



AUSTRALIAN REGIONAL DEVELOPMENT CONFERENCE

Regional Development in a Changing World

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regionaldevelopment.org.au



Mr Caoimhin Arden

Director - Projects & Advisory Services, Energy Action (Australia)

Meeting the challenges of implementing energy efficiency in a regional environment

Across Australia there is a large stock of commercial and industrial facilities located in regional areas that are in need of energy efficiency upgrades, particularly in light of the soaring cost of energy.

Some of the challenges faced in these regional areas includes a lack of local expertise across the design, implementation and maintenance of energy efficient systems. The "import" of skills from the major centres leads to situations where there is no skills transfer, leaving incumbent local contractors in a position where they are unable to effectively maintain the newly introduced technologies.

In addition, the climatic conditions in these regions often mean that alternative technologies may be better suited than those used in the coastal metropolitan areas.

This paper will identify these challenges, the associated impacts and propose solutions that can be adopted to overcome the pitfalls of servicing these projects with non-local consultants and contractors.

Dr Lynne Armitage

Associate Professor, Bond University

Micro Homes: Trends and Implications on the Gold Coast

Housing affordability is a major crisis affecting both capital and regional cities around the world. In response to this predicament and the desire of many families to downsize, micro homes have become increasingly popular both in Australia and globally in recent years. Micro homes, which are smaller, more organised and more energy efficient than conventional homes, can lead to several benefits: relatively higher affordability level than conventional homes; higher density to support public transport and a growing population; and more efficient use of the limited land resources. However, micro homes have also been associated with such issues as lack of privacy, design shortfalls (e.g. insufficient natural lighting and limited living and outdoor space) and inability to accommodate the needs of larger families.

The Gold Coast is a city located in South East Queensland with approximately half-a-million population. As a major regional city based heavily on the tourism and construction industries, the city has been experiencing rapidly increasing housing prices and population. In this regard, micro homes are playing an increasingly important role on the Gold Coast, particularly in the newer housing estates. The objective of this paper is to critically evaluate the trends and implications of micro homes on the Gold Coast. To do so, the paper is divided into three sections. The paper, firstly, conducts a review of the literature on micro homes and their rising popularity in recent years. Secondly, the paper reviews a case study of the Gold Coast by exploring micro home trends across both the public, private and community sectors in the city. The paper then discusses key implications of micro homes on the Gold Coast before providing recommendations for addressing the major issues identified. Lastly, the paper concludes with key lessons relating to micro homes which may inform future policies on the broader scale.

Mrs Katrina Baddeley

CEO, Victorian Regional Community Leadership Program Secretariat Inc

Leadership A New Way of Doing Business

As Australia becomes increasingly urbanised, rural and regional Australia needs strong leadership to advocate for its needs. The Victorian Regional Community Leadership Program (VRCLP) association members develop leaders - individually and collectively to make a positive difference in their communities.

VRCLP's member programs use an experiential approach to education and capacity building so that participants build on their leadership skills in a safe environment this coupled with the provision of feedback via mentoring and other tools allows them to use the skills through a do, learn, do approach to learning.

Participants in the programs who are ultimately involved in community decision making need to understand, respect, and trust one another, even when they have diverse perspectives and backgrounds, they need to have the skills and tools to find creative, workable solutions and they need to pay at least as much attention to the common interest of communities as they do their own personal interests.

During the presentation, we will explore the "Why" behind the formation and purpose of VRCLP, explain our roots in Economic and Community development- bottom up approach that celebrates the diversity of our regions and allows each program to tackle regional and as well as Australian issues.

Currently unique to Victoria our programs operate 'in a region, for a region' and it is this strength of diversity and ability to meet the changing strategic needs of rural and regional communities that result in positive economic and social outcomes for Victoria.

The presentation will also consider the following questions

- Why are we attractive to business and Government?
- What impact are the programs having across rural and regional Victoria- economically and socially?
- How could our model be duplicated across Australia?

Mr Mark Bennett

Head of Agribusiness & Emerging Corporate, Regional Australia, ANZ

AgTech, defining farming's future

AgTech and big data benefits are making headlines, but what do they mean for the average farmer? Technology in agriculture is by no means a new concept, but is one that is increasing in importance due to the much talked about food boom opportunity. As the industry seeks to increase food production to meet the needs of growing populations, it is critical to consider alternative production methods to help increase supply and ensure ongoing industry sustainability. Transforming the global food system will require continuous advancements in agriculture technology.

At ANZ we seek to frame the possibilities in a way that encourages awareness, discussion and debate to inform industry decisions, and create advancement and competitive success. ANZ has modelled technology's link to productivity on a tri-scenario basis. This modelling seeks to answer the following questions:

- What are the implications, positive and negative, for Australia's agri industry and what is the size of the prize should we get it right?
- Where is Australia's competition and how are its competitors using AgTech to advance?
- What is the impact of AgTech on industry earnings and export revenues? What does that tell us about the quantum of investment required?
- Do we have the capital and resources to make the most of this opportunity?
- Is Australia linked to the critical engine rooms of innovation and change management?
- Are there subsector's that will benefit more than others in a new financial and supply chain environment?
- What is the role of banks and other capital providers?

ANZ's unique research and insights will address the wide ranging considerations that go beyond smart innovation and AgriTech application in Australian farming and supply chain.

Ms Julie Bird

External Research Manager, Rural Industries R&D Corporation

Australian Biomass for Bioenergy Assessment

The Australian Biomass and Bioenergy Assessment (ABBA), provides detailed information about biomass resources across regional Australia, to assist in project development and decision making for new bioenergy projects, and provide linkages between biomass supply, through the supply chain, to the end user. This will create uses and value for regionally based biomass sources, such as cereal straw, forestry residue and grape marc. In order to achieve this, the project is collecting, on a state-by-state basis, data on the location, volumes and availability of biomass, for inclusion on the Australian Renewable Energy Mapping Infrastructure (AREMI) platform.

This geospatial data is then available to renewable energy project developers, policy makers, and others, providing a multi-faceted dataset that will complement existing related information, such as energy infrastructure, power utilities, population data, and land use data. Data collected from this project is presented on the AREMI platform as customisable layers. Data collected and uploaded includes; the types, locations and volumes of existing biomass resources (where possible identifying both total and potentially available resources), the types, locations and volumes of existing bioenergy industries, identification of other relevant spatially based information in communication with commercial participants in the renewable energy sector, land capability for future biomass.

In addition to these data sets, interactive analytic tools are being developed to enhance the utility of the data. These analytic tools are likely to include information relating to estimated biomass cost, cumulative availability, and estimates of future biomass potential from alternative cropping scenarios.

The ABBA project is funded by the Australian Renewable Energy Agency, and the NSW, Victorian, Tasmanian, South Australian, Western Australian and Queensland state governments, QUT and USC, and is managed by the Rural Industries R&D Corporation, and will be demonstrated live during this presentation

Mr James Brann

Director of Engagement and Strategic Practice Leader Transition, Charles Sturt University

Bridging the digital divide - rural universities and accessible higher education.

While we are continually told that the future of Australia is in the regions but our infrastructure to support this is lacking. Part of this future is well educated, socially mobile rural community. Many students from rural locations choose to learn online. Learning online depends upon internet connectivity that is of sufficient speed and stability to enable seamless and effective engagement. Evidence shows significant variance in internet connectivity across regional and remote areas of Australia.. Such variability leads to inequities, and hampers some regional students' online learning experiences. In addition to this, anecdotal evidence indicates that financial constraints on regional LSES students' impact upon their capacity to afford data plans of sufficient size to meet their needs. The inability to access affordable and reliable internet cumulatively impacts on the quality of regional LSES students' learning experiences Understanding and responding to the context in which online students study is a vital component in Universities effectively facilitating regional student success.

The Outreach Team is the first of it's kind with industry using innovative student service mechanisms to make vital contact with CSU students during important transition points. This session looks at how Charles Sturt University's award winning* Outreach Team bridges the digital divide in rural and remote areas of Australia. Predominantly this will look at:
The Industry leading Outreach sessions where CSU travels to locations all around Australia to make important face to face contact.

The creation of the first Online Study Student Representative Council The range of proactive and reactive support mechanisms the Outreach team engages in to support the development of rural education.

*The CSU Outreach Team won the Equity and Opportunity category at the Australian Financial Review Higher Education Awards in 2016.

