



LOCAL
GOVERNMENT
NSW

RESEARCH AND
INNOVATION FUND –
EXPRESSIONS OF INTEREST
OCTOBER 2018

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Introduction

Background

The aim of the LGNSW Research and Innovation Fund is to support new areas of research, policy development and innovation for the advancement of local government in NSW. Its purpose is to fill gaps in the evidence base, explore emerging issues, promote informed discussion and debate, and encourage the development of research capacity within the sector.

LGNSW have allocated seed funding for the first year of operations, and our intention is to leverage this investment by selecting projects of broad sector application and then seeking to attract council, industry and university partners.

Councils were invited to put forward proposals for new research, policy development and innovation with broad application for local government across NSW, and criteria for success were described as:

- Alignment with the LGNSW Policy Principles
- Important for the local government sector as a whole
- Council funding contributions; and
- Capacity to attract other project partners.

Summary

45 Expressions of Interest were received, and a number of councils and university researchers did not lodge an EOI but expressed an intention to lodge next year. The EOIs were in the following areas:

- **Capability** – shared services, governance, procurement, data, strategic planning, skills, rates and party politics
- **Economy** – food production, start-up funding, climate risks, night time economy and innovation
- **Infrastructure and Environment** – mine rehabilitation, bridges, road condition, greenways, gravel roads, swimming pools
- **Planning and land use** – precinct development, community planning and native title
- **Social and community** – prisons, community engagement, alcohol screening, arts engagement and customer profiling
- **Waste** – PFAS, energy generation, recyclables in road works, waste to energy, plastic pollution and charity waste
- **Water** – regional supply, groundwater and bioretention water quality.

Councils offered funding contributions which ranged from \$2,000 to \$5,000,000, and university partners included the following universities:

- University of New England
- University of NSW
- University of Technology, Sydney

- Charles Sturt University
- University of Newcastle
- University of Wollongong
- University of Sydney.

Next Steps

LGNSW has an ongoing commitment to supporting and promoting research and innovation in the NSW local government sector, and will endeavour to provide some support to all projects in order to progress good ideas and innovation. We will be in touch with all councils who lodged a submission to discuss potential funding sources, and will also liaise with all potential partner universities to provide them with a list of potential projects and to identify potential research partners.

LGNSW has also appointed an Advisory Committee to assess the proposals, and the committee will meet in late October to select a short list of projects. All councils in NSW will be invited to participate in the shortlisted projects as industry partners, and university partners will be approached in order to ready each of those projects for an ARC Linkage application. LGNSW funds will be allocated to the shortlisted project which attracts the highest levels of support from NSW councils, and we will aim to lodge a linkage application by the end of 2018.

Further information will be provided through the LGNSW weekly newsletters and project website at <https://www.lgnsw.org.au/key-initiatives/research-and-innovation-fund>.

To discuss this project please contact Sarah Artist, Senior Manager Innovation and Capacity at 9242 4182 or sarah.artist@lgnsw.org.au.

Capability

<p>Shared Service Delivery for Joint Organisations</p>	<p>The Local Government Amendment (Regional Joint Organisations) Act 2017 commenced on 15 December 2017, allowing Councils in regional NSW to voluntarily create new Joint Organisations (JO) in 2018. The JO model will provide an excellent platform for embarking on delivery of shared services to local communities. This project would explore areas in which councils could cooperate through JOs, especially in shared service delivery, for the benefit of local government councils and their local communities. The project would deliver a report which summarises the international and Australian literature on shared services and distils it into a form which makes it useful to JOs as they decide on their shared service mix. A template would also be delivered which can be used by individual JOs to help them decide on which functions/service should be provided regionally and which retained locally.</p>
<p>Armidale Regional Council</p>	
<p>Contact: Greg Lawrence, Service Leader - Economic Development and Marketing 02 6770 3931 GLawrence@armidale.nsw.gov.au</p> <p>University Partner: University of New England</p>	
<p>Investigating and Strengthening Corporate Governance in Local Councils</p>	<p>Evidence shows that the current operation of local governments is not sustainable. The current level of governance such as frameworks, processes and behaviours that help local governments achieve their objectives, comply with legislative and other requirements, and meet standards of probity, accountability and transparency need strengthening. The project aims at strengthening corporate governance by: i) investigating policies and procedures that support critical business process and ways of generating funds to meet Council expenses; ii) identifying gaps in governance; and iii) delineating strategies to address the gaps. Councils need to have financial management strategies that support their financial sustainability and meeting OLG's operating performance benchmark over the long term.</p>
<p>Armidale Regional Council</p>	
<p>Contact: Susan Law, Chief Executive Officer 02 6770 3832 executiveoffice@armidale.nsw.gov.au</p> <p>University Partner: Associate Professor Bernice Kotey, School of Business, University of New England.</p>	

<p>Smarter procurement for Local Councils in NSW</p>	<p>This project proposes that LGNSW, Local Councils and a research partner work with the Office of Local Government and other stakeholders to undertake a review of the Local Government Act and procurement guidelines to better support and reflect the rapidly changing technology and data driven cities of our modern world, which meets the needs of the Smart Cities most NSW Councils are trying to build. The current legislative framework and guidelines for procurement at a Local Government level have embedded an approach of favouring more mature and fully-tested approaches and single transactions where all the steps, outcomes and approaches are clearly understood. There is an opportunity to reimagine the framework to allow procurement teams to truly collaborate and design innovative solutions, procure better goods and services, and ultimately improve the service Councils across NSW are providing to their constituents.</p>
<p>Canterbury-Bankstown Council</p>	
<p>Contact: Petrhyce Donovan, Digital Innovation Manager 0429 524 510 petrhyce.donovan@cbc.city.nsw.gov.au</p> <p>Council's Contribution: \$15,000 University Partner: The project is open to all relevant and interested university and research partners. The project will consider co-collaboration or exclusive university partnerships depending on interest.</p>	
<p>Building Local Government Capacity for Evidence Based Decision Making</p>	<p>This project aims to develop an integrated data sharing framework that provides for multi-agency collaboration and data sharing across the three levels of Government. All levels of Government currently hold a vast amount of data generated and collected by different government agencies which have limited availability to Local Councils in real-time. The establishment of this framework and the digital tools will allow Councils to have access to the data currently kept in isolation. It is envisioned that access to evidence and real-time data will build regional capacity and empower Councils to address issues relevant to their region more efficiently. The main objective of this project is to develop innovative digital tools to enable Councils to visualise regional data and implement scenario modelling which can be used to inform evidence based decision making across all areas of council operations to support sustainable and resilient Councils and communities. The project would also collaborate with Local Government NSW to develop a Local Government open data sharing policy which aligns to the Guidance on Data Sharing for Australian Government Entities and the NSW Government Open Data Policy.</p>
<p>Central Coast Council</p>	
<p>Contact: Louise Fisher, Chief External Funding Coordinator 0417 987 423 Louise.Fisher@centralcoast.nsw.gov.au</p> <p>Council's Contribution: \$50,000 University Partner: Preliminary discussions have been held with University of Newcastle.</p>	

