

## Call for priorities and themes for new Cooperative Research Centres (CRCs) and CRC Projects

Please rank the following research themes in order of relative importance to the Australian economy

(1 being the most important, 8 being the least important):

Clinical health care:	7
Climate research:	1
Cybersecurity:	4
Disaster response and preparedness:	6
Mental health:	5
Remote and Indigenous health:	3
Soil and water:	2
Transport:	8

Please explain the reasoning for your top three selections.

Reasons:

### 1. Climate Research

Climate Research is a global issue that is highly relevant to Australia and needs multifaceted evidence-based solutions building on previous scientific evidence. It affects all aspects of the economy and needs a cross industry/sector approach to ensure that potential impacts are accommodated by the underpinning science/discovery.

Australia as a nation has lagged behind Europe and other Western and non-Western countries in actioning climate change steps that will make a concerted difference to past conduct. Prioritising this area will bring the nation up to worldwide standards.

Research literature highlights the dearth of solutions that may require supra-economic advantages to individuals to solve. Universities are best placed as public, rather than private, organisations to conduct research on a topic that vitally affects the well-being and continuation of all species in a way that may not immediately, or only, bring economic gain.

Climate science will be essential for our ability to adjust to climate-induced environmental changes and the flow on this has on food security and human habitation. More work is needed to improve adaptation and increase mitigation.

In the timeframe that a new CRC will deliver new knowledge and for acting on that in time to make a difference, we need to continue now to develop tools and systems to address the various challenges of adapting to climate/environmental change.

The focus would be on implications, projected effects and future-proofing Australian industry, communities and natural resources. There can a flow from climate research into some elements of disaster response preparedness.

This would be an opportunity to expand the work of National Energy Research Australia (NERA)

## **2. Soil and water**

Soil and water is a global issue that is highly relevant to Australia and needs multifaceted evidence-based solutions such as can be achieved within the CRC model.

Natural resources are critical to Australia's economy. The variability associated with Australia's soil and water will not be addressed by anyone else.

Soil and water are critically interlinked with the environment and relate to sustainable food production and understanding the key services provided to humans and other species by natural ecosystems.

This would be an opportunity to expand the work of the Food Innovation Australia Ltd (FIAL) without overlapping into the Industry Growth Centre's remit.

## **3. Remote and Indigenous Health**

Indigenous Health has been a long standing problem with often tragic consequences and needs to be addressed by bringing together a diverse set of stakeholders to a common mission such as through a CRC.

There is a clear gap in health care access, quality and equity in rural, remote and Indigenous populations.

Suggest consideration of a name change to Rural, Remote and Indigenous Health which is inclusive of but not limited to Indigenous health. It would be critical that mental health be a key component of this priority theme.

### **Would you like to provide your own theme/s?**

Yes

### **CRC theme suggestions**

#### **Suggested theme 1:**

Developing and future proofing regional communities and their economies

#### **Explanation of suggested theme:**

There is a need to strengthen the regions and the industry that supports them as they have been left behind somewhat by a range of economic policies and endogenous developments that have encouraged cities to grow, especially in the inner areas, over decades.

The theme could comprise aspects of agri-production responses; building technology responses (sustainable architecture including cooling etc.); cultural heritage and identity; mental health issues; disaster management (prioritisation of asset protection, viability of volunteer structures etc.); economic viability of rural shires in the face of rising infrastructure costs (road maintenance); population decline (e.g. different expectations of younger generation – millennials, iGen); future of service industries (health, banking, shopping); transport and access to health provision, employment and social isolation which contributes to mental health (addressing transport issues may alleviate social problems facing multiple social groups).

**Suggested theme 2:**

New technology impacts on future societies

**Explanation of suggested theme:**

Artificial intelligence, robotics and genetic technologies appear poised to radically change many aspects of human life, yet their potential impacts are not well researched and debated. This theme should address the economic, social and cultural challenges and opportunities posed by new technologies, for urban and regional communities. A model focused on new technology for the purpose of future society would make itself could make itself amenable to growth in multiple sectors and enable the best technology in each to have an impact, rather than tackling technology one sector at a time There are some excellent examples globally of the success of this approach.

**Suggested theme 3:**

Sustainable Agriculture, Food Production and Food Security

**Explanation of suggested theme:**

The extent of impact (health, socioeconomic, global) of this theme is considerable and includes agricultural practices, primary production and food security.

Cooperative research is critical to the future of Australian agriculture. Existing commodity based market and supply chain structures are not able to realise the opportunities nor complexities associated with wealth distribution (emerging economies) food (viz political security) natural resource sustainability and farm viability. Requires a multidisciplinary international collaboration to develop ecologically and socially sustainable solutions.

This would be an opportunity to expand the work of Food Innovation Australia Ltd (FIAL) in particular but also extends into other exiting strengths within the innovation system.