Mr Clint Bruin

Principal, ResTech

Sustainable water supply for capital constrained communities

People in small communities of Regional Australia need water.

The conventional approaches to providing treated water don't work, practically or economically. They do not readily accommodate the absence of major infrastructure and economies of scale—such as unlimited grid power, diverse support and service skills, communications infrastructure, logistics and high population density.

New thinking and collaboration can change this.

This presentation will show that by going back to system design basics. By addressing the integration of process and renewable power so that it is in sympathy with the environment and available resources, we can create a new convention. A convention that is scalable, sustainable and natural.

The presentation explains how using renewable energy in the DNA of water treatment plant design (rather than just an add-on) we can implement practical and economic water solutions for small and distributed communities.

Ms Lindsay Cane

CEO, Royal Far West

The economic importance of early intervention for regional Australia

The gap between the proportion of developmentally vulnerable children in regional Australia, relative to those in major cities, continues to widen across all domains (AEDC). Children in rural and remote Australia are twice as likely to be developmentally vulnerable when they commence school, and are subsequently twice as likely to score below the national minimum standard on NAPLAN tests by year three (AEDC). This is not only a social justice issue for regional Australia, but an economic one as well.

International research has found that reducing early vulnerability of children will yield substantial long-term economic gains for individuals, businesses, the economy and governments (Kershaw et al). Investing in early childhood development through assessments and suitable interventions is an investment in the human capital vital to ensuring the future prosperity of our regions and the nation as a whole.

Royal Far West has a 94-year history of providing integrated early intervention health and education services to children, families and communities in rural Australia. RFW's service diagnoses and supports some of the most complex, non-acute health and development concerns, including autism, intellectual disabilities, speech, language and communication problems, and mental health concerns. Since 2013, we have delivered over 40,000 occasions of service via telecare to over 2000 children across regional Australia, connecting allied health professionals into rural and remote communities where gaps exist.

Whilst the provision of health care via technology is not always appropriate, and is not necessarily a silver bullet, Royal Far West is collaborating successfully with a number of communities to intervene early, to reduce waiting lists, to provide paediatric support and expertise and to strengthen community-based services. This support is already having an impact on kids and families and in some cases whole communities.

Mr Glenn Capuano

Demographer, id (the population experts)

Population change in Regional Australia - 2016 Census

The 2016 Census shows significant changes in Australia's population make-up. This presentation will focus on the key results for regional Australia, which areas are growing and declining, where young people are moving, and which areas are gaining from metropolitan Australia, and why. Who are the winners and losers from the last 5 years, and what are the key differences between them? Are the existing trends being reinforced, or are there new trends emerging? What's likely to happen over the next 5 years. What are the opportunities for regional areas in attracting population from the cities, and from overseas?

Ms Catherine Caruana-McManus

Director - Sales & Strategy, Meshed

Community IoT Networks: How the internet of things is transforming regions and enabling truly connected communities

The internet of things is a \$120billion opportunity for Australia and presents one of the biggest opportunities to unlock the significant economic prosperity of Australian regions. With the proliferation of low cost connected devices and the invention of low power, long range connectivity, regional Australia is being transformed for a better future.

For the first time, public access "free to air" IoT networks are being deployed by cities and regions who are keen to bolster their smart cities, smart industries and economic development imperatives. For farming communities, Community IoT Networks are transforming their costs and ability to accelerate their precision farming requirements.

This presentation will explore a number of regional Connected Communities case studies including Ipswich (QLD), Sunshine Coast (QLD), Hamilton (Vic) and Wollongong (NSW) where next generation services and innovation are coming to reality.

Ms Jacki Dimond

NSW Manager, Foundation for Rural and Regional Renewal

The role of philanthropy in creating strong local economies

Every town or region is different but the challenges of building and sustaining thriving communities are similar, including attracting the right resources, managing volunteer fatigue, avoiding 'brain drain', addressing skills shortages and avoiding population decline and subsequent service loss.

But many communities are successfully tackling these challenges by driving economic development, with a little support from philanthropy. The tactics vary from job readiness programs and school-based training in agriculture for youth, community-driven art shows and farmers markets, creating social enterprises and running local leadership training, to region-wide marketing programs to attract new businesses and passing tourists.

When resources are limited but the community is passionate, this provides a blank canvas to be creative.

In this presentation, we will share practical examples of projects that have effectively supported, and even reinvented, their rural, regional and remote communities by establishing new economic development opportunities. We'll also share what made the projects attractive to philanthropic partners.

Mr Max Eastcott

General Manager, Gwydir Shire Council

Gwydir Shire's Circular Economy initiative

Gwydir Shire Council is developing a proposal based around the concept of a circular economy where the material flows stay with and benefit its local economy. The initiative has four distinct components that work synergistically to create an outcome far larger than any of the individual components being developed in isolation.

These components are, firstly, a behind the meter scheme that will fund every business and household within the Shire to become energy independent by fitting solar panels and battery storage with the repayments being less than the energy savings. The advantage of this scheme is that it will be available to all residents irrespective of their ability to pay upfront, which is an impediment to residents with limited disposal income, and the security of knowing the local Council is there if something goes wrong. This scheme is being modeled at the moment in conjunction with the University of Technology Sydney.

Secondly the planning for an agri-industrial area consisting of a 20 hectare greenhouse, biogas plant and poultry processing plant are well advanced. These three activities, working together, will create over 1000 direct employment opportunities together with a significant number of secondary jobs. The planning to date, using external consultants, shows the concept is viable and profitable, which is essential in order to attract equity funding.

Mr Noel Ferguson

Economic Development Manager, Wingecarribee Shire Council

Maintaining jobs in the regions despite Job Automation and Climate Change

The combined effects of Job Automation and Climate Change disruption are slated to result in 40%-50% job losses between now and 2030. Our current regional business support systems are unlikely to be able to cope with these massive changes. Successive Governments are unlikely to have the revenue base to be able to consistently spend five to ten times more money on business training services.

Community-based business mentoring is a relatively low cost and nimble way to improve the resilience and sustainability of regional businesses. Business Mentors New Zealand has used this approach for the last 25 years. In the process it has helped over 70,000 NZ businesses and not-for-profit organisations.

This presentation outlines our journey to date in the Southern Highlands of NSW, showing how regional communities can work together with existing business services to improve their future prospects.

Mr Andrew Findlay

Executive Director, Vertel

Broadband services for smarter, healthier and safer Australian communities

While the world marvels at (and in some cases is aghast with) the 'disruption' caused by 'web scale' companies with challenger 'platform operations', very little has changed for those individuals and businesses living and or operating in regional and remote areas of both developed and undeveloped countries.

In the Australian context, the ongoing failure of the NBN to effect meaningful change to those in regional and remote Australia coupled with the unrelenting dominance of Telstra has resulted in a scenario where the 'digital divide' as never before been so significant.

To address these issues, business, government and communities need to both challenge the 'status quo' presented by the incumbent telco carriers and commit to strong leadership in 'changing the game' in enabling the required communications infrastructure in their regions.

Andrew will identify and deconstruct the most relevant aspects of this challenging approach and provide insights and effective steps for Government, Business and Communities to take to secure the required converged, assured and secured network services for smarter, healthier and safer Australian communities.

Government and Enterprise organisations are operating from flawed assumptions and 'beliefs' that exist around the technical, commercial and social aspects of delivering infrastructure based competition for telecommunication services in regional and remote Australia.

The reality is that these communities need to get smarter in their approach to securing the fixed and mobile networks that underpin vibrant, safe and sustainable communities.

Andrew will deconstruct the current 'telco game' and provide insights and effective steps for Government, Business and Communities to secure these critical converged, assured and secured network services for these underserved regions of Australia.

Ms Claire Flanagan-Smith

Senior Consultant, RM Consulting Group

Community-lead conflict resolution

Communities across Australia are presented from time to time with challenges that threaten their social fabric, health, economy and/or amenity. Often, these challenges lead to conflict within communities or between communities and business or government. While conflict and competing interests are natural, dealing with community issues can be confronting.

Community-led problem solving is the process of working with communities to achieve better solutions to local issues. In this presentation, we advocate for a community-led approach to resolving conflict and demonstrate how communities, when properly supported and informed, can develop highly effective and well-supported solutions to the matters that concern them.