<p>IP&R with 10 years hindsight</p>	<p>IP&R with 10 years hindsight. This project aims to assess the success of the Integrated Planning & Reporting (IP&R) Framework implementation across the NSW local government sector by presenting case studies and identifying opportunities for improved service delivery across and between government sectors to ensure community aspirations are met. IP&R was introduced in 2009, and has evolved in many ways across the sector in the ensuing 10 years. Many local government authorities find they have care and control over only a portion of the aspirations desired by their communities and captured in local government produced Community Strategic Plans. This projects aims to identify best practice IP&R activities and recommend strategies for councils seeking to engage their communities and other stakeholders in the implementation of IP&R.</p>
<p>Clarence Valley Council</p>	
<p>Contact: Laura Black, Director Corporate & Governance 6643 3810 Laura.Black@clarence.nsw.gov.au</p> <p>Council's Contribution: \$2,000 University Partner: To be determined.</p>	
<p>Defining and addressing the skills gap in the local government sector.</p>	<p>This project seeks to quantify the skills gap in the sector, but particularly in councils located in regional NSW. Giving rise to creative and collaborative ways in which local government is transformed into an innovative and attractive employer market. The local government environment is as complex as it is diverse in its service delivery range, and the professional skills gap experienced by regional local government, places delivery of many community projects in jeopardy as councils struggle to attract suitably qualified people to deliver quality outcomes. This project aims to develop practical strategies to assist councils to recognise transferable skill sets and attract appropriately experienced applicants to regional areas.</p>
<p>Clarence Valley Council</p>	
<p>Contact: Laura Black, Director Corporate & Governance 6643 3810 laura.black@clarence.nsw.gov.au</p> <p>Council's Contribution: \$2,000 University Partner: UTS Centre for Local Government Excellence seems the most likely contributor brining research about current state and best practice to the table.</p>	

<p>Rate Capping – a new approach to reduce inequity across the local government sector</p>	<p>To develop a system of rate capping that is specific to each local government area, based on the demographics, needs and community will relevant to each council</p>
<p>Hawkesbury River County Council</p>	
<p>Contact: Chris Dewhurst, General Manager 0402 778 753 gm@hrcc.nsw.gov.au</p> <p>University Partner: University of Technology Sydney, Institute of Public Policy Governance.</p>	
<p>The Impact of Party Politicisation in NSW Local Government</p>	<p>This project will consider the increasing impact of party politics in NSW local government [refs can be provided]. It will consider the policy setting implications between Councillor's, their party, and the General Manager and staff. This research will provide practical guidance for both staff and elected officials to navigate this increasingly fraught landscape.</p>
<p>Hawkesbury River County Council</p>	
<p>Contact: Chris Dewhurst, General Manager 0402 778 753 gm@hrcc.nsw.gov.au</p> <p>University Partner: University of Technology Sydney, Institute of Public Policy and Governance</p>	

Economy

The Future Food Systems CRC	<p>The Future Food Systems (FFS) CRC will provide technology and skills needed to make Australia a leader in supply of premium, nutritionally dense food goods. Innovation in nutrition-focused agronomy, indoor cropping, advanced manufacturing and smart logistics will help overcome declining returns for agricultural commodities. The resulting sustainable supply systems will enable regional agrifood hubs to capture Australia's share of emerging markets expected to reach AU\$8 trillion pa in value by 2025. FFS CRC participants include large and small growers, food manufacturers, technology providers, airport owners, major research providers, SMEs and regional development organisations. The participants are collectively investing in the FFSCRC as they have identified that a co-ordinated approach to research, new business and capability development is required to realise Australia's future food systems. Many of the outcomes of the FFSCRC will be delivered via export-facing regional and peri-urban food precincts in NSW, WA, NT, QLD and VIC to develop unique solutions for sustainable production of high value goods. The opportunity for local government is to coinvest with the FFS CRC and industry partners to develop these food precincts for the benefit of regional economies.</p>
Armidale Regional Council	
<p>Contact: Greg Lawrence, Service Leader Economic Development & Marketing 02 6770 3931 GLawrence@armidale.nsw.gov.au</p> <p>University Partner: University of New England</p>	
Regional Start-up Funding	<p>I am interested in ascertaining the various funding sources available to start-ups in regional areas. Although the federal government's innovation fund as well as state government support for various start-up programs have increased the number of start-ups significantly, the challenge has been helping potential business owners to gain access to finance to support promising ideas. There are several funding sources that have not been tapped into due to a variety of factors including lack of knowledge. My proposal is to ascertain the various sources of funding available to SMEs in regional areas and the extent to which potential owners are open to using these sources of funding.</p>
Armidale Regional Council	
<p>Contact: Greg Lawrence, Service Leader - Economic Development and Marketing 02 6770 3931 glawrence@armidale.nsw.gov.au</p> <p>University Partner: University of New England</p>	

