REGIONAL UNIVERSITIES NETWORK (RUN)

SUBMISSION ON INNOVATION AND SCIENCE AUSTRALIA – 2030 STRATEGIC PLAN

Introductory comments

The 2030 Innovation and Science Strategic plan must articulate a vision which embeds innovation and science in Australia's future in a way that is inclusive and encourages prosperity and economic development across the nation. Science and innovation should be viewed as positive forces for jobs and growth, not the source of disruption and job loss.

Policy and funding frameworks, including with respect to science and innovation, which do not take account of the different circumstances of different localities, do not fully deliver to all. For national cohesion and prosperity, we cannot afford the regions to be left behind.

Embedding science and innovation within a broader framework for place-based, economic development should be part of the 2030 Science and Innovation Strategic Plan. Such a framework is provided by City Deals, which have been extensively rolled out in the UK and are starting to be implemented in Australia. Smart Specialisations (part of the European Commission's approach to promoting growth across Europe), and the Growth Deals in the UK, which focus on smaller towns and regions, are similar policies. Australia has much to learn from these initiatives.

Regional Australia plays a vital role in national prosperity and productivity. It is the leading source of Australia's largest export industries: agriculture, mining and tourism. The Regional Australia Institute (RAI) estimates that regional Australia accounts for around 67% of national earnings[1]. As a very substantial component of the Australian economy, it is clearly in the national interest to maximise regional Australia's contribution to innovation.

[1] Regional Australia Institute analysis based on ABS data for 2011

As anchor institutions in their local economies, regional universities have a fundamental role to play in in innovation, productivity and national development. The Regional Universities Network (RUN) universities drive regional economic, social, cultural and environmental development, and help to unlock human potential of their regions, and thus the nation.

Challenge 1: Moving more firms, in more sectors, closer to the innovation frontier

What is your reaction to this challenge? What's missing, such as other opportunities? Can you nominate your three highest-priority responses to address this challenge?

Many parts of regional Australia do not have a diverse, economic base to build on, and few innovative firms. Encouraging companies to become more innovative must be a key part of the regional development agenda. Place-based and holistic initiatives, such as city deals or regional growth deals, can help communities to become more innovative and shape their economic development. Such initiatives should be developed from the base up involving all levels of government, business, universities, VET sector providers, NGOs, community groups and other stakeholders. As anchor institutions for their regions, universities can provide a lead role in such initiatives.

A baseline audit of science and innovation on a regional basis could be informative in helping to develop local strategies. The audit could include a focus on existing social and economic capital, and specific assets, expertise and infrastructure.

How should we strike the balance between supporting existing innovative leaders and allowing the emergence of the next generation?

The 2030 Strategic Plan should be flexible and responsive, and supportive of both existing and emerging innovative leaders. Continued support for a sustainable, high quality higher education sector will be important in order to nurture our existing and future leaders.

This is particularly crucial in the regional context. Regional economies are dominated by SMEs and Government bodies which may not have high levels of innovation. Regional universities play a crucial role in helping to "grow" their community's leaders, some of whom will establish innovative enterprises and new ways of thinking. Graduates of regional universities largely stay in the regions to work, whereas regional students who move to the capital cities to study often remain there.

How do we ensure our current (and future) workforce has the necessary skills to support firms in their ambition and realise Australia's vision to be a "top tier" innovation nation?

There are challenges for the regions in building an innovative nation in that parts of regional Australia have few innovative companies. "Growing your own" needs to be a key strategy.

Regional universities can take the following steps to assist developing skills for innovation in their regions:

- Embedding the teaching of 'entrepreneurialism" in undergraduate courses as a key employability skill;

- Developing entrepreneurialism in research students;
- Encouraging "working integrated learning" placements for students in start-up or other innovative companies (as far as possible, given the relative scarcity of this sort of company in some parts of regional Australia);
- Offering prizes to students for innovative ideas for start-ups e.g. a year's free accommodation in a regional incubator/accelerator;
- Appointing 'entrepreneurs -in -residence" with extensive industry experience;
- Offering short-courses in entrepreneurialism to company employees;
- Collaborating across networks in relevant initiatives;

What role could "clusters" of innovative activity play in fostering high-growth firms?

Clusters of innovative activity can play an important role in fostering high-growth firms, including SMEs. Universities have an anchor role for such initiatives, as they are the natural centre for innovation in their regions. A number of regional universities have innovation parks which can act as the nucleus to draw other key players in.

There must be extensive interaction between university researchers, business, and graduate entrepreneurs within the 'cluster' to gain maximum benefit and build an innovation ecosystem, as distinct from a "tech, innovation or science park". The development of such precincts may be incorporated in a vision for broader regional economic development.

Packaging innovation within a broader, more holistic policy or framework makes it appear less disruptive or threatening – it puts it in a context of new job creation and industries, with universities and VET institutions offering new courses to provide graduates to work in the new industries.

Challenge 2: Moving, and keeping, Government closer to the innovation frontier

What is your reaction to this challenge? What's missing such as other opportunities? Can you nominate your three highest-priority responses to address this challenge?

Governments have a role in facilitating innovation, regional development, and the growth of professional and highly skilled jobs in the regions. This can be achieved by mechanisms such as program or infrastructure funding, or through the relocation of government agencies or bodies to regions. Where the investment is focussed in an area with a regional university, the prospect for long term benefit is magnified.

While essentially all Government initiatives involve upfront expenditure and cost to the taxpayer, the investment pays off in the long term. In many cases, government initiatives leverage other funding, including from state and local government and the private sector. Locating a Government institute or agency at or near a regional university may act as a nucleus for the future growth, and the development of an innovation precinct. Other players may be attracted, including from the private sector.