In 2014, the small community of Costerfield became alarmed about the impact of local mining activities on drinking water and livestock. As a result of continued hostility between community members, the mine and government, the Minister for Energy and Resources engaged RMCG to investigate and advise on the matter. Across 2015, RMCG used a community-led approach to develop a rounded understanding of the issues and come up with solutions that satisfied the community, the mine and government departments.

Mr Tim Ford

Founder, Cohoots Coworking

Inside-Out Coworking: A new model of community engagement for economic development

'Economic development opportunities for business and job creation' - these terms lead to infrastructure as a solution. If we change that phrase to 'socio-economic development in regional communities', we are focused on people. In a world that is characterised by an abundance of connections of weak ties, we are yearning for genuine interaction and connectedness.

Unfortunately we are not good at adjusting to this. With the rise in entrepreneurship across all groups and the need for young people to embrace these approaches due to declining employment opportunities, a new approach is needed.

92% of rural and 70% regional Victorian councils had declining business numbers in 2014/15. Within these numbers 96% of business entries and exits were micro-enterprises, employing less than 4 people. This majority group of entrepreneurs yearn for connections and a modern enterprise approach. Yet we prefer to focus on traditional approaches and on very small numbers of high potential of tech startups. These people are the local community and they can give a community sustainable vitality in the midst of the current retail, manufacturing or large single employer disruption.

Coworking is an obvious part of this solution as it provides entrepreneurs with connection, support and development. Inside-Out Coworking is a regionally developed model that expands on these approaches to involve the whole community of enterprising people.

Inside-Out Coworking reflects the modern socio-economic environment, which has at its core the principle of peer learning and support, building on the strengths and experiences of people within the community and creating mutual prosperity. It supports communities to be enterprising and to develop their own solutions from within in order to be sustainable. This approach challenges traditional business approaches that rely on top-down government support and formulaic models of business development.

Mr Colin Gillam

Major Projects Director, SSE Australia

Distributed Energy in Regional Communities ***WWW - Creating the Internet of Power***

WWW - World Wide Web

NEM - National Electricity Market

One works and the other is the NEM!

The Internet works because it was designed to be fault tolerant and interconnected through hubs that are all capable of redundancy. Web is a perfect description because it's connected in multiple directions.

The NEM fails because it's been designed to fail!

It is based around a centralised power model that means if there's a problem it's easy to shutdown and isolate the problem. From a safety perspective this is a good plan. However it tends to then shut down everything from the cause of the problem out to the end of the network, like cutting off the tentacle of an octopus.

Recent blackouts in South Australia and other regional locations are the result of aging infrastructure, poor design and private ownership of the network meaning profit is put before people. Now there's a revolution coming and the NEM can't cope and the private owners of the networks will fight it because it will destroy their profitability.

Distributed energy systems with battery storage make self sufficiency on power achievable to individuals, small communities or even whole cities and countries. And regional communities are the vehicle to deliver this change and provide the solutions. They are also the ones who can create new jobs and industries to build and support this.

The presentation will discuss interactively the types of opportunities that are open to communities and regional centres to become more energy self sufficient and to be part of the WWW of energy into the future..

Mr David Gregory

Entrepreneur, Xcursion

Building a Globally Focussed Tech Business In Regional NSW

Australians are great innovators, especially those from regional areas who are often faced with increased challenges due to their location and disproportionate access to services. Growing up in Tamworth in the 90s, I was endlessly frustrated about not having the same access to education and information technology as my peers in the city. Whilst the landscape is changing, how can we use this to our advantage to promote sustainable growth and development in our regions?

In the 90s, being an innovator, to my frustration, I saw many tech businesses emerge and thrive in areas such as eCommerce and media, yet from where I was living, the dreaded 56.6k dialup modem was a massive barrier to entering this booming world!

However, with access to communications catching up with the rest of the world, our regional areas can better service and support innovation in a rapidly changing landscape. Consequently we can now build global enterprises from anywhere that has a broadband connection. With these improvements in communications breaking down so many traditional barriers to entry, the opportunities for our regional centres is immense.

Despite this, innovation takes far more than just an internet connection. It's never easy developing an idea from a concept and building it into that globally focussed business, but it is possible! In my presentation, I'll explore this in further detail, highlighting some of the greatest challenges facing a tech business in regional Australia and what's needed to over-come these challenges and create opportunities for success.

From working in Education and running businesses in regional NSW, the services that are needed to support the next generation of entrepreneurs comes down to three simple things: Good coffee, fast networks and a well-serviced airport. If a regional centre has this mix of provisions, it suddenly becomes a very attractive place to base your business.

Mrs Leela Hanson

Director Business Development SME, Efic

Growing Regional Australia Through Exports

Why Export? - Benefits to the national economy are evident

Company level Evidence - Companies that export are more innovative and profitable than those that don't.

What does innovation mean? There is no one model for innovation. Efic Innovation White Paper identifies six types of innovation

Regional Australia is already a major contributor to Australia's exports – 67% of Australian exports come from regional Australia with the bulk coming from agri and mining. Other contributors include tourism, manufacturing and education.

How can we grow the Export Pie given the benefits? – Top down – ie relying on the trickle down impact from the major agricultural and mining companies to benefit SMEs in the supply chain and Bottom Up – Growing exports from SMEs themselves. Taking the Bottom up approach – How Regional Development organisations can help in creating the framework to assist regional SME companies to export:

- SME Export One Stop Shop– Helping SMEs to locate the support services available to move into or grow their export business.
- Building export capability – Eg. Use Export Clusters/incubators with government, universities and industry organisations to energise regional SME companies
- Learning from Export Champions – As the Export Brains Trust Export consortia –
- Maximise the spillover of management skills and knowledge from regional corporate and/or multi-national enterprises to local SMEs.
- Understanding the challenges facing SMEs wanting to export.
- Export Finance – Can make or break an export opportunity - Efic – We can help
- Conclusion: Exporting can grow regional Australia. Regional Development Councils can assist by creating frameworks to encourage SMEs to take the international road. Collaboration is key –

Mr Andrew Hoyne

Founder and Principal, Hoyne

WHY GOOD TOWN BRANDING EQUALS GOOD ECONOMICS: The real world social and economic benefits of effective placemaking and meaningful branding

This presentation aims to illustrate how branding done correctly - combining research, strategy, creativity and long-term investment – increases community cohesion, attracts business investment and improves economic performance.

Based on the findings of our book, *The Place Economy*, we share the increasing cache of case studies and company financials – from local and international sources – that categorically link better placemaking (planning, architecture, materials, green space, amenities, cultural connections) to significantly higher profits: profits in the sense of returns that developers and investors can enjoy, plus the coinciding upswing in economic performance and community wellbeing for regional centres and townships.

Within the presentation we explain how every area has its story but sometimes that heritage or distinction has been undervalued, belittled or forgotten. To create an authentic - not manufactured – identity for regional towns and centres you must determine how all members of the community want it to be seen. Achieve this and the result is a place that's attractive and inspiring to existing residents and businesses as well as potential visitors, new residents and new commercial opportunities.

Maroochydore, the capital of the Sunshine Coast, will be a key regional Australia case study in this session. Working with SunCentral, a corporation set up by the Sunshine Coast Council to oversee the development, Andrew Hoyne is shifting the perception of Maroochydore from being a sleepy little town to an energised, thriving, future-focused city. Maroochydore demonstrates how clever thinking in the early stages is speeding up the process of securing investment, therefore creating social and economic benefits for decades to come.

The *Place Economy* book is only one activity Andrew Hoyne has underway to help Australia maintain its famous quality of life. Later in 2017 he will launch a project to help one regional town kick-start a completely new, energised and economically buoyant future.

Mrs Melissa Kahler

Agricultural Land Use Planning, NSW Department of Primary Industries

NSW Department of Primary Industries: Right to Farm Policy Implementation

The NSW Government has developed a State-wide approach to deal with the concept of 'right to farm' and management of land use conflicts between agricultural activities and other land uses. The Right to Farm Policy was introduced in December 2015 and stated that the Government supports farmers' right to farm to the extent of what is lawful.

This paper will focus on two key themes. Firstly it will provide an overview of the NSW Right to Farm Policy and secondly, the application of the policy to the NSW North Coast Horticulture Industry.

The NSW Right to farm policy focusses on 6 themes, including:

1. Reinforcing rights and responsibilities
2. Establishing baseline data and monitoring system of land use conflict
3. Strengthening land use planning
4. Reviewing environmental planning instruments to ensure best land use outcomes
5. Improving education and awareness on management of land use conflicts
6. Considering potential future legislative options.