<p>Identifying & Assessing Local Climate Impacts and Risks to Industry & Employment</p>	<p>After a recent Bathurst Regional Council decision to review its Drought Management Policy this proposal suggests that a substantial part of future rural planning discussions need to focus on the prospect of increased frequency of drought and related declines in forecast soil moisture, evaporation rates and run-off etc. This review requires a clear understanding of the science of localised climate changes, particularly the predicted local temperature impacts that are reasonably expected across each NSW council, and the subsequent impacts on existing agriculture, water security, the local industry mix, and community health risks, such as from heat stress impacting summer sport, elderly or vulnerable residents etc, amongst others. This proposal calls for research, analysis and recommendations on the local impacts of a changing climate (particularly drying effects and potentially more drought) on the current set of industry compositions and ultimately economic growth and employment levels across councils in NSW.</p>
<p>Bathurst Regional Council</p>	
<p>Contact: Jess Jennings, Councillor 0423 224 750 Jess.Jennings@bathurst.nsw.gov.au</p> <p>Council's Contribution: \$50,000</p> <p>University Partner: Charles Sturt University – Institute of Land and Water Australian National University – Climate Institute</p>	
<p>Mapping the Entrepreneurship Ecosystem in the Liverpool Plains Shire Council Region to Identify Gaps</p>	<p>On June 16 2016, micro, small & medium enterprises (MSMEs) were recognised globally as the backbone of economic development. The MSME sector provides jobs, income, export, taxes and contributes in several other ways to economies at all levels. Research has shown that it is not enough to have MSMEs established in rural and regional areas. To survive these businesses must seek alternative markets outside their local areas, nationally and internationally (Kotey 2014) and need capital to become established and to pursue growth. While lack of funding is often seen as a major setback to SME development, there is evidence that there are several sources of financial products that are not tapped into by MSMEs. There is anecdotal evidence that professional investment development are elements of the regional ecosystem that require innovation to assist with attracting investment, especially developing partnerships and joint venture arrangements (Tink 2018). The LPSC council seeks to investigate the sources of finance available to support establishment and growth of rural and regional SMEs that provide diversified incomes for rural families dependent on agriculture. The study will investigate the availability and accessibility of various funding sources to new and existing rural businesses and the extent to which they are open to using these sources.</p>
<p>Liverpool Plains Shire Council</p>	
<p>Contact: Roslyn ten Brink, Corporate Strategy Coordinator 02 6746 1755 Ros.tenBrink@lpsc.nsw.gov.au</p> <p>Council's Contribution: \$45,000</p> <p>University Partner: The key university partner is the University of New England with long standing expertise in Regional SME and entrepreneurship development.</p>	

<p>Examining the Night Time Economy in Regional NSW</p>	<p>The study will examine the Night Time Economy (NTE) across two local authorities within NSW, Port Macquarie-Hastings Council and Bathurst Council with an aim of assisting the two Councils to deliver greater vibrancy and activation in and around their conurbation, support business while capturing the needs and wants of workers and the broader community, along with exploring creative clusters and opportunities to build places that people want to visit and congregate. The overarching purpose of the study is to understand the size and character of the NTE experience in the two Council areas as well as to identify strategies to enhance NTE activations. This purpose is driven by the aim of giving consideration to community interests and ideas, legislative constraints, the strategic directions of both councils, and best practice approaches to activating and managing the NTE. Whilst the initial study is based on two Local Government Areas this could easily be extended to more regional locations to explore commonalities across regions.</p>
<p>Port Macquarie-Hastings Council</p>	
<p>Contact: Sandra Wallace, Community Participation Manager (02) 6581 8668 sandra.wallace@pmhc.nsw.gov.au</p> <p>University Partner: Port Macquarie-Hastings Council is proposing collaborating with Charles Sturt University for this research study.</p>	
<p>Planning for the Emerging Future - A Socio-Economic Management Model for Local Government</p>	<p>Anticipating, planning and delivering against future changes and major transitions for communities has always presented challenges for all levels of government. The way in which Local Government responds to these transitions has the potential to mean the difference between a thriving, strong, resilient and sustainable community or one that experiences disruption, downturn and social disadvantage before reinvention. The Singleton Local Government Area currently faces one such significant transition. Mining is acknowledged to be a transitory industry endeavor and given the magnitude of its operations in the Singleton Local Government Area the way in which a transition away from mining is managed has significant implications for the long term future of the local community and economy. This research proposal is for the investigation and documentation of a methodology for Councils to undertake integrated socio-economic management that enables the unique opportunities of transitions and social changes to be identified, planned for and harnessed. This would effectively replace the outdated and segmented Economic Development and Community Development models. Ultimately the aim of the research project would be to build a local government socio-economic management model that no longer sees economic and community transitions as disrupters of growth and sustainability but harnesses transitional opportunities as a normal part of ongoing socio-economic management to the benefit of our communities.</p>
<p>Singleton Council</p>	
<p>Contact: Natalie Zagninski, Manager Strategy & Engagement 0424 168 310 nzagninski@singleton.nsw.gov.au</p> <p>Council's Contribution: \$20,000</p> <p>University Partner: The University of Newcastle through the International Centre for Balanced Land Use has indicated a strong interest in partnering on this initiative.</p>	

Revisoning the Innovation District	Waverley Council is undertaking a project to create a new Knowledge and Innovation Hub in Bondi Junction. The Knowledge and Innovation Hub Project seeks to create a leading innovation space responding to local conditions as a means of further developing the Knowledge and Innovation sector within the LGA. Currently at the early stages, the project will be centred around the adaptive re-use and restoration of the historically significant, Boot Factory building at 27-33 Spring Street Bondi Junction and the use of the nearby Waverley Library. The most widely accepted model for the design of innovation precincts has been to attract large public research organisations or anchor organisations eg. Google which act as a catalyst for attracting research-centric corporations, and then knowledge-intensive small to medium businesses and start-ups. In the past these commercial elements of the innovation ecosystem have generally been organised as isolated developments as “Science” or “Technology Parks”, with distinct hard boundaries, often dedicated to a single discipline. In the Waverley context we will be seeking to explore an alternative model whereby the lifestyle features of the LGA including its proximity to the city and coastal amenity and highly educated local population serve as the basis for the creation of an innovation district.
Waverley Council	
Contact: Matthew Fallon, A/Executive Manager, Enriching Waverley 02 9083 8773 matthew.fallon@waverley.nsw.gov.au	
Council’s Contribution: \$5,000,000	
University Partner: Although we have not yet started to explore the potential of securing matching funds for a formalised ARC project we have had formal contact with a range of academics in framing our project.	
Infrastructure and Environment	
Mine Site Rehabilitation	This project aims to integrate innovative low cost technologies in mine site rehabilitation to prevent emissions of toxic trace elements and provide for effective and sustainable human and environment protection. More than 60,000 abandoned mines exist across Australia with no individual or organisation held responsible. Contamination costs the Australian economy billions of dollars each year and causes great community anxiety. This project, with a focus on the contaminants antimony and arsenic, will apply advanced analysis techniques to unravel the complexities of pollutant immobilisation for scale-up to successful and long-term rehabilitation strategies at these problem sites. This project will be based in the Macleay Catchment of northern NSW.
Armidale Regional Council	
Contact: Greg Lawrence, Service Leader - Economic Development and Marketing 02 6770 3931 GLawrence@armidale.nsw.gov.au	
University Partner: University of New England	