Some government programs require that matching funds are sourced solely from the private sector. However, in regional Australia, many businesses/organisations are partly

government funded (community health and Indigenous organisations being two good examples). Restrictions on the sources of matching funding prevent key regional stakeholders from being able to participate.

Where is innovation required to reduce the burden of partnering with government?

Many SMEs do not have the resources or skill sets to manage the burden of the application/submission process and tight timelines that are often associated with Government programs.

How could government seek to leverage greater social benefit and public value from major program expenditure?

Greater social benefit and public value could be leveraged from major program expenditure by following a holistic, place-based approach to development e.g. city deals and growth deals.

The framework is a "deal" not a grant. Government funding is long-term, provided, for example, over a 10-20 year timeframe. Support is incremental and dependant on attracting matching investment from industry and for attaining certain outcomes or milestones. It may include funding for infrastructure, including in the innovation space, and for universities and the VET sector to develop new initiatives and courses.

Universities are knowledge institutions with strong international connections. These qualities can be used to inspire a vision for renewing the community or region in a way that that builds on existing strengths, opportunities or need. Innovation precincts can play a key role in the development of cutting edge industries and the take up of new technology.

Challenge 3: Delivering high-quality and relevant education and skills development for Australians throughout their lives

What is your reaction to this challenge? What's missing? Can you nominate your three highest-priority responses to address this challenge?

Priorities for education and skills development include:

- Developing courses aligned with priorities for regional development, tailored to place-based needs.

- Embedding micro-credentialling in university courses so that workers can upskill as required and receive a qualification.

- Assisting employers to undertake more upskilling/education on their premises. In Scotland, apprentice schemes at graduate level, undertaken in the work place and delivered by universities, are being rolled out.

How do we create a cohesive education and training system that is integrated into to the innovation and research system?

Examples of approaches that would create a cohesive education and training system that is integrated into the innovation and research system include:

- Teaching entrepreneurialism to undergraduates on a more widespread basis. Graduates of these programs could help drive the development of innovative companies, or bring their learnings to research degrees.

- Embedding education, entrepreneurialism, innovation and research in a broader framework such as a city or growth deal integrates the various components in a broader vision.

Challenge 4: Maximising the engagement of our world class research system with end users

How can we increase people and idea exchanges between industry and research? How can we increase the multi-disciplinary engagement and exchanges across industries?

Do we have the right incentives to encourage research translation?

Research engagement/translation/extension is a critical part of successful research; but is not always funded as such (or at all). Despite a lack of targeted funding to support the initial establishment of relationships with industry, regional universities have a strong history of working with Industry partners through contract research, via partnerships with local government organisations, and as participants in Cooperative Research Centres and funding schemes which target Industry involvement e.g. ARC Linkage.

Regional universities have strategically leveraged the relevance of our research to local and national industry partners in an attempt to grow our overall research profile and build a sustainable research program. Our staff have been encouraged to develop of new knowledge through balancing both fundamental and industry funded applied research.

The flexible approaches adopted by regional universities have allowed the co-location of industry employees in our campuses which has facilitated the co-supervision of Higher Degree Candidates, and foster enduring research partnerships. An example of this is the co-location of NSW Department of Primary Industries fisheries researchers at the Southern Cross University's National Marine Science Centre at Coffs Harbour.

The embedding of industry within a university does enhance the ability of our research training system to understand the end-user needs in identifying and developing programs to solve real world problems. However, this could be greatly enhanced by the development of incentives such as specific scholarship programs for industry employees to undertake higher degree research programs, and perhaps the addition of a new category of weighting in the block grant calculation for completions from candidates who are industry employees.

Such incentives may need to be additional to those provided to Industry to encourage the participation of their staff in research training opportunities, and the direct initiatives for our industry partners may include tax incentives, and the funding to support the development of employee training programs with a partner university. Small changes to the Research Training Program, whereby universities are required to provide a scholarship for industry based higher degree research candidates may also encourage greater connections.

Challenge 6: Bold, high-impact initiatives

What is your reaction to this challenge? What is missing? Are there other opportunities?

RUN strongly supports bold, high-impact, place-based initiatives for the development of cities and regions. Policy and funding frameworks, including with respect to science and innovation, which do not take account of the different circumstances of different localities, do not fully deliver to all. For national cohesion and prosperity, we cannot afford some regions to be left behind.

In recognition of these concerns, science and innovation initiatives in the UK and Europe are embedded in holistic and place-based policies such as smart specialisations and city deals. These initiatives recognise that science and innovation should be part of multi-disciplinary and other initiatives for the economic development of specific areas, as well as being fundamental to basic research. Australia has just started to follow these British and European models and can learn much from their experiences.

What type of initiatives would achieve the greatest impact? Bold high impact initiatives at regional, national and/or international scale? How should we decide?

Waves of city deals initiatives have been rolled out in the UK. With time they have achieved and are achieving an inclusive outcome in many regions.

Does Australia have a national "burning platform"? Do our regions?

Regional disadvantage is a burning platform. Although city deals are just starting to be taken up in Australia, it could be argued that the nation lags behind the UK and Europe in adopting a comprehensive approach place-based approach to regional development, that includes innovation and science.

What is the right balance of government and other sector involvement in leading and supporting bold high impact initiatives? What measures are required to achieve this?

There should be collaboration between all levels of government, business and the education sector in framing bold, high impact initiatives such as city and growth deals. Government funding should be used to leverage business funding.