For the purpose of this discussion, theme 2, establishing baseline data of land use conflict, will be the focus. In 2016 NSW DPI and the University of Technology Sydney set up a 3 year project to investigate the type and extent of land use conflict in NSW, how council manage conflict and how they can be better supported. Preliminary results from the first 2 years of this study will be delivered.

The horticulture industry, particularly Blueberries, has experienced significant growth in recent years, being valued at over \$200 million and providing significant economic contribution to the regional economy. This rapid expansion has caused serious levels of land use conflict amongst adjoining landowners, community members and other agricultural industries. Discussion around the application of the right to farm policy and collaboration between industry and agency stakeholders will outline how all stakeholders are working towards addressing land use conflict.

Dr Michael Kane

Director Innovation and Economic Strategies, Economic Development Queensland, Department of Infrastructure, Local Government and Planning

Rethinking regional economic development – innovative and diverse strategies to grow our regions

Regional economic development has traditionally been about natural resources and infrastructure. Innovative diverse strategies are however also required to maximise the opportunities across Queensland's diverse regions.

Regional economic economies and communities are under increasing and continued pressure. With increasing evolution in the Australian economy to knowledge intense service economic activity in urban areas, away from traditional once labour intensive natural resource industries, regional communities need to develop diverse economic activities that leverage the region's comparative advantages.

Achieving increased economic development in the regions requires a partnership approach. The traditional government land developer approach is to deliver traditional land developments projects. Thinking innovatively Economic Development Queensland (EDQ) is working with Queensland's regional communities to plan and undertake development, attract investment, build infrastructure and create economic activity and jobs.

As an economic development specialist business unit with a broad range of capabilities EDQ, working with local communities, is able to deliver innovative and diverse projects across Queensland's diverse regions.

EDQ is enabling a range of developments across industrial development, renewable energy, energy infrastructure, and tourism and town centre rejuvenation. This paper sets out both the partnership approach and the diverse range of project that EDQ is working on with local communities. These innovative project examples include:

- Indigenous community and tourism development on Palm Island
- Town centre regeneration in Rockhampton
- Award winning affordable regional housing developments in Townsville
- Electric vehicle infrastructure supporting EV road based tourism
- Large scale renewable energy solar farm at Aldoga, near Gladstone
- Planning for the waterfront development at Townsville
- Gas pipeline infrastructure to support industrial development in Bundaberg

EDQ's seeks to understand the diverse opportunities while bringing in external financing, planning and development expertise and to work with local innovation and energy. Diverse innovative economic opportunities are being created in regional Queensland with this approach.

Dr Sam Kebell

Senior Lecturer, Victoria University of Wellington

Speculative Design and Regional Development: Three Case Studies on New Zealand's Kapiti Coast

The Kapiti Coast District covers more than 700km² within an hour's drive from Wellington, and while it is home to approximately 50,000 people, it is an increasingly contested landscape. It is typical of accessible regions around New Zealand, where developers look to expand the city limits, farmers look to increase productivity, indigenous people look to defend their cultural integrity, and baby boomers look to retire on their own piece of paradise. Landscape and architectural development are in constant tension, each compromised for the advance of the other. The aim of this research was to explore more symbiotic relationships between architecture and landscape that are relevant to the region.

Over the past four years, more than two dozen research students in architecture, interior, and landscape architecture at Victoria University of Wellington have taken the region as their subject of inquiry, and explored compelling alternatives to the current trajectory. Through speculative design-led research, students discovered possibilities for the region through the lens of a single project. This paper will present three design theses which demonstrate how landscape and architectural development can be intensified in more interdependent ways.

Mr Greg Laverty

Director Economic Development and Major Projects, Sunshine Coast Council

Solar ... why not the Sunshine Coast

In 2017, Sunshine Coast Council will commence operations at its \$50.4 million 15 megawatt solar farm – the first to be constructed by a local government authority and the fifth largest in Australia. Construction has seen the installation of more than 57,000 photovoltaic modules, almost 1,500 support structures and six inverter stations. Civil works include a control room, roadworks, and medium voltage underground lines.

Located at Valdora on a 49 hectare site previously used to grow sugar cane, the solar farm will have the optimum solar perspective: no shading, located away from urban areas, and limited impact on the surrounding rural community. A 10 metre wide green buffer zone along boundaries, including the road frontage, will be provided by the planting of 36,000 trees.

Over a 30-year period the Sunshine Coast Solar Farm will provide after cost-savings of \$22 million, based on today's electricity costs, and offset 100 per cent of Council's electricity consumption across all its facilities and operations. These include administration buildings, aquatic centres, art galleries, community and performance venues, holiday parks, libraries, and sporting facilities. Sunshine Coast Council serves Australia's 10th largest population centre. Its current population of 285,000 residents is expected to reach more than 450,000 by 2031. Council's vision is to be Australia's most sustainable region and the Sunshine Coast Solar Farm is at the very heart of realising this vision for its growing community.

This presentation will reinforce the premise that local government authorities are ideally placed for self-build renewables by investigating a council as its own customer, policy drivers for sustainability projects, stakeholder engagement within the private and public sectors, relationship building and management within the community – and the challenges and the successes that accompany such an undertaking.

Ms Maxine Loynd

Director - Regional Development Policy, Department of Infrastructure and Regional Development

CSIRO Regional Strategic Foresight Project

The Department of Infrastructure and Regional Development recently collaborated with the CSIRO on a Strategic Foresight project for regional Australia. The project developed a framework for understanding the inter-generational trends to develop potential future scenarios for regional Australia. These scenarios are enabling consideration of what it will be like to live, work and invest in regional Australia in 30 years. The scenarios are being used by the Department to inform regional development policy and investment decisions. The involvement of both subject matter experts and regional thought leaders was key to the project's success.

A wide range of regional development stakeholders from academia, the community, industry and across all levels of government was consulted during the course of the project. includes infrastructure investment, employment, education, health and private investment.

The scenarios were informed by the following five megatrends: connectivity improvements in both physical and telecommunications infrastructure; the growing significance of the Asia-Pacific region; population growth and economic activity being drawn away by larger centres and high amenity areas from smaller towns; value generation through knowledge, innovation and new services in the economy; and the environment as a source of both risk and livelihood to regional communities and businesses. These megatrends were identified through analysis of issues related to social, economic, institutional, environmental and technological change.

Most regional policy encompasses cross-cutting issues such as health, education, communications and immigration. Accordingly, the final report is being used to influence a range of policy development not only in the Department of Infrastructure and Regional Development, but also more broadly across policy areas which have a regional dimension. These include industry, education, health and immigration. The report is also of key relevance to industry and business and they consider future investment and development opportunities in regional Australia.

Dr Andrew Manning

Senior Manager Infrastructure Planning and Development, North East Water

The Regional Growth Strategy: an innovative model for strategic urban water planning

The objective of my presentation is to document a case study which outlines the model developed and applied by North East Water in the preparation of the Corporation's "Regional Growth Strategy".

The RGS model is an adapted form of the Victorian Department of Planning's integrated land use planning methodology utilised in the 'Regional Growth Plan program'. The adapted model investigated and evaluated data associated with industrial, commercial and residential land supply, dwelling demand, economic development and population change.

A fundamental success factor was engaging and capturing advice from local government, agencies, state government, the private sector and communities in north east regional Victoria. This was further extended by harnessing the extensive 'on-ground' knowledge of North East Water's professional workforce. These engagement fora were critical in determining the shape and final form of the RGS.

As a case study, the RGS will be discussed in relation to contemporary models for policy development and decision making.

The RGS model highlights that an integrated approach to investigating and embedding the drivers of regional growth and development, creates an environment for more informed and robust decision making as to investment in future urban water services and infrastructure.

Ms Narelle Martin

Director, Regional Change Agency

Impacts and Opportunities: Economic Development and Climate Change

No matter what we do to reduce greenhouse gases in the immediate term, we have already changed the climate, and will continue to do so: these changes are locked in. Making decisions that incorporate and adapt to the impacts of climate change is therefore both an immediate challenge and an opportunity. The need for pragmatic considerations.

Councils, businesses and individuals make decisions all the time. Often decisions can be based on what has worked in the past. There is a need to consider the current and future impacts of climate change routinely into decision making.