Bridge Health Check	<p>Not only is there a need to examine the structural health of existing bridges in an economic manner, but there is also a need, particularly in relation to timber girder bridges, to better understand the strength/elasticity relationship. The need to economically measure regional bridges is different from that of the need in regions of high population such as a capital city. City bridges are characterised as large high cost structures carrying many thousands of vehicles per day which are near large maintenance centres. Regional bridges can be very remote, 100s of kilometres from a maintenance centre, and only carry a few hundred vehicles per day. However, some of these vehicles can be high mass and such bridges might be critical to local access. There is also the question of economically constructing new/replacement bridges. Concrete structures are major contributors to the global CO2 footprint and sand is in short supply world-wide. A pilot study cost to measure one single span bridge and report its carrying capacity could currently cost between \$5 000 and \$10 000. This could also include creating a suitable contract for the task. The budget cost for a multiple span bridge might be between \$10 000 and \$20 000. Such costs are typical of measuring one isolated bridge. Ways of decreasing these costs for a large set of bridges would be part of the project which would also include new methods of Structural Health Monitoring (SHM).</p>
Armidale Regional Council	
<p>Contact: Greg Lawrence, Service Leader - Economic Development and Marketing 02 6770 3931 GLawrence@armidale.nsw.gov.au</p> <p>University Partner: University of New England</p>	
Development of parameters for road condition assessment	<p>The project would involve a collaboration with the Australian Road Research Board to develop a process for the objective and independent reporting of road asset condition across NSW. ARRB has the technology available to conduct road inspections and provide comprehensive data on attributes such as roughness, cracking and rutting. These factors are potentially sufficient to provide a picture to state government of current asset condition against standards, and also asset deterioration over time. That information is vital to ensure that funding is sustainable, but also provides insight into management techniques that are working at best practice.</p>
Glen Innes Severn	
<p>Contact: Keith Appleby, Director Infrastructure Services 0408 144 251 kappleby@gisc.nsw.gov.au</p> <p>Council's Contribution: \$20,000</p> <p>University Partner: University of New England</p>	

<p>Evaluating the benefits of the Cooks River to Iron Cove GreenWay - A Living Laboratory</p>	<p>Using the Cooks River to Iron Cove GreenWay in Sydney's inner west as a living laboratory, this study aims to understand the many benefits and challenges of urban greenways. The study will develop a framework to measure the multiple benefits and challenges of the GreenWay as the Central and Southern Missing Links Project is completed. Using longitudinal research, focused on before and after monitoring of the GreenWay Missing Links Project, a range of issues will be evaluated. These include active travel rates (cycling, walking and light rail usage), and benefits across social, health and environmental criteria. Broadly, the study will identify current knowledge and theory gaps in determining effective ways to evaluate the impact of new active transportation infrastructure in urban greenways.</p>
<p>Inner West Council</p>	
<p>Contact: Nick Chapman, GreenWay Place Manager 0417 402043 nick.chapman@innerwest.nsw.gov.au</p> <p>Council's Contribution: \$30,000 University Partner: The GreenWay Living Laboratory Project proposal has been developed by UNSW's City Futures Research Centre in collaboration with the GreenWay Place Manager at Inner West Council.</p>	
<p>Reducing the dust and environmental impact of on gravel roads</p>	<p>Council has a significant unsealed road network, during dry conditions Council receives constant complaints from dust and corrugation issues. The Otta seal is used to address dust complaints as there is no windblown dust contamination to adjacent properties, to do nothing, it is anticipated that dust complaints would continue in the dry weather conditions and road pavements wet and slippery/boggy during wet periods</p>
<p>Nambucca Shire Council</p>	
<p>Contact: Paul Gallagher, Assistant General Manager - Engineering Services 0409 129 721 paul.gallagher@nambucca.nsw.gov.au</p> <p>Council's Contribution: \$200,000 University Partner: Any University could be involved with the long term monitoring of the trial.</p>	

<p>Building Green Bridges - reducing Councils greenhouse gas footprint</p>	<p>Nambucca Shire Council has a history of adopting proven cutting-edge technologies that are both financially sound and environmentally friendly. NSC recently leveraged the extensive knowledge of Australia's largest development and construction company, Lendlease, to help design the new Lanes Bridge in Bowraville. This bridge incorporates the latest safety in design technology the "wing plank" revolutionising bridge Construction. The construction safety and efficiency of the wing plank is superior to all other bridge beams currently used by road authorities in Australia and globally. NSC is the first LGA to use the wing plank on its network. In partnership with Lendlease, Council has provided an allocation of \$300k to construct two "green" bridges using Geopolymer concretes in which are environmentally friendly compared to cement based concretes because they don't contain cement. Cement is the worlds' second most consumed product after water. Cement manufacturing contributes to 8% of global greenhouse gasses each year.</p>
<p>Nambucca Shire Council</p>	
<p>Contact: Paul Gallagher, Assistant General Manager - Engineering Services 0409 129 721 paul.gallagher@nambucca.nsw.gov.au</p> <p>Council's Contribution: \$300,000</p> <p>University Partner: Council are happy to encourage any of the NSW universities to participate. It is noted that Curtin University, University of NSW, Melbourne University, Swinburne University, RMIT University have under taken relevant studies.</p>	
<p>How to manage native wildlife and its coexistence with humans in natural and non-natural water systems</p>	<p>A project aiming to create a base-line study of native ducks and potentially a few other native animal species and their impact on the health, economic, environmental and social natural and man-made aquatic systems such as pools/structures, sea pools etc. Once these issues have been identified, the study will further establish best-practice guidelines for Local Government in order to deter native animals from man-made aquatic areas. Issues arising from animals such as ducks, bats and pigeons in aquatic areas are the potential for disease, the ongoing cost to LGA's through cleaning and maintenance of facilities, and the OHS risks associated with the stress of killing native animals, along with the potential for harming staff or others in public spaces, NPWS licencing requirements being onerous and permits insufficient to exterminate all animals.</p>
<p>Warrumbungle Shire Council</p>	
<p>Contact: Simone Tenne, Environmental Health Officer 02 6849 2000 simone.tenne@warrumbungle.nsw.gov.au</p> <p>Council's Contribution: \$5,000</p> <p>University Partner:</p>	

