founding members**

- Australian Groundwater Technologies
- Australian Water Environments
- CSIRO
- DesignFlow
- FMG Engineering
- The Goyder Institute
- Hydroplan
- National Centre for Groundwater Research and Training
- SA Water
- SKM
- URS
- Wallbridge and Gilbert
- Water Data Services
Food and wine

Premium Food and Wine Co-Innovation Cluster Program

- Established 2013
- Coordinated by Primary Industries and Regions SA

In the 2013-14 State Budget, funding was announced for an ongoing cluster program beginning with a five-year $2.7 million pilot program in the Murraylands, Riverland and Limestone Coast regions (Rural SA).

This is made up of two streams:
- Longer-term strategic program with the overall aim of supporting the development of formal clusters in the nominated regions.
- Short-term operational collaborative projects as a stepping stone to developing the longer-term formal clusters.

The initial seven projects selected are detailed below.

Coonawarra Grape and Wine Incorporated
Funding will aim to accelerate the activities of the already existing Coonawarra Grape and Wine Incorporated industry cluster, incorporating the Coonawarra Vignerons Association and the Coonawarra Grape Growers Association. This aims to promote the wine, region and brand, and to encourage collaboration, improve profitability of wine and wine grape production, and create a sustainable Coonawarra wine industry through environmentally friendly initiatives and sustainable business practices. The project aims to ultimately build capacity for wine companies to more effectively compete in the Chinese market, leveraging the benefits of being part of a larger group.

Naracoorte Lucindale Council
Funding aims to develop collaboration across the red meat value chain to create a deeper understanding of the industry, its barriers and inefficiencies. It will also help to understand the economic impact of potential collaborations and establish a collaborative culture to drive innovation and build capacity for increased, sustainable profitability across the red meat value chain.
Regional Development Australia Limestone Coast Inc
Funding aims to progress the formation of an industry cluster to determine opportunities and establish a model to retain the cold storage facilities on the Limestone Coast and secure the economic viability of the region’s potato industry, following the closure of the McCain Foods Pty Ltd’s Safries factory in December 2013. This project will also develop strategies to meet a number of requirements of a cold storage and transport logistics initiative.

Dairy SA
Funding aims to enhance collaboration between the processing and pre-farm-gate sectors by developing a plan that will enhance profitability, drive production and increase confidence in the state’s dairy sector. This project reflects the industry’s ‘grass to glass’ value chain and will collaborate across the two pilot regions of the Limestone Coast and the Murraylands and Riverland.

Regional Development Australia Murraylands and Riverland Inc
Funding aims to advance the Murraylands Food Group, which includes major food production and processing companies from across the region, to work with relevant government organisations to achieve goals that cannot be achieved as individuals. The group’s focus is on mapping capability and forming identity, and will explore brand and market development, capability development and production sustainability.

Regional Development Australia Murraylands and Riverland Inc
Funding aims to build and explore a portfolio of activities to link and leverage many of the underlying activities and opportunities currently available in the Riverland. The project aims to coordinate local businesses in sharing ideas, co-defining solutions and testing delivery.

Southern Mallee District Council
Funding aims to support the Southern Mallee Cluster in its efforts to drive better value at the farm gate through more efficient and effective farm practices. The cluster group aims to build long-term sustainable agricultural and horticultural structures and will work with experts around issues such as land management, soil management, farming technologies, farm practices, crop management and crop and seed technologies.
CLUSTERS IN SOUTH AUSTRALIA

Case study: Australian Aerospace Alliance

**Background**

The Australian Aerospace Alliance is a collaborative project that began in mid-2013 between the Defence Teaming Centre, South Australia’s defence industry and the Department of State Development (DSD). Since that time significant progress has been made in the Alliance’s development to reach a point where it is now being expanded nationally to establish an Australian Aerospace Alliance cluster that is able to compete and secure work on the global stage. The Alliance’s formal launch took place in South Australia on 17 February 2015 and internationally on 25 February 2015 at the Avalon Air Show.

The Australian Aerospace Alliance has five capability areas:

- Avionics systems and electronic products
- Software solutions
- Autonomous systems
- Advanced manufacturing
- Aircraft sustainment

The approach to date has entailed drawing on best practice from similar international industrial cluster development activities and working with key stakeholders within Australia to foster high levels of commitment from companies to develop a national Australian Aerospace Alliance.

In reaching its current stage of development, the Australian Aerospace Alliance has made significant steps in bringing members together around a clear set of principles that are focused on delivering value to its customers.