An obvious example is infrastructure. It is sensible to routinely and consciously ask questions and consider the impact of climate change on the location and construction of the infrastructure. Is it in the right place? Will increased flooding and intensity of rainfall mean that the location or type of infrastructure should be reconsidered? Rather than repairing roads, does there need to be a program to shift roads at risk?

Are trees being put in the landscape going to cope with increased temperatures, heat waves and change in rainfall patterns? If they don't then money, time and people resources have been wasted. There are also opportunities to take advantage of the changes due to the impacts of climate change. What commodities will grow in a region in the future? Where are opportunities for providing heat refuge holidays? Are there communities that that can develop and be marketed as retirement hot (or as it may be, cooler) spots?

We need to move the discussion of climate change impacts from the environmental realm to a core business, and economic development, risk and opportunity.

The pragmatic impacts of current decision making will either help or hinder the future of communities.

Dr Deepika Mathur

Research Associate, Charles Darwin University

Don't waste your waste: need for diverting construction waste from landfills in regional towns

There is a need to rethink how construction waste is managed in Australia. The need emerges from the fact that waste from construction and demolition activities constitute 40% of the total waste generated. The rate of waste generation is growing at twice the rate of population growth in Australia with projections that renovations (which generate almost five times waste as new construction) will be the largest activity in the construction sector in the future. In regional towns, huge quantities of construction waste going to landfills not only results in significant air, water and soil pollution, it also leads to tremendous pressure on the limited landfill spaces.

It is more problematic for regional towns which already face the barriers of distance from reprocessing centres and economies of scale for recycling and reusing this waste. This paper argues the need for managing construction and demolition waste more efficiently in regional towns. Interviews with builders, architects and landfill operators in Alice Springs, a regional town in central Australia, were used to identify the on-site and off-site practices of waste generation, collection and disposal. The findings identified a range of barriers to diverting materials from landfill in small regional communities. These include minimal on-site sorting, lack of financial incentives, limited opportunities for recycling, lack of awareness and industrial culture. These results are significant because they highlight the need for better policy and more appropriate context specific solutions for reducing and recycling construction waste for regional towns.

Mr John Mayo

Chief Advisor – Government, Spinal Life Australia

Inclusive Communities make dollars and sense

Future planning for regional areas will need to include how people, both residents and tourists, access the region as a consumer, a consumer of goods, services and information and a user of buildings, infrastructure and precincts.

The populations most influenced by that planning are:

- People with a medical condition, e.g. arthritis/osteoporosis 18.1%,
- People with a disability 18.5%,
- The Over 60s 17% (projected 26% by 2031)
- People with temporary injury 20% plus
- Parents with prams 6%,
- People with language other than English 19%

For any region to grow and develop, the organisations that comprise its fabric will need to review their accessibility and user friendliness.

When they do they will find their city/town has simply evolved; that many pedestrians cannot seamlessly connect from venue to venue, that websites are not customer friendly, that some services and places could be described as ‘elite’ because only some people can access them. And, they will find there is no handy bucket of money to fix all of these.

The way forward is to make the region user friendly through organisations having a policy and an Action Plan for a ‘no gaps’ community. The driver is to become an Inclusive Community.

This presentation shows the way for Local government, industry, business and community organisations to make people feel ‘included and engaged’ and progressively deliver services and venues offering equitable access to improve economic returns.

It details the multiple beneficial functions of an Inclusive Community Action Plan and relationship with annual Business Plans and Budgets to fund progress. A generic Policy and Action Plan template will be available for participants.

An Inclusive Community – a program to maximise the social and economic performance of regions, state and nation operating within a global economy.

Mr Armando Mazzei

Associate, SGS Economics & Planning Pty Ltd

Funding our regions - successful stories of infrastructure funding in regional towns with developers contributions plans

Regional Australia is continually growing and is expected to be home to 1.3 million additional residents over the next 20 years. This additional population will put stress on existing infrastructure, placing the current lifestyle of the regional residents in jeopardy. To mitigate these impacts Australian regions will need to invest 3 billion dollars in infrastructure over the next 20 years, and limited resources will be a challenge.

Funding this infrastructure with tax payer's dollars doesn't seem plausible, with rates capping limiting the amount that can be collected, restricting opportunities to build new infrastructure. Furthermore, it is unfair to expect current residents to pay for infrastructure needs triggered by future users.

Australian legislation has created mechanisms to facilitate "user pays for infrastructure" models to regulate the way additional population is charged for the infrastructure required. This mitigates the impacts that population growth may have on existing infrastructure.

This presentation will draw on analysis of DCP's that have been adopted over the last 10 years, showcasing the outcomes for their respective communities. Armando will:

- Highlight the benefits that these DCPs presented to their regional areas, compared to the risks associated with putting them in place.
- Review ways to build skills in the regions to implement these mechanisms and tools to monitor the performance.

Ms Heather McGregor

Director, Aboriginal Services - North, TAFE NSW Coffs Harbour

Co-authors:

Mr David Roberts, Manager, Aboriginal Education and Training, TAFE NSW Campbelltown

Pathways to partnership, participation and progress

The presentation will provide insights into the development and proven results of an educational engagement and delivery model established through Aboriginal leadership and self determination. The presentation will outline unique approaches to shaping of learning design, enquiry and communication channels, brand and visual identity, cultural safety, rigour, flexibility and results. It will demonstrate the underpinning capability development and cross functional collaboration amongst the diverse Aboriginal Pathways staff community; demonstrate the use of customer experience standards; culturally appropriate support; and reflect on the systemic challenges/resistance that can be met when asserting approaches that are based on Aboriginal values and ways of knowing.

The suite of products, services and infrastructure behind "Aboriginal Pathways - TAFE NSW" have seen flexible, mixed mode delivery of pre employment programs, customised workforce development programs with employers and key partnerships to combine capability and resources in the interests of Aboriginal student outcomes.

Case studies will be shared to demonstrate examples of bringing students together from multiple communities to develop skills for viable enterprise development; deep collaboration with an employment service provider to provide intensive residential pre employment programs in partnership with industry; and negotiation with peak bodies and large employers to develop customised models of delivering qualifications to upskill Aboriginal staff.

In particular the presentation will explore the importance of committing to leadership, design and delivery by Aboriginal people. The growth of Aboriginal leadership positions in industry and key organisations, as well as influential Aboriginal organisations, has seen increased expectations around negotiating services with Aboriginal counterparts in TAFE NSW. This requires a core ongoing focus on building leadership and capability in Aboriginal staff to meet this expectation. A case study of Aboriginal staff growth will also be shared.

Changing customer expectations about flexible, industry driven training, coupled with increasing demand for culturally appropriate relationship management and service design, has resulted in innovative approaches to Aboriginal Services in TAFE NSW. Aboriginal self determination, and collaboration led by Aboriginal people for Aboriginal people, has driven clear results in educational outcomes, career Pathways and business growth.

Mr Craig Milburn

Director Finance Corporate and Community Services, Shoalhaven City Council

Managing change from the board to the community

This presentation would cover two areas of change – the role of the Shoalhaven Tourism Advisory Group (STAG) and the approvals of events. The STAG are the primary industry advisory group to the Council on tourism matters. Over the past 4 years the group has undergone significant change from small things like a name change to major changes to the terms of reference. The interaction of the STAG to the Council staff has also been presented with challenges over this time as the staffing has moved from an under resourced area to a well-resourced highly skilled unit that is now able to undertake many of the roles the previous advisory body did. So what does STAG now do after being successful in developing the resources the Council has committed to this area?

In addition to this the Council has changed its LEP to allow events conducted on council land that use to require a development application (DA) to now be simply assessed under an events process and not requiring a DA. The presentation would cover the issues faced, the steps taken by staff to make this transition across groups in the organisation and how the community has responded.

Mr Peter Morris

Principal, Telesis Consulting

Building Rubber Ball Economies: Entrepreneurship-led resilience for sustainable regional economic development

Large employers in rich economies have been shedding workers for more than three decades. In these developed economies the OECD has found that new jobs have come almost exclusively from start-ups and from expanding Small to Medium Businesses.

In regional economies these trends have extra bite. This is caused by the points of vulnerability of virtually all regional economies.....

1. they tend to be heavily reliant on commodities, so they are price takers and the value of their output is determined by global markets; and
2. large regional manufacturers are commonly Low value/High volume producers placing them directly in the firing line of cheap global competition.