Professor Greg Leslie Acting Director, UNSW Global Water Institute UNSW	
Planning and land-use	
Greening the Greyfields, a new approach for community-co design, a case study in Blacktown	<p>Australia’s cities face significant social, economic and environmental challenges, driven by population growth and rapid urbanisation. The pressure to increase housing availability will lead to greater levels of high-density and medium-density stock. However, there is enormous political and community pushback against this. One way to address this challenge is to encourage medium-density living solutions through “precinct” scale development. Precinct-scale development has the potential to include additional hard and soft infrastructure that may offset the perceived negativities of higher densities. In addition, we propose to develop scenario planning tools to ensure planning has the necessary evidence. In this project, we will focus on a case study in the City of Blacktown, Western Sydney, New South Wales, Australia. By 2036 Blacktown is forecast to grow to approximately 500,000 people (an increase of over 30%) and 180,000 dwellings. Most new dwellings will be delivered through urban infill. The Blacktown master plan promotes higher density housing, mixed employment uses and continued improvements to the public domain. Our proposal provides a unique opportunity to implement this broad strategy within a specific case and location. Specifically, this project aims to encourage co-design process and implement a new approach for precinct level planning while using data driven approach based on cutting edge scenario planning tools.</p>
Blacktown City Council	
<p>Contact: Agnes Brejzek, Strategic Planner 9839 6512 agnes.brejzek@nsw.gov.au</p> <p>Council’s Contribution: \$20,000 University Partner: University Partners The Project proposal has been developed by UNSW's City Futures Research Centre in collaboration with Blacktown City Council and the strategic planning department.</p>	
Community Strategic Planning, Quality of Life and a Sustainable Future	<p>Council has developed a way to undertake community strategic planning that measures quality of life priorities for local communities. The project would include tailoring the model to metropolitan and inland Councils, and expand the model to identify local values and priorities for a sustainable future.</p>
Central Coast Council	
<p>Contact: Tiffany Burton, Senior Corporate Strategist 0416 564 850 tiffany.burton@centralcoast.nsw.gov.au</p>	

<p>University Partner: I have spoken with the University of Technology Institute for Local Government, and the University of NSW.</p>	
<p>Native Title</p>	<p>There needs to be a coherent whole of Government response to Native Title on Crown Lands which Councils administer- at the moment Councils seem to be locked out of any negotiations proceeding through the Office of Crown land and the Attorney General with Native Title holders. While the new Crown Land Management legislation requires a Native Title Manager in Councils it also transfers a lot of risk, and cost shifting (including time of doing business costs) and potential compensation to Councils in the future- without any coherent framework to operate under. While the Native Title Legislation answer is to develop an Indigenous Land Use Agreement to deal with mutually beneficial management of Crown Land the framework for such an ILUA is missing for Local government in NSW (although well advanced in some states like QLD) and the resources for Local Government and the Native Title Holders to negotiate such agreements. There is also potential conflict between the outcomes of the two pieces of legislation which are emerging causing conflict in Aboriginal communities and confusion in the wider community. Any research response led by LGNSW needs to be in concert with the Department for Aboriginal Affairs research agenda.</p>
<p>Clarence Valley Council</p>	
<p>Contact: Laura Black, Director Corporate & Governance 6643 3810 Laura.Black@clarence.nsw.gov.au</p> <p>Council's Contribution: \$2,000 University Partner: Unknown</p>	
<p>Social and Community</p>	
<p>Prisons in regional NSW</p>	<p>Rising prison populations and overcrowded facilities have seen Australian jurisdictions respond with prison expansion programs, primarily within rural areas. In NSW, \$3.8 billion has been allocated to establish new facilities and upgrade, expand, or repurpose existing centres over a four year period. Yet little is known about the impact of prisons on the economies of rural communities. To address this, our highly experienced research team of criminologists, a rural sociologist and an economist propose to conduct a socio-economic impact analysis drawing on a range of data sources to compare NSW rural LGAs with similar characteristics, with and without a prison. Case studies of four NSW LGAs that house a prison will incorporate residents and stakeholders' perspectives and ground the quantitative findings. A model will be generated for a decision support system to assist policy-makers to assess the impact of a prison upon a rural community when planning prison development. The findings will provide insight into the benefits of the prison</p>
<p>Armidale Regional</p>	
<p>Contact: Greg Lawrence, Service Leader – Economic Development and Marketing 02 6770 3931 glawrence@armidale.nsw.gov.au</p> <p>University Partner: University of New England</p>	

