

Environment Protection Authority

# EPA Board Innovation Summit 2017 summary report

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**Standing on the Edge of Revolution**

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# 1 Introduction

This report summarises the proceedings of the Environment Protection Authority (EPA) Board's Innovation Summit, *Standing on the Edge of Revolution*.

34 representatives from industry and from across government accepted the invitation to attend the Summit held on Tuesday, 13 June 2017 at the SA Health and Medical Research Centre Auditorium.

The EPA hosts an Industry Summit each year. The purpose of these forums is for business and the EPA to discuss topics of shared interest relating to environmental performance and to collectively determine pathways for achieving performance improvements for both South Australian businesses and for the EPA.

EPA Board Presiding Member Linda Bowes facilitated the Summit welcoming delegates and advising that the theme had been chosen in response to rapid global advances in technological and digital innovation. She highlighted the opportunities these provide to build a more diversified, knowledge-based economy that supported both productivity and environmental improvements.

The questions asked at the forum related to how South Australia could respond to these opportunities – 'How can improvements in technology assist businesses to attain lower carbon, cleaner production systems, and to participate in a more circular economy?' and 'What is the EPA's role?'

During the Summit, three interconnecting themes arose:

- How business could assist the State adopt a circular economy, by moving towards more low carbon, cleaner and efficient production systems, and how the EPA could support this transformation.
- The benefit of forming stronger linkages and partnerships between industry, the research sector and government to find innovative solutions for complex problems.
- Improving environmental performance can go hand in hand with improving business performance.

## 2 Presentations

### Opening Speech – Minister Ian Hunter

The Hon Ian Hunter MLC, Minister for Sustainability, Environment and Conservation provided the opening address. Minister Hunter recognised that our economy is moving away from polluting activities towards cleaner production processes and encouraged delegates to look beyond the inherently wasteful and traditional linear economic system of 'take, make, use and dispose'.

He noted that South Australia's recycling rate is a success story. South Australia diverts from landfill more than 80% of the waste generated, and the waste and resource recovery industry contributes more than \$500 million to Gross State Product. However, Minister Hunter noted that whilst this puts South Australia in a good position, our economy is not as circular as it could be.

A 'circular economy' is a sustainable economic system, which relies primarily on renewable energy sources and aims to keep material resources in use, or 'circulating', for as long as possible. Products that are reused or re-manufactured retain much more of the value created during manufacturing than if these are only recycled. By adopting the principles of a 'circular economy' we can guide economic and environmental policy and practices into the future and support more innovative and sustainable practices.

Minister Hunter encouraged delegates to have an open conversation about how their business could contribute in a powerful way to support the wellbeing and prosperity of our state through innovation. In particular, what businesses could do to move to a cleaner, low carbon and more efficient production process and how the EPA work could with businesses to this end.

### Keynote Address – Professor Tanya Monro

The keynote address was provided by Professor Tanya Monro, Deputy Vice Chancellor, Research and Innovation, University of South Australia. Professor Monro is an ARC Georgina Sweet Laureate Fellow at the University of South Australia and specialises in research in the field of photonics, with a focus on sensing, lasers and new classes of optical fibres. Professor Monro has won the Eureka Prize for Excellence in Interdisciplinary Scientific Research, South Australia's 'Australian of the Year', Scopus Young Researcher of the Year, South Australian Scientist of the Year, and the Prime Minister's Malcolm McIntosh Prize for Physical Scientist of the Year.

In her address, Professor Monro demonstrated that Australia depends on science and research to increase its productivity; achieve sustainable economic growth; create jobs; and improve national well-being. She spoke about the new 'industry led' approach to research, focussing on end use, maximising the impact of research by vesting intellectual property in partners, and seeing innovation outcomes through to market.