Geelong's entrepreneurial-driven recovery

The crisis which hit Geelong with the closure of the Ford plant last year is a classic example of all of these forces hitting a regional economy. About 580 workers directly employed by Ford lost their jobs when the parent company closed the plant in the face of multi-million dollar losses. A critical part of the rescue package from government has been the creation of the Geelong Runway program to develop local entrepreneurs across the region.

The projects aspirations are substantial....

Over five years, the initiative aims to generate more than 500 direct and 2,500 indirect jobs, create up to 70 new enterprises, more than \$150 million in annual GDP and \$500 million plus in cumulative asset value.

Geelong has had its crisis moment and is rebuilding from the ashes. The challenge now is to find communities which recognise the vulnerabilities their region's have inherited and the impact the rapidly changing global environment may have and step in with a positive response early, before they are faced with a burning platform and the need to jump, anywhere and quickly.

“Are entrepreneurs born or made?”

The approach being used in Geelong - Start-up Science – is a proven and efficient approach to refine business ideas into robust, investment-ready start-ups.

Start-up Science has been the weapon of choice for CSIRO, the University of Western Australia and the Swinburne University of Technology, as they are pressed to convert research into profitable commercial ventures.

And some of the most innovative corporations of our time have employed Start-up Science as the best means of navigating a future in their fast-changing industries to ensure they do not become innovation road kill, including

- Telstra
- Google
- Fontera
- Singtel Optus
- Coca Cola Amatil, amongst others

Today we are seeking to launch Start-up Science into Regional Australia.
Here is how it works.

Mr Matthew Nichol

Principal Economist, REMPLAN

Creativity Loves Constraints!

We love creativity because of the amenity it contributes to our lives and the communities we live in. Creative activities have an economic dimension too that is reflected by jobs in creative fields. Some of these jobs are in businesses where creative processes are central to the products and services developed. Creative activities can also be embedded in other 'non-creative' industries, for example, an iron and steel forge casting sections for a sculpture.

Marissa Mayer, then VP at Google, is credited with saying "Constraints shape and focus problems and provide clear challenges to overcome. Creativity thrives best when constrained." From an economic development perspective not only does creativity love constraints but if we value creative activities in our communities, then creativity itself needs the fundamental constraint of a common definition.

One key constraint already exists, that is the overall composition and value of a region's economy in terms of employment, wages and salaries output and value-added / Gross Regional Product by industry. The Creative Industries simply must fall within these parameters. This paper explores the ABS' experimental 'Cultural and Creative Activity Satellite Accounts' as well as REMPLAN's methodology that is focused on defining Creative Industries across local government areas and regions.

How creative is our region?

A common definition allows benchmarking and the identification of gaps and potential opportunities to expand creative activities. Concerts, exhibitions and festivals often attract visitors to regions and therefore it is important to also understand the overlap between the Creative Industries and the Visitor Economy.

Cultural activities and amenity are key factors in attracting visitors. These aspects also appeal equally to residents and are key to driving population growth. Economic studies into the value of Creative Industries are sometimes criticised for not adequately capturing the true intrinsic value of the sector. This paper explores approaches for measuring the broad range of contributions by Creative Industries to regional economies.

Dr Rob Passey

Senior Research Associate, ITP Renewables

Identifying the most appropriate renewable energy options, as well as ways for Councils to drive uptake and maximise local benefits

There is rapidly increasing interest shown by communities in smaller-scale renewable energy, most notably distributed solar PV systems, and more recently, in batteries for electricity storage at the household scale. There is also increasing interest in medium-scale projects, such as bioenergy from sewage treatment plants and wind farms.

Such projects can of course have environmental benefits, but they can also have significant local social benefits. These include:

1. Direct local employment creation and skills development:
2. Indirect employment creation: by reducing the amount of money that leaves regional areas through the generation component of electricity bills, which can then circulate through the local economy and create local employment.
3. Local resilience: by enabling ride-through of brown outs and blackouts.

There is a clear role for local governments – not only to facilitate and so maximise uptake, but to guide this in order to maximise local benefits such as employment creation.

We discuss the work already undertaken for Byron Shire Council as well as the work currently underway for East Gippsland Shire Council. In both cases this includes:

- a) Hourly modeling of the electricity load to identify the least-cost technology options which would achieve each Council's targets.
- b) A discussion of the associated impacts on the electricity network.
- c) c. A discussion of the options available for Councils to create an environment where the community can develop renewable energy options and maximise local benefits.

Dr Kithsiri Perera

Lecturer, USQ

Application of Remote Sensing and Social Media to Mitigate Bushfire Threat in Regional Australia

Bushfires behave as an integral part of forest regeneration cycle, but when it comes to the point of a natural disaster, the impact to human settlements and the environment is massive. In Australia, bushfires have become the most disastrous natural hazards. According to the Australian bureau of Criminology, bushfire damage recorded from 1967 to 1999 have an estimated cost about \$2.5 billion excluding losses to the forest cover and the environment. After the disastrous 2009 Black Saturday bushfire in Victoria, public attention to bushfire took a new peak.

The Black Saturday bushfire has killed 173 people and injured about 500 people. However, about 50% of 54,000 average annual Australian bushfires occurs due to suspicious and deliberate reasons. Due to this grave situation, scientists are regularly exploring various methods to mitigate the damage from bushfires. This study focuses on a low-cost safety measure that can be powered by widely available free satellite images and popular social media to mitigate the bushfire disasters, particularly in regional Australia. The prime focus of this study is to educate rural communities about the progress of bushfire using semi real-time MODIS satellite imagery, and in return gather local information through social media. Satellite imagery based bushfire graphic contents will be available for local communities through social media.

These bushfire contents can be further uploaded to local newspapers, TV, and, to mobile subscribers, to establish and expand the participatory user cohort. Google functions such as placemarks can be linked with satellite data and user input (participatory GIS) to create and deliver the media GIS contents with precise bushfire information. Collected Participatory GIS inputs can be used to enrich the GIS database to conduct further enhancements of participation and safety measurements of rural communities in bushfire hazards.

Dr Caroline Perkins

Executive Director, Regional Universities Network

Regional Universities – Anchor Institutions for City Deals

City deals, growth deals (outside city areas) and smart specialisations in the UK and Europe have been rolled-out in recognition that a spatial policy and funding frameworks do not deliver for all. These place-based policies for economic development, collaboratively developed from the bottom up by local stakeholders, give regions and cities hope for a brighter future. For national cohesion and prosperity, regions and cities cannot be left behind.

Universities are recognised as anchor institutions for their regions and are a driving force behind many of the initiatives. Australia has just started to follow the British and European models and can learn much from these examples.

City and growth deals are collaborative agreements between the major regional players – all levels of government, regional development bodies, business, universities, vocational training providers, and other key stakeholders – that commit to a vision and priorities for development for an area. The initiatives may build on existing regional advantages or business strengths, or seek to develop expertise in areas of growing need.

Universities are politically neutral, bring disparate parties together, and are brokers and facilitators. They can use their knowledge, research and connections, including in the international context, to inspire a vision for development for the local city or region.

Innovation is an important part of many of the deals. When packaged in the context of regional development, innovation is seen as a positive force for jobs and growth and not the source of disruption and job loss.

In Australia, universities are participating in the first tranche of City Deals. The first competitive round of City Deals for regional cities and outer metropolitan areas in Australia this year will provide new opportunities for place-based economic development with universities at the centre.

Mr Warwick Powell

Chairman, Sister City Partners Limited

Agtech meets Fintech: blockchain and supply chains to revitalise agribusiness

Who would have imagined that bitcoin's foundations could find their way to helping the transformation of regional economies? Developments in blockchain technologies provide opportunities to re-engineer diverse and complex supply chains. In doing so, questions of provenance can be better addressed, driving place-based value in end products. Importantly too, financial re-engineering becomes possible, resulting in greater financing efficiency, better risk allocation, security of payment and over time fairer and more effective cross-generational succession.

Sister City Partners - and its subsidiary entities - have been at the forefront of collaborative development of applied blockchain technologies in a number of supply chains, including the production of beef. Our case studies show how leading edge technologies can be aligned to add value to traditional activities and drive value in a consumer-centric world.