	<p>industry for rural economies as well as ways to improve existing practices and policies with prison expansion programs (if needed) that take into account the complexity of rural communities, the specific needs of offenders and their families and other support networks during the prison term and reintegration period, and the inherent difficulties and constraints of service delivery that can exist in rural and remote settings.</p>
<p>Urban modelling platform for community engagement</p>	<p>Bayside Council seeks to better collaborate with our community and would like to explore easy to use digital platforms to showcase planned or conceptual Capital works programmes to the community and stakeholders. Few councils have the knowledge to setup computer generated modelling to show the community what planned works will look like when complete, a new community park? or a town piazza? A proposed dwelling? a Footbridge? Council wishes to partner with a Digital team that can create a repeatable and simple to use platform that can show concepts in the 3D or Augmented Reality. There are many tools on the market that can scan real spaces in 3D, what Council's and Communities need is a ready made platform with perhaps some hardware that can be shared across regions to scan, model and release online for Community to review, comment on etc.</p>
<p>Bayside Council NSW</p>	
<p>Contact: Robert Kolimackovski, Manager IT 0419 970 846 robert.kolimackovski@bayside.nsw.gov.au</p> <p>University Partner: Still scoping, however any Unit that specialises in Spatial mapping and Augmented reality would be ideal</p>	
<p>An ethnographic understanding of the modern day Local Government customer</p>	<p>In our rapidly changing modern society, Local Government in NSW has a responsibility to better understand the needs of customers. As Councils, we collect extensive amounts of data, but have little research to contextualise varying Local Government customer service/experience models with qualitative research about customers. It is proposed that a research partner works with a number of NSW Local Councils and subsequent communities to better understand what people want from Councils, how they prefer to interact with Council and how much they understand about the Local Government sector as a whole. By understanding on a broad scale the customer preferences, trends and behaviours, Councils across NSW will have an opportunity to tailor their services, providing an improved customer experience which better meet the needs of customers. Innovative Councils in NSW can take this research and commission more work if required, further developing the sector and providing a deeper understanding of their specific area, which will allow each Council to scale up or scale back certain service elements. This research will help Local Councils across NSW to start a conversation about how we can innovate our services, make use out of data,</p>
<p>Canterbury-Bankstown Council</p>	
<p>Contact: Petrhyce Donovan, Digital Innovation Manager 0429 524 510 petrhyce.donovan@cbc.city.nsw.gov.au</p> <p>Council's Contribution: \$15,000 University Partner: The project is open to all relevant and interested university and research partners.</p>	

<p>The project and will consider co-collaboration or exclusive university partnerships depending on interest.</p>	<p>improve the customer experience, implement emerging technology, how we can engage and empower our customers and use connectivity to enrich the lives of Local Government customers.</p>
<p>Socio Economic Impact Study of Prisons - Elaine Barclay</p>	<p>Rising prison populations and overcrowded facilities have seen Australian jurisdictions respond with prison expansion programs, primarily within rural areas. In NSW, \$3.8 billion has been allocated to establish new facilities and upgrade, expand, or repurpose existing centres over a four year period. Yet little is known about the impact of prisons on the economies of rural communities. To address this, our highly experienced research team of criminologists, a rural sociologist and an economist propose to conduct a socio-economic impact analysis drawing on a range of data sources to compare NSW rural LGAs with similar characteristics, with and without a prison. Case studies of four NSW LGAs that house a prison will incorporate residents and stakeholders' perspectives and ground the quantitative findings. A model will be generated for a decision support system to assist policy-makers to assess the impact of a prison upon a rural community when planning prison development. The findings will provide insight into the benefits of the prison industry for rural economies as well as ways to improve existing practices and policies with prison expansion programs (if needed) that take into account the complexity of rural communities, the specific needs of offenders and their families and other support networks during the prison term and reintegration period, and the inherent difficulties and constraints of service delivery that can exist in rural and remote settings.</p>
<p>Dubbo Regional Council</p>	
<p>Contact: Tim Nichols, Economic Development Team Leader 02 6801 4000 tim.nichols@dubbo.nsw.gov.au</p> <p>Council's Contribution: \$2,000 University Partner: CSU</p>	
<p>Alcohol Screening and Brief Intervention Project</p>	<p>The 2016/17 Sydney North Primary Health Needs Assessment Needs Assessment identified that Northern Sydney has one of the lowest self-reported alcohol consumption rates in NSW at levels likely to cause risk, combined with the highest rate of alcohol attributable hospitalisations in NSW for females. This suggests a culture of unaddressed drinking patterns and indicates that people may be reluctant to access the support they need. The negative effects of alcohol misuse on families and communities is far reaching, resulting in increased rates of cancer, injuries, depression and anxiety, risky sexual behaviour resulting in increased STI's and unplanned pregnancies, emotional trauma and Fetal Alcohol Spectrum Disorder. Sydney North Primary Health Network is currently piloting a model of care to reduce alcohol consumption amongst their residents. The project involves general practitioners screening patients for their alcohol consumption using an internationally validated alcohol screening tool (AUDIT C), and providing brief interventions to patients who score 5 or above on the AUDIT score. In order to facilitate broader implementation of</p>
<p>Northern Beaches Council</p>	
<p>Contact: Will Wrathall, Team Leader Community Development 9942 2224 will.wrathall@northernbeaches.nsw.gov.au</p> <p>University Partner: Whilst we are yet to approach specific universities we are confident that this would</p>	

<p>generate significant interest given the scale of the issue on the Northern Beaches and the broader application to councils throughout NSW.</p>	<p>the project, funding is needed to embed the information into existing general practice software so that the process is faster (the current pilot is paper based, and this is not sustainable).</p>
<p>Arts engagement to combat social isolation</p>	<p>This project aims to identify small communities of older people (defined as 65 years and older) in key geographic locations across the LGA (i.e. Avalon, Narraweena & Cromer) who are not currently engaged with traditional arts practices or institutions. The project will aim to bring art-making practices to these identified communities through means identified from community consultation. Council will work directly with Dr Gail Kenning and Dr Shankar Sankaran from University of Technology (UTS) to develop sound and resourceful qualitative evaluation approaches to assess “well-being” through arts engagement. UTS will build on the collaborative resources already developed in partnership with the Art Gallery of NSW, offer programs to support the general wellbeing of the community, provide pathways to enable individuals to gain knowledge about and access to support services.</p>
<p>Northern Beaches Council</p>	
<p>Contact: Will Wrathall, Team Leader Community Development 9942 2224 will.wrathall@northernbeaches.nsw.gov.au</p> <p>University Partner: UTS</p>	
<p>Engaging the Community</p>	<p>How many times does a Council advertise something in the paper, put it on their website and Facebook page, issue press releases and shout it from the roof top and yet when you move to progress the matter, people scream they weren't told! Equally, when Council is faced with making decisions relating to development, rate increases, traffic and parking changes and the like there are 3 kinds of people: 1. Those who are apathetic 2. Those who are for it 3. Those against it Those who are apathetic NEVER attend a meeting, write an email, issue a press release, form a group or abuse Councillors or Council Staff Those who are for it ALMOST NEVER attend a meeting, write an email, issue a press release, form a group or support Councillors or Council Staff Those who are against it ALWAYS attend meetings, write countless emails, issue press releases every 2 hours, form groups and abuse Councillors or Council Staff. Therefore, some form of innovative solution is required to engage the community more measurably.</p>
<p>Council: Port Stephens Council</p>	
<p>Contact: Paul LaMotee, Councillor 0414 548 525 paul@lemottee.com</p>	

Waste

An integrated strategy to remediate PFAS contaminated soil and groundwater

Bathurst Regional Council

Contact:

Anna Stapleton,
Manager Environment
02 6333 6268

anna.stapleton@bathurst.nsw.gov.au

University Partner:

CSU will be the main university partner for this research project. Researchers at CSU Engineering with partnership with Institute for Land, Water and Society (ILWS) has established a PFAS research team.