The Australian Aerospace Alliance is on a journey towards becoming self-directing, self-governing and self-sustaining. The recently established management structure and governance of the Alliance represents a major step towards achieving these aims. The Alliance is now moving to identify other national companies that can add to or enhance its offering to customers in each of its five capability areas.

**Vision**

The Australian Aerospace Alliance will secure growth from within the global defence and commercial aerospace sectors through the collective strength, capabilities and innovations of its members.

**Mission**

To leverage superior collaborative working practices in the effective delivery of highly competitive, innovative and value-adding solutions that exceed the expectations of commercial and defence customers globally.

**Value proposition**

Through an integrated ‘one team, one system’ approach, the Australian Aerospace Alliance can be depended on to deliver quality, innovative, value-adding solutions on time and at a highly competitive price.
The Australian Aerospace Alliance will secure growth from within the global defence and commercial aerospace sectors through the collective strength, capabilities and innovations of its members.

*Australian Aerospace Alliance - Vision*
Background

The music industry in South Australia has historically been disconnected, where collaborations are non-existent and practitioners are intensely competitive.

There have been a number of significant barriers to building the music industry in South Australia, stemming from the introduction of poker machines into what were traditional live music venues. This saw many live music venues and performance spaces close down in the face of the lucrative poker machines. In addition to this, liquor licence laws brought another layer of regulatory issues that restrict types and styles of instruments allowed to be played within a licenced music venue.

Technology has had immense impact on the music industry globally, challenging traditional business models. Historically, the way an artist monetised their art was by creating a CD for sale and selling it through multiple channels. This has now turned to the artist recording a product as cheaply as possible only to give it away on streaming websites. Their recorded product is now seen as part of a marketing budget to drive ticket sales to performances, rather than as an income stream. In addition, the income from streaming sites is floored, where artists are, for the most part, unable to derive even the minimum wage from streaming royalties.

Music as an industry is significantly different to traditional industries, such as manufacturing and mining, largely due to very few highly valued contracts or a physical product that is produced or sold. Traditional income streams have dried up and music businesses have been forced to look at other ways to succeed. This is not only the case for the music industry in Australia - it is a global issue.

The process of identifying and developing a music industry smart specialisation cluster

In 2012, the State Government introduced a ‘Thinker in Residence’ program focused on the South Australian music sector. The report, handed down in November 2013, listed 49 recommendations designed to build and develop music and music business in South Australia. The result of these recommendations has led to a number of significant initiatives that have now been introduced into the local music sector. One of these is the formation of Musitec to manage the music industry cluster.

Establishment of Musitec

On 28 July 2014, Musitec began its operations as the first music-focused industry cluster in the world.

From the outset, the Musitec charter has been to search globally for industry opportunities that local capabilities could fulfil through collaborations. As the music industry becomes more involved within the tech space, a merger between music and tech is an obvious approach for Musitec.
In order to lead the South Australian industry and ensure it is at the forefront of international trends, Musitec made a deliberate decision to focus globally. As a result, it has built a broad base of global leaders not only within the music landscape but also within high level technology and developer industries.

Within the first six weeks of operation, Musitec delivered a series of industry development workshops and networking events within a broader context called Sounds X SA.

In a deliberate attempt to build knowledge about existing music businesses in SA and to facilitate connections in the industry, a series of ‘speed dating’ events were held. Through these events, it became clear that the music sector needed to come together, and Musitec has since begun to see significant results by developing a sense of community among practitioners. The beginnings of significant collaborations are now forming.

Looking globally, Musitec representatives attended the International TCI conference, connected with the international music industry at large, and have attended a global think tank for the music industry, which involved 20 world leaders coming together to build global collaborations and create new business models to affect international change.

The next phase

The next phase will see Musitec continue to build its community, implement a program to bring the tech community together with music businesses, and develop new companies and ideas to drive economic value for the state. In addition, Musitec will continue to grow its global presence by attending South By South West in the United States, and presenting at the worldwide Music Cities Conference in the United Kingdom.
Background

The South Australian Government has strategically invested in the state’s water industry for more than 15 years to establish and build an internationally competitive, export-orientated water industry made up of a cluster of small to medium businesses.