Our design and development work has emerged out of an interest and desire to rebuild the foundations of a viable "agriculture of the middle" in regional Queensland, and have led us to becoming a founding industry partner in the CRC for Food Agility. In that context, we have begun to bridge the worlds of fintech and agtech, where data is the lingua franca.

Mr Malcolm Robertson

Senior Project Officer, Office of Environment and Heritage

Assessing regional vulnerability to build adaptive capacity

As climate affects multiple systems, addressing climate vulnerability requires systemic, coordinated responses, with input, agreement and collaboration of multiple stakeholders. As part of the NSW Government Enabling Regional Adaptation process, Office of Environment and Heritage is assessing place-based vulnerabilities and responses; enabling regional scale consideration of climate projections and related impacts on government service planning and delivery.

This presentation will outline the Western Enabling Regional Adaptation project, which provided structured process to build understanding of projected climate impacts and identify opportunities to address regional vulnerabilities. It will explore how to build on the capacity of key regional decision-makers to enhance government service planning and delivery at a regional and sub-regional scale across Western NSW.

Dr Francine Rochford

Senior Lecturer, Director of Learning and Teaching, La Trobe University

What Happens When The Water Leaves? Sustaining Water Infrastructure In A Marketised System

Infrastructure funding remains a constant theme in social sustainability. In a user-pays irrigation system reliant on large scale and aging infrastructure the funding model may have a significant impact on the sustainability of regional communities. This paper presents a case study of a Victorian in which large volumes of water have been permanently traded out of an irrigation system. The result may be that the remaining infrastructure is unviable at a system level.

The paper considers a number of options: to allow the infrastructure to be retired, to intervene with strategies to attract new industries – and water – into the area, to explore alternative funding models, and to explore alternative funding methods. It will draw upon literature in other jurisdictions and in other large infrastructure contexts to address the common problem of post construction infrastructure sustainability. In particular it will consider literature addressing climate adaptation finance mechanisms with a view to articulating this issue as a precursor to large infrastructure problems in a climate change era. The result will inform new approaches to sustainability of climate change adaptation.

Mr Stephen Saunders

Section Leader Industry and Destination Development, Coffs Harbour City Council

Create your paradise – where destination and industry intersect

Coffs Harbour is a regional city of approximately 73,000 which has historically been heavily reliant on tourism, agriculture, construction and government services.

In May 2016 a new tourism strategic plan for the Coffs Coast region (which includes a partnership with neighbouring Bellingen Shire Council) was adopted, and is now in its second year of implementation.

One of the characteristics of the strategy development process was the involvement of an industry-led section 355 committee, working with the two Councils. As a result the Destination Coffs Coast Committee (DCCC) was formed to advise on strategic direction and monitor the implementation of the agreed strategy.

A key aspect of the strategy concerned the basis for differentiating the region from many other Eastern seaboard destinations. The DCCC decided on a nature-based strategy, built on the unique natural landscape of where The Great Dividing Range meets the Pacific Ocean. This landscape endows the Coffs Coast with Australia's most liveable climate (source: CSIRO), and a combination of temperate rainforest and stunning maritime scenery, including 90 kms of beaches.

The challenge was to utilise these natural assets while protecting World Heritage areas, and overcoming a historical lack of investment in new accommodation and other tourism infrastructure.

The adoption of the Tourism strategic plan was followed by the development of the Coffs Harbour Events Strategy. Council owns and manages the C.Ex International Coffs Harbour Stadium which has hosted key sporting events, including the World Rally Championship Service Park, national and state events like Oztag, International women's cricket and FFA soccer, to name but a few. Council also plays a role in supporting the development of community capability to host smaller, but nonetheless vibrant events that attract and entertain visitors and locals alike. Council has recently secured matched funding from the Federal government for the enlargement of stadium facilities to complement the superb playing surface.

Cultural event development and ongoing event attraction is a key opportunity for the region. In parallel, Council has been working on a refreshed Economic Development Strategy (EDS) that reflects the current economic opportunities and challenges facing the region. A central element of this has been to focus Council resources on areas where it can make a contribution, over and above growth that will be market-driven. The Digital and Innovation economy, the Agri-food economy and the Visitor economy have been singled out as areas of priority. The focused use of Council resources to support and build capability for these sectors is the framework for this important strategy. Other important elements of the strategy are focused on attracting investors and new

residents, while retaining the city's youth. Place making is a new and growing element of the strategic direction.

This paper lays out the lessons learned in trying to achieve positive economic outcomes with limited resources, and how the integration of communication, Council structures and support together with community partnerships have contributed to progress to date.

Mr Thomas Schwarten

Business Development Manager, Principal Environmental Restoration, Syrinx Environmental PL

Lake Bolac Sewage Treatment Wetland – A Success Story For Passive And Sustainable Waste Water Treatment And Reuse

The passive sewage treatment wetland is in Lake Bolac, Victoria and is operated by Grampians Wimmera Mallee Water (GMMWater) with the aim to achieve sustainable, low cost, low energy, effective and reliable waste water treatment in a remote rural community 230km N/W of Melbourne. Wastewater enters the system via a pressurised sewer main and flows into the first stage of the primary treatment system which consists of four settling tanks where removal of coarse solids takes place wastewater then flows into the two woodchip filters where removal of fine particulates and oil and grease takes place.

Following this, wastewater flows into two dosing tanks that discharge into one or both of the vertical subsurface flow wetland/s through a siphon system; water passes through the vertical subsurface flow wetland/s operating alternately in off-peak periods and in parallel during peak periods to facilitate reduction of Biological Oxygen Demand (BOD), Total Suspended Solids (TSS) and initial nutrient loadings. Wastewater then passes through a series of three surface water wetlands operating in series for removal of nutrients and pathogens and finally, whilst a large proportion of water is lost through evaporative processes, any excess treated wastewater is released onto a biodiversity floodplain for disposal.

The biological treatment approach using passive waste water treatment technology is perfectly suited for small remote communities, delivers sustainable and environmentally acceptable solutions and provides long term opportunities for rural employment and capacity building within local communities and the workforce.

The innovative use of treated waste water to re-establish a biodiversity floodplain on degraded or unused (farm)land creates valued habitat for flora and fauna and value adds to community assets and infrastructure use.

Passive sewage treatment wetlands are highly successful if designed, constructed and maintained well; these systems have been successfully operated across Europe for decades and are implemented across Australia in many different climate zones and rural settings.

The key to success once in operation is system and wetland knowledge and staff commitment

Mr Tim Smith

Urban Planner, JBA

Co-authors:

Mr Gordon Kirkby, Director, JBA

Is the Last Plane Out of Sydney Almost Gone? Aviation and Regional Development in New South Wales

Capital city connections to regional and remote areas of New South Wales provide accessibility to countless services and facilitate connections between producers and global markets. However, regulatory and market driven factors have led to a recent destabilisation of the regional aviation scene, contributing to the termination of some long established routes and a lack of confidence in route profitability by carriers. This has in turn had a perceived impact on economic certainty and local quality of life in some of Australia's most vulnerable areas.

This presentation demonstrates the connection between intrastate Regular Public Transport air services, and the economic and social performance of regional centres. This work included a review of impact of transport in regional areas and the planning significance of such connectivity, as well as a review of the current economic environment and the application of government policies across regional NSW. A quantitative analysis of relationships between passenger flows and regional economic indicators is reported with a range of interviews informing the findings.

Ultimately, for the continued wellbeing of regional New South Wales, increased political and systemic recognition of the varied benefits of aviation services is essential in order to avoid continued service decline, market failure and regional disinvestment.

Mrs Merran Socha

Business and Industry Liason, Berrigan Shire Council

Engaging a community to benefit an industry

Engaging the community to benefit an industry

Queensland Fruit Fly (QFF) was declared endemic in Southern NSW and Northern Victoria in 2011 and all State Government intervention in eradication of the pest ceased. The community was accustomed to contractors entering private property and blanket spraying when outbreaks of QFF were detected in the high value pest free production zones of the southern Riverina and the Goulburn and Murray Valleys.

Almost immediately the local horticultural industry was impacted with increased infestation of QFF, resulting in increased costs for control, a decrease in production and international market access was threatened. Concurrently, the community was impacted with infestation and fruit destruction in backyard orchards and loss of vegetable garden production.

Council faced a double edged sword from the same issue – needing to support its largest and most valuable industry and wanting to protect and promote a healthy community activity in productive backyard orchards vegetable gardens. Research strongly supported the hypothesis that most QFF infestations originated in the urban and peri-urban areas where the pest was offered shelter and the ability to “overwinter”.