This grant will enable the Council to develop an innovative strategy with Charles Sturt University (CSU), University of New South Wales (UNSW), Western Sydney University (WSU) and University of Technology Sydney (UTS) to remediate soil and groundwater contaminated with per- and poly-fluoroalkyl substances (PFAS), which is identified as an emerging environmental issue for many Councils in NSW. Existing technologies, such as PFAS immobilisation and oxidation within soil environments, are questionable in terms of their long-term efficiency. A further limitation is the lack of a reliable tool to make decisions regarding PFAS remediation options for landowners and operators in Local Government due to the complex chemical and physical characteristics of PFAS. The research will lead to an implementable technology with direct, positive impacts on the remediation of PFAS contaminated soil and groundwater at many sites throughout NSW local councils.

PFAS

Clarence Valley Council

Contact:

Laura Black,
Director Corporate & Governance
6643 3810

Laura.Black@clarence.nsw.gov.au

Council's Contribution: \$2,000

PFAS has recently emerged as a contaminant of concern, and the cost of managing biosolids containing PFAS has the potential to significantly adversely impact local water utilities (LWU). In particular, beneficial reuse of biosolids may no longer be feasible for biosolids containing PFAS. This project aims to quantify the impact on LWUs of managing biosolids containing PFAS and investigate feasible management options for biosolids containing PFAS that are affordable for communities.

<p>Power from (Dog) Pool!</p>	<p>Inner West provided 1.7 million dog poo bags from dispensers within its parks last financial year. This project seeks to expand on the 'Organics Evolution Plan 2036 and beyond' and look at local small scale local infrastructure for processing dog poo onsite such as a digester that can power a light (e.g. e-turd). IWC is working with ISF on research around whole of community organics happening currently and this project aligns as a form of organic waste available for treatment within IWC. ISF and IWC would co-contribute research into this project and provide a site to trial the resulting small scale infrastructure developed.</p>
<p>Inner West</p>	
<p>Contact: Helen Bradley, Resource Recovery Planning Manager 02 9335 2130 helen.bradley@innerwest.nsw.gov.au</p> <p>Council's Contribution: \$140,000 University Partner: Institute for Sustainable Futures ISF at UTS who have engineering and technical expertise in addition to extending leading research on whole of community organics.</p>	
<p>Recycled materials trial: using Plastiphalt in road works</p>	<p>This is a great initiative with respect to enhancing recycling –in particular related to the dreaded plastic shopping bags. Council intend to do the road construction project with “Plastiphalt” for the road pavement waring surface. There will be no noticeable difference in the look or the vehicular ride over standard asphaltic concrete as the glass is coarse sand (4mm minus) replacement and the plastic and toner are polymer additives that enhance the durability and performance of the product. The laboratory tests indicate the new asphalt will increase pavement life by 15 per cent, sustain increased traffic count volumes of 20 per cent while reducing the pavement thickness by 10 per cent</p>
<p>Nambucca Shire Council</p>	
<p>Contact: Paul Gallagher, Assistant General Manager - Engineering Services 0409 129 721 paul.gallagher@nambucca.nsw.gov.au</p> <p>Council's Contribution: \$300,000 University Partner: Open to all universities to become involved with the monitoring and further development</p>	

<p>Waste to Energy at a Local Scale Feasibility Study Project</p>	<p>The purpose of this project is to conduct a comprehensive feasibility study to convert municipal and other sources of waste into energy (WtE) at a local scale. There are multiple components to a WtE Project, all of which will contribute to a complex decision support matrix and eventually each project 'gateway'. The feasibility study will determine whether the combination of changed circumstances is enough to warrant a pilot plant being built in this point in time. It will also determine what the smallest scale is: volume of waste and photovoltaic energy plant that could be used, taking into consideration the tyranny of distance and the subsequent transportation costs.</p> <p>Lastly, the feasibility study will also determine whether councils across NSW and perhaps Australia, who are in a position to convert waste to energy, are able to form a cooperative sales arrangement through a partnership with a lower to medium tier power generator. The aim would be to form a 'virtual generator' whose combined energy input into the grid nationally would be sold to the Australian National Electricity Market (NEM) in a more competitive financial arrangement than offered by tariff inputs payments at the lower scale (through Community Agreements).</p>
<p>Tenterfield Shire Council</p>	
<p>Contact: Terry Dodds, CEO 0400 263 932 t.dodds@tenterfield.nsw.gov.au</p> <p>University Partner: If TSC were to obtain funding from the Australian Renewable Energy Agency, other LGs, and LGNSW, our intent would be to invite Macquarie University's Macquarie Partnerships to express an interest.</p>	<p>Researching impediments to allowing recycled content in common engineered products such as plastic in asphalt and glass in cement. Research could be in the form of policy/literature reviews or in the development of material specifications. The outcomes of this research will be to make it simpler for local government and any consumer to purchase engineered products with post-consumer recycled content and thus alleviating the some of the pressure on Australians recycling industry and dealing with the glut of low value recycle. Unfortunately I have not been able to liaise with any universities due to time constraints.</p>
<p>Increasing recycled content in common engineering products.</p>	
<p>Willoughby City Council</p>	<p>Contact: Kristian Wynn, Resource Recovery Team Leader 9777 7681 kristian.wynn@willoughby.nsw.gov.au</p> <p>Council's Contribution: \$10,000</p> <p>University Partner: We have not yet identified a university partner for this project. We would be happy to collaborate with any university that may have an interest in this area.</p>
<p>Contact: Kristian Wynn, Resource Recovery Team Leader 9777 7681 kristian.wynn@willoughby.nsw.gov.au</p> <p>Council's Contribution: \$10,000</p> <p>University Partner: We have not yet identified a university partner for this project. We would be happy to collaborate with any university that may have an interest in this area.</p>	