Professor Monro noted that one of Australia's primary research priorities is to build capacity to respond to environmental change and integrate research outcomes from biological, physical, social and economic disciplines. She noted that there are a number of practical challenges in achieving this including improved accuracy and precision in predicting and measuring the impact of environmental changes caused by climate and local factors; resilient urban, rural and regional infrastructure; and options for responding and adapting to the impacts of environmental change on biological systems, urban and rural communities and industry.

Australia fares poorly in OECD rankings on innovation however, we have significant potential to improve this by creating stronger linkages between academic research and industry, with the aim of ensuring research can be practically applied and provide value to the Australian economy.

Professor Monro highlighted a number of significant changes taking place within Australian universities to facilitate partnerships with industry and a shift to applied and interdisciplinary research. This includes university funding being linked to the economic value of research, mandatory industry partnerships for PhD research, developing course curricula

with industry to ensure they are demand driven, impact assessments of research to comprehensively understand impacts and 'mobility funds' to enable industry representatives to work in universities and vice versa.

These also come with significant changes in the innovation landscape, for example the National Innovation Science Agenda, the higher education reform package currently before the Senate, growth of new venture funding opportunities and continued focus on industry growth centres.

In closing Professor Monro highlighted the need to continue developing the state's capacity to support industry and business to become more innovative.

### ***On the Couch Panel Session***

Following the keynote address, an 'on the couch' panel session was convened and hosted by EPA Board Deputy Presiding Member Allan Holmes. Panel members were Scott Whicker, Millicent Mill Manager, Kimberly-Clark Australia, David McKay, Chief Operating Officer, Thomas Foods International and Tony Circelli, Chief Executive, EPA.

Mr Whicker and Mr McKay shared examples of innovation within their industry sectors demonstrating the necessity and importance of staying ahead of challenges to ensure business viability. Building their brand through innovation and transforming challenges into opportunities were key themes outlined by both industry panellists. Both noted the strong connection between driving more environmentally sustainable outcomes with a change in broader organisational culture that supports innovation across the organisation. Environmental challenges can provide a trigger to drive broader cultural changes that support innovation and positive business outcomes. Mr Holmes and Mr Circelli provided additional commentary around the EPA's contribution through regulation to improve environmental performance as well as the role in facilitating partnerships.

A workshop session was then held to discuss delegates' views on economic changes and industry innovation along with the shift to low carbon, cleaner and more efficient production processes.

## 3 Workshop

A workshop session was held to discuss the following statement:

South Australia is standing on the edge of its most profound economic change in more than half a century. A revolution is occurring, driven by globalisation, the speed and impact of technological change, the internet and access to knowledge along with the shift to low carbon, cleaner and more efficient production processes.

- What will this change mean for you and the industries of today?
- How can regulators and innovators work together to drive change?
- What will be the role of the EPA in a cleaner economy?
- Where are the opportunities?

Below is a summary of the key points raised during the workshop discussion:

### 3.1 What will this change mean for you and the industries of today?

Delegates noted that consumer expectation was missing from the statement and that these expectations change regularly. Wealth redistribution also means that every business needs do more with less and create leaner production processes.

The discussion focused on reducing costs through innovation, and particularly through energy efficiency. Preconceived notions and attitudes can stifle innovation, however the growth of partnerships to capitalise on data and information enables better decision-making processes and more sustainable industries.

The future will bring greater opportunities to benefit from technology for example, waste to energy. The challenge is to become more efficient in a cost-sensitive environment. A continuing move towards automation means removing older equipment and processes that are energy intensive but the trade-off is that human capability in the traditional businesses is reduced. This change is affecting progressively smaller companies as technology becomes more accessible.

Investment in innovation is risky, but increased collaboration within industry sectors can reduce this risk. Industry also need investment certainty from business partners to make innovation viable.

The importance of nimble policy was highlighted to enable industry innovation. Along with the ability to access to knowledge, resources and technologies to stay 'ahead of game'. This is especially important to the SME sector.

Delegates suggested that the EPA could consider focussing their industry communications on the business benefits of environmental management. Delegates also agreed that data held by the EPA could be made more transparent and accessible to industry and the community.