A comprehensive communication strategy was developed to educate community on how to best protect their gardens from QFF. The premise of the campaign was that control in the towns would be the best way to protect the horticulture industry. The program was initially implemented by Berrigan Shire Council and in subsequent years has become a cross border partnership including Moira Shire Council. The marketing strategy for this program is unique in that we used the idea of the individual helping themselves to actually assist the industry, a technique that would be used in community development projects but quite unique in the delivery of an Economic Development project.

In 2016 this QFF program was recognised in the 2016NSW LGA Awards for communication.

Ms Elizabeth Veitch

Executive Director, Regional Development Australia ACT

Co-authors:

Mr Craig Hanicek, Project Manager, SERREE

SERREE: Developing a collaborative Renewable Energy Industry Cluster on a regional scale to leverage economic development outcomes

Regional Development Australia ACT presents learnings from our SERREE (South East Region of Renewable Energy Excellence) initiative, outlining how we facilitated the development of this ACT - south-east NSW region's renewable energy sector, whilst optimising its economic development benefits – business growth opportunities, local jobs and regional investment.

The SERREE Industry Cluster initiative engages a broad and diverse network of some 1,000 of this region's renewable energy stakeholders, with members representing business and industry – from large multi-nationals through to smaller regional and allied businesses, the three tiers of government, research, education and training institutions, and community.

The SERREE initiative is collaboratively supported by the Federal, NSW and ACT Governments, RDA ACT and RDA Southern Inland, and key renewable energy industry stakeholders, with funding being increasingly contributed by business and industry as government steps back having provided seed funding.

Over the three years 2014-2017, RDA ACT has developed a replicable model for renewable energy sector development on a regional-scale – encapsulating what has been done to develop SERREE, what worked, or not, and why.

Presented in the form of a Resource Kit, other regions can draw on this practical resource to develop their local renewable energy industry. It recognises that all regions are different, with each having a unique mix of strengths and challenges, and that these can be used to form a pathway to leveraging economic development outcomes.

SERREE has built a strong and cohesive membership network; it has facilitated business and industry growth, new jobs, industry-relevant skills training, brokered research to commercialisation opportunities, and linked small regional businesses with large multi-national corporations to ensure jobs stayed in the region. SERREE is currently developing deeper global connectivity with a view to facilitating export opportunities for strategic partnerships of regional businesses.

We have developed a range of SERREE collateral including communication tools – a website and popular weekly e-newsletter; presented events, including a well-attended series of Renewable Energy Business Forums covering a range of topics and providing networking opportunities; and community-engagement projects initiatives such as Renewable Energy Day.

Dr Daisy William

CEO, Strategic Enterprise Consulting Pty Ltd

The importance of a sound third sector and its potential impact on regional social capital and the development of regional communities

Regional communities have networks of service providers and individuals such as seniors, the disabled, Indigenous people, educational institutions, health bodies and others. There are also many special interest groups such as art collectors, musicians, sports men and women, history buffs, writer's groups make up the social capital of regional towns.

For that reason, it is important to strengthen the sector that governs many of these groups that make up regional communities and ensure their development, growth and existence.

This article is a research paper. Quantitative and qualitative data were collected using four lines of enquiry, which are literature review, an online survey, ten in-depth interviews and a case study. A mixed-method research methodology was employed because the quantitative method opened the research to the widest possible audience before narrowing it to the scope of this particular study.

This study revealed:

- problematic practices, which are comparable to criminal behavior, such as intimidation, harassment, mismanagement of funds and other corrupt practices, such as putting pressure on directors to change their vote and manipulation of corporate records.
- 100 percent of the organisations interviewed had directors that did not know how to interpret financial reports.
- 90 percent of the organisations interviewed were closing down or had been on the verge of closing down at one or more times in the life of the organisation.
- 80 percent of the organisations did not have successful director recruitment process.
- 40 percent of the organisations that were closing down could have continued their operation if they had partnered with other organisations that could complement their services.
- The corporate governance mechanisms that have been specifically developed to strengthen this sector through this research are:
 - A Corporate Governance Model of Best Practice for Small NFP Organisations in Australia.
 - A Code of Conduct for Directors of Small NFP organisations in Australia.

Mr Ron Wright

Project Director Civil Construction and Infrastructure, TAFE NSW Kingswood

Building skills with concrete results for nation building

AIMS

This presentation is designed to showcase radical approaches to solving complex skilling and workforce development challenges in large-scale general and civil construction projects. It will identify the multiple overlapping objectives of such projects and map out the evolution of two specific training models over the last five years. It will provide individual case studies that demonstrate the positive impact on employment for local communities and achieving project deliverables for construction firms large and small across the country.

CONTENT

Through separate partnership initiatives across the state in the last 5 years, TAFE NSW has established a ground-breaking model that has changed how workers engage with training, how employers' workforce development needs are met and how local communities benefit.

The model features the following sophisticated interlinked series of offerings and features that meets the complex business and operational needs of large multi-billion dollar construction projects.

A skills exchange procures, coordinates and report on all aspects of skilling and training and operates as a one-stop shop for learning, combining the needs of hundreds of small and large contractors.

Partnering with various training providers provides a “best of breed” skilling solution and there is a highly collaborative approach to supporting local and often disadvantaged workers by providing everything from foundation skills in literacy and numeracy and highly specific equipment operating skills to apprentice mentoring to retain apprentices, high risk licence training, trades skilling and safety leadership development.

A mobile ‘pop-up’ implementation reflects industry practice and industry need, including the design, construction and roll-out of transportable containers converted into classrooms that can be used on-site for theory and inclement weather training.

There is significant utilisation of simulated worksites established on land provided by partnering local councils or construction stakeholders, thus allowing entry-level trainees to gain highly practical and work-safe skills on specialised equipment typical to large scale construction projects. This model is working across infrastructure projects in the Tweed Valley, residential developments in the Illawarra and high rise construction in Parramatta and the Sydney CBD and case studies include multi-billion dollar construction projects such as the North Coast Pacific Highway upgrade, Calderwood Valley Estate, Barangaroo and Darling Harbour.

CONCLUSIONS

The presentation will describe tangible results around the development of human capital, job readiness programs and pre-employment pathways for people from social disadvantaged and under-represented groups into the construction industry and on the job VET based Learning models with trade qualification outcomes.

Also described will be a range of sustainability skilling outcomes (environmental, cultural, wellbeing and safety programs), partnerships with public and private training and other service providers, local councils and government agencies and civil construction management companies like Lendlease, Pacific Complete, Walker Group and others.

Specific results described will include the improving of apprenticeship completions rates in construction to 85% compared to a National average of 47% and over 13,000 workers gaining formal skills training, and over 20,000 accredited training outcomes.

The presentation will also provide tangible results like the delivery to enterprises and projects of a supply of skilled workers and capability development for a safer, adaptable, competitive industry workforce.

Miss Kelly Wright

Founder, Deciding to Make a Difference

Deciding to Make a Difference - Supporting remote Aboriginal communities to build culturally focused sustainable housing solutions.

What if you could take the problem of plastic pollution and use it to solve the housing shortage in remote Aboriginal communities? Kelly Wright is not only proposing, but implementing this very notion. Working with one of Australia's leading sustainability architects Ken McBryde and the with the express approval from the Elders of Jilkminggan was key to this. With direct dialogue with the ladies of the community to establish what they want and need was one of the fundamental differences in the DTMAD project.

Implementing the Nev House technology, our team have designed a culturally suitable, sustainable housing solution that the community have ultimately been involved with throughout. As part of this program Yulang Aboriginal training and educational unit are going to tailor a course enabling this 'Sustainable Community Development' model. Local labour is employed, with on the job training to create a sense of ownership and pride. It is an effective model for land and family with houses designed with sustainably sourced timber and steel framework using recycled plastic panels of a total of 3 ton of plastic waste in every home. Teaching and construction training we feel will maintain and grow the community organically as a productive and innovative method of building in remote Aboriginal communities.

These Off grid, modular, sustainable, category 5 cyclone proof homes have the ability and diversity to meet the needs of growing families that will, be easily expanded, maintained and developed to meet the needs that will reflect each respective family involved. This project is scalable and a capable solution to end 3rd world living in a 1st world country. Will you decide to make a difference?