The cluster would further develop the skills and knowledge emerging from South Australia’s specific conditions (water stress, innovative companies and universities, stable government), resulting in globally competitive expertise in some areas of the water industry. In each of these areas there are numerous companies (natural clusters) that make up the entire supply chain for some technologies and services. It is expected that these services will be increasingly required around the world as developing countries grow and the effects of climate change become more apparent.

The second wave of cluster development in the water industry

In 2012, with the input of the South Australian Government and a clustering expert, WIA worked to drill further down into cluster specialisations. This resulted in two specialisation clusters being progressed: a wastewater group (WaRDA) and a managed aquifer recharge group (MARHub).

Since established, these specialisation clusters have received a government grant and were part of the state’s export programs to India and China, which included representation in a South Australian delegation to Shandong, providing a number of new market opportunities. The clusters have developed a brand identity and website as well as marketing collateral, and both the WaRDA and MARHub clusters were launched in mid-2014.

The WIA has now appointed a cluster facilitator to drive both clusters forward in operation, cooperation, marketing, support services, business opportunities and state, national and international activities.

The water industry clusters have also been working together with the University of Adelaide in the Australian Cluster Observatory. Together, they have implemented a number of activities, resulting in more enquiries to join the clusters from regulatory authorities, specialist companies, learning institutions and academics.

Why managed aquifer recharge?

South Australia has long been a leader in research and application in the managed aquifer recharge (MAR) field. This has been reflected in the South Australian Government’s water policy ‘Water for Good’, which states that South Australia will aim to source more than 25 per cent of its water for Adelaide from stormwater schemes, primarily aquifer storage and recovery (ASR), by 2050.

Aquifer storage and recovery, a form of MAR, creates an alternative water resource by capturing, treating (often biologically) and storing water in controlled aquifers. This water can then be pumped back out from the aquifer when required. The water that is used can be from a range of sources, but two common sources are treated wastewater or stormwater, where the pattern of supply of the water does not fit the pattern of demand, making storage necessary.
Beyond the water resource benefits of MAR, other benefits are:

- improved environmental health through reduction and management of pollutants
- low cost treatment both in the aquifer and biological methods
- flood risk reduction
- storage with lower space requirements compared to dams
- lower evaporation losses
- potential for transfer using the aquifer.

Between the South Australian-based universities and the CSIRO it has been estimated that approximately 30 per cent of the academic papers written on this field originate from South Australian-led research.

South Australian companies have built expertise and global recognition in this field and have successfully implemented MAR with a range of aquifers, water sources and other constraints (e.g. space). MAR is currently being used in a range of scales for urban and rural irrigation and also industrial purposes in South Australia.

**Why regional and decentralised wastewater?**

WaRDA brings together a cluster of companies and experts within government who are leading the way in wastewater for regional and decentralised applications for South Australia and beyond.

As industry leaders in the planning, design, construction, monitoring and maintenance of wastewater treatment plants for small communities, WaRDA helps companies work together and opens doors for its members to access global markets and provide expertise worldwide. In addition to this, the coordinated activities of the cluster are positioning South Australia as a globally recognised hub of expertise in the field of community wastewater management systems.

WaRDA companies specialise in designing and implementing innovative solutions, as there are often significant local constraints in regional areas. These innovative designs provide a wide range of benefits, from improved health conditions to environmental benefits and safe recreational facilities.

These wastewater treatment plants, typically sized for up to three megalitres per day, are designed to produce water for a range of re-use purposes while being cost effective on whole of life costs and highly reliable.

Remote and decentralised wastewater treatment has been implemented in South Australia where small communities have historically been using less sophisticated wastewater capture and treatment methods (e.g. septic systems) which, when they fail, have been shown to contribute to environmental pollution and health risks.

The benefits of small scale wastewater treatment plants is that they reduce the need for transport of wastewater by treating it locally, they can be implemented in a small footprint, and the output water can be optimised to meet required standards for a potential re-use purposes (e.g. irrigation or industry). With modern supervisory control and data acquisition (SCADA) and telemetry, the wastewater treatment plants are monitored centrally, with specialised staff only attending when specifically needed.

These plants treat water that could otherwise contaminate groundwater or surface water sources or potentially impact environmentally reliant businesses (e.g. irrigation and aquaculture).
Contact

For further information, please contact:

**Gavin Artz**  
Principal Project Officer, Innovation  
Department of State Development  
131-139 Grenfell Street  
Adelaide, South Australia  
T: +61 8 8303 2242  
E: gavin.artz@sa.gov.au

Web address:  
www.statedevelopment.sa.gov.au/industry/innovation/clusters