### 3.2 How can regulators and innovators work together to drive change?

Delegates raised the concept of a joined up government (different portfolios working together with specific industry sectors) suggesting that it would be beneficial if this was further developed. Delegates also recognised the need for increase in the association between the regulator and industry including the development of trust, respect, openness and willingness to find solutions together.

This could be achieved through more regular workshops and collaboration between industry and the regulator to better understand the various perspectives. Funding models should also be developed that are outcome based, for example energy grants for industry, not just the energy industry. Make funding flexible and adaptable so as innovators who do not fit into the standard operating models or funding models are not disadvantaged.



It was noted that it is important to recognise that innovation comes with uncertainty and accept the information and work of credible businesses on face value rather than insist on consultants to verify. Delegates noted that the practical implementation of innovation can be difficult. For example, businesses may have the ability to develop and create recycled products, but there must be a market for these goods. Industry often also need assistance moving into digital record keeping and sharing technologies.

Both regulatory certainty to support innovation (a more certain operating platform) and the opportunity to work together were seen as challenges. Equally, rewarding or recognising businesses which do it well is also necessary. Delegates sought recognition from regulators that it is difficult for policy and regulation to keep up with the speed of innovation and best practice models and that all policy and regulation should be outcome focused so innovation can be harnessed.

It was noted that economic benefits could be linked and associated with environmental benefits and that there could be a greater focus in regulatory narrative on economic benefits.

The role of the regulator also being a facilitator was further recognised using the analogy of police operations (regulator) and also their role in directing traffic (facilitator) when and where required.

Delegates noted that most businesses would not be aware of how to engage a PhD student, or know how to best utilise their skills and that the regulator could take a greater leadership role in facilitating these relationships and partnerships.

The need for greater consideration of cross-state border regulations was highlighted. For example, the regulations for private boating vessels are different in Victoria and New South Wales to South Australia.

Further the issue of government consultation was raised noting that it is regularly targeted and undertaken on a single issue. This needs to be broadened to a discussion across agencies with early involvement of stakeholders.

### **3.3 What will be the role of the EPA in a cleaner economy?**

Delegates agreed that the regulator should maintain a strong role in compliance and enforcement but also stay abreast of industry direction so they can facilitate the circular economy principle and map a journey for transition with industry. This includes the facilitation of sustainable development to protect the environment, rather than current perception that we protect the environment as a first priority. There was recognition that sustainable development and circular economy principles are good for the environment, good for the economy and generate jobs.

Delegates noted the benefit of early engagement between the regulator and industry, specifically on innovation and encouraging development, noting that trials could be done in partnership or with agreement of regulator (rather than see the regulator as a blocker) to demonstrate environmental safety. The concept of risk-based regulation was discussed noting that the regulator would focus on aspects needed to manage risks rather than be risk intolerant, unnecessarily prescriptive or risk adverse. This links to the need for consistency across regulation imposed by the various departments and flexible outcome based regulation. Earlier collaboration with other government agencies was recommended to avoid mixed messages and conflicting advice. The EPA could facilitate this where required across Government.

Social licence to operate was discussed noting the importance of using best practice science and setting boundaries for 'responsible' levels of pollution. The EPA working with industry as a facilitator, sharing solutions and assisting in the development of a resolution through problem solving frameworks was suggested. Delegates encouraged the EPA to be proactive and flexible in responding to current needs and bringing together the right people, particularly for complex problems that cross various agency boundaries.

The EPA could have a greater role in linking industry to research or subject matter experts and providing an enhanced advisory assistance role. This could also include linking industry to funding for further research and testing.