<p>Balancing the economic and ecological impacts of mitigating plastic pollution</p>	<p>In NSW, plastic pollution is a severe threat to the economy and health of our waterways. The NSW Government's Marine Estate Strategy (2018) recognises water pollution from urban stormwater discharge, litter, marine debris and microplastics as priority threats to the environmental, social, cultural and economic benefits derived from the marine estate. The NSW Government has also committed to reducing litter by 40% by 2020. To achieve this target and to mitigate priority threats, new research is needed to fill knowledge gaps about the economic and ecological impacts of litter. This is vital to ensure that this emerging issue can be solved through evidence-based decision-making. Research is required to quantify and compare the effectiveness, and costs and benefits of different strategies for mitigating plastic pollution so that products, management and policies can be sustainably improved to minimize impacts. The project aims to gain a fundamental understanding of how to cost-effectively mitigate plastic pollution by evaluating methods to avoid, intercept and/or redesign plastic products affect the emissions and impacts of litter to the ecosystem.</p>
<p>Willoughby City Council (on behalf of Sydney Coastal Councils Group)</p>	
<p>Contact: Debra Just, General Manager 9777 1010 debra.just@willoughbycouncil.nsw.gov.au</p> <p>University Partner: The University partner on this project is UNSW.</p>	
<p>Charity Waste and the Circular Economy</p>	<p>Wollongong City Council currently does not charge gate fees to various registered charities within the LGA as a service to the community. As a result, our waste facility sees a significant amount of waste being sent to site from these charities each year. Much of this waste could be diverted from landfill and re purposed for use again e.g. old clothes that aren't fit for sale could be re purposed in to rags or raw textiles. We would like to investigate the composition of the waste being donated to these charities and audit the loads going to landfill to determine alternative uses for the materials. The end result would ideally be in the form of education provided to these charities to aid them in effectively sorting this waste a diverting it from landfill.</p>
<p>Wollongong City Council</p>	
<p>Contact: Chris Brown, Commercial Business Analyst (02) 4227 7586 cbrown2@wollongong.nsw.gov.au</p> <p>University Partner: University of Wollongong</p>	

E-Waste processing hub	<p>Technology surrounding the recycling and re purposing of E-Waste is rapidly developing in Australia due to increasing social awareness and a greater understanding of the environmental impact of land filling this waste. In light of this, we would like to explore what we can do as council to both encourage and facilitate this emerging economy in our area. We would like to understand what factors need to be in place to make an area an attractive destination for businesses that will emerge in this space.</p>
Wollongong City Council	
<p>Contact: Chris Brown, Commercial Business Analyst (02) 4227 7586 cbrown2@wollongong.nsw.gov.au</p> <p>University Partner: University of Wollongong</p>	
<h2>Water</h2>	
Economic and Social Optimizatoin of Regional Water Supplies in a Climate Change Environment	<p>This project seeks to build a framework for optimal regional water allocations and investments in public water infrastructure, in a climate-change affected environment. Armidale Region has a growing controlled environment horticulture and intensive agriculture sector. It is also executing plans to grow population by 20% over the next 5-10 years. This growth is premised on the Region's secure water supplies, cool climate and high solar / photo-voltaic resources, a strong AgTech / knowledge sector, and the increasing popularity of Armidale as a viable 'tree-change' and tourism destination. The Armidale Regional Council is seeking to model these relationships to better understand the adequacy, limitations and thresholds of water infrastructure requirements over the longer term (30-50 years), based on current production scenarios and growth trajectories for horticulture, industry and residential water use.</p>
Armidale Regional Council	
<p>Contact: Will Winter, Economic & Business Development 0427 1520 68 wwinter@armidale.nsw.gov.au</p> <p>University Partner: TBC - subject to relevant clusters of research expertise and expressions of interest.</p>	

<p>Ground Water Research and Monitoring through IoT</p>	<p>Many Council's don't fully make use of existing ground water, previous bores are not mapped or out of service, with inadequate understanding of the water table quality and quantity. This project aims to research what we have in our area, map via GIS, report on condition, then establish a system to monitor and track usage to ensure Council is using renewable resources rather than town water. Ongoing the tracking through IoT sensors will allow better understanding of quantity and quality of water tables in the area. The sensors can also be utilised to track contamination.</p>
<p>Bayside Council NSW</p>	
<p>Contact: Robert Kolimackovski, Manager IT 0419 970 846 robert.kolimackovski@bayside.nsw.gov.au</p> <p>University Partner: It's expected the UNSW's Global Water Research Institute would be a natural partner for this initiative.</p>	
<p>Western Sydney Bioretention Monitoring and Water Quality Calibration Project</p>	<p>Blacktown City Council (Council) and other east coast Councils are required to implement stormwater quality treatment measures to comply with relevant State Environmental Planning Policies (SEPP). Other planning instruments also require Council to mitigate the impacts of urban development on receiving waters. Moreover regional plans have recently been prepared by the Greater Sydney Commission and require protection of South Creek from urban development. This will see stormwater management requirements embedded into Blacktown's Local Environmental Plan (LEP). To meet water management objective these Councils are predicted to make significant investments in bioretention treatment systems in the next 30 years to service the development in their respective greenfield and brownfield urban centres. Research to ensure that Council understands how to ensure good system health and plant survival is therefore of great value to all Councils and communities. This project aims to determine if these systems are meeting Council's and the State's water quality requirements and to investigate how these systems can be optimised for very hot, dry and saline western Sydney conditions (which then makes them suitable for most LGAs in NSW).</p>
<p>Blacktown City Council</p>	
<p>Contact: Mark Liebman, Senior Engineer 0468 423 299 mark.liebman@blacktown.nsw.gov.au</p> <p>Council's Contribution: \$350,000</p> <p>University Partner: Council has already began discussions with both University of Technology, Sydney and University of Western Sydney as consortium partners.</p>	