## 4 Workshop Summary

The following summarises the main points made during the workshop:

- Reduction of business costs can be made through innovation, for example via energy efficiency gains. Development of partnerships across the business/research/regulator interface to capitalise on available data and information can enable efficient and effective decision making for all sectors working towards cleaner production, and more sustainable industries. Jointly mapping a pathway towards a more circular economy will create a competitive advantage and certainty for business investments in SA.
- Business needs to become more efficient in an increasing cost-sensitive environment. But SMEs cannot necessarily afford to make the capital improvements to become more efficient. They also may not have access to up-to-date information and technology. As technology is becoming more accessible both in terms of market availability and lower market prices, progressively smaller companies may be in a position to make the capital investments required.
- Investment in innovation is risky, but collaboration between the business/research/regulator sectors reduces the risk as up-to-date data/information/technology and regulatory interests will be incorporated at the foundation of changed practices. Regulator agreed trials of new processes and technologies also enable innovation.
- Policy needs to be nimble enough (eg make policy more outcome focussed rather than prescriptive), to enable business innovation. Regulators could work with business and research sectors to communicate up-to-date knowledge and technologies to enable business to stay 'ahead of the game'. This is particularly important for SMEs which do not otherwise have an obvious and simple pathway to access to knowledge and beneficial technological changes.
- The efficiency advantage for business of government working together in an integrated way (both portfolios within a government, and across state/territory borders) on policy and regulation, rather than being single issue based was noted.
- The link between social licence to operate and using best available scientific information and technology was noted.

## 5 Opportunities and Next Steps

Chief Executive Tony Circelli thanked attendees for sharing their thoughts and summarised the main concepts arising from the event. Three main concepts emerged from the summit presentations and workshop discussions:

- 1 The circular economy and moving towards a low carbon future; cleaner and efficient production systems; and how the EPA could support this transformation.
- 2 Forming stronger linkages and partnerships between industry, the research sector and government to find innovative solutions for complex problems.
- 3 Improving environmental performance hand in hand with improving business performance.

In response to the feedback received at the Forum, over the next 12 months the EPA will consider:

- Its role in facilitating three-way partnerships with research providers and industry to address significant environment protection challenges.
- Exploring its capacity and capability to increase its facilitation and education role to progress innovation and best practice changes.
- Further improving the EPA's transparency and accountability through continuing to make information and data held by the organisation available online in a form that is useful to both industry and the community.

Further to the above overarching considerations, the following points identify specific opportunities identified through the summit. These are not stand alone points, but rather need to be undertaken in an integrated and coordinated way.

Both business and the EPA:

- Work with the research sector to steer research to be undertaken in areas that will 'make a difference' for industry and regulators to achieve cleaner production systems and a circular economy.
- Jointly mapping a pathway towards a more circular economy would create a competitive advantage and certainty for business investments in SA. Use industry associations as the primary vehicle to engage with the research sector, noting that research organisations provide a safe collaboration pathway because they are independent and neutral.
- Remember cross industry innovation. A solution in one industry may benefit another industry – share technology resources, managing technology, staying relevant and keeping abreast of technological advances.
- Proactively promote good news stories to garner media interest, utilise competitive market advantage and set good examples for other businesses. Balance the need to have a competitive edge with collaboration between industry, government and other entities.

Business:

- Use the principles of a circular economy framework to attain a pay off in material efficiency, reduced energy needs and job generation.
- Demonstrate the use of longer lasting products ie markets for reused and recycled materials. Seek government assistance in creating markets for products which support a cleaner economy and support in connecting compatible industries and businesses.

The EPA:

- Ensure policy development is forward thinking and based on both current and projected future technological applications. Also that implementation of policy by industry is facilitated by information dissemination and enabling access to relevant data trends.
- Data held by the EPA to be made more accessible.

- Host regular workshops with industry groups on areas where the business/research/regulator interface could bear fruit.
- Continue to consult early on proposed regulatory changes with industries and businesses who will be affected.
- Increase its efforts in communications on the business benefits of environmental improvements and current funding programs across government, eg Building Upgrade Finance.

The EPA will consider the summit report and discuss joint opportunities with industry bodies.