

THEORY AND PRACTICE OF REGIONAL COMMUNITY BASED INTENTIONAL INNOVATION IN NORTHERN INLAND NEW SOUTH WALES

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ABSTRACT: Intentional Innovation Communities (IICs) are co-created structures with an overarching aim of achieving the realisation of ideas through a transfer of knowledge process that results in new things, with desirable consequences. IIC structures facilitate idea creation, selection and implementation for the improved prosperity of a community, region, business or group. In this study innovation was investigated and stimulated within the Northern Inland region of New South Wales (NSW), through direct engagement with communities involving initial and follow-up workshops. A series of 11 workshops were held across Armidale, Tamworth, Bingara, Moree and Narrabri, with the intention of facilitating an exchange of knowledge on innovation, enhancing the contextual understanding of innovation capability and developing a model for achieving innovation within the region. Evidence gathered demonstrated that support exists for the development and application of an IIC model to stimulate individual and collective innovation within the region, through co-creation of ideas. The need for appropriate funding, support and resources that might be required to establish an IIC model is considered.

KEY WORDS: Innovation, Co-creation, Community, Development, NSW

ACKNOWLEDGEMENTS: This project was funded through the Enterprising Regions Program of NSW Trade and Investment. The Authors dedicate this study to the work of Dr David Evans, the pioneer of the concept of Intentional Innovation Community (IIC).

1. INTRODUCTION

The reason for engaging with the innovation process is to produce new knowledge for the creation of new things that are useful and are of value in society (Thomas *et al.*, 2011; Evans and Thomas, 2010). Innovations are defined as ideas or practices that are perceived as new by practitioners (Rogers, 1995). These may include the creation of appropriate growth strategies and models that generate significant value to individuals and businesses. Innovation has also been identified as an interactive process based on the continuous cooperation between firms and various actors (D'Allura *et al.*, 2012). In any context, innovation is reliant on the existence of a favourable environment (West and Farr, 1996), effective management of the available resources, and ultimately the realisation of ideas by turning knowledge into actions with desirable consequence (Kretzmann and McKnight, 1993). The concept of Intentional Innovation Communities (IICs) is novel and relies on the creation of a suitable environment that produces innovations.

The IIC model is based on the premise that innovation in any context can be intentional and simply involves a benefit gained from something new being selected, developed, implemented and used. The mechanics of the IIC model are inherent in the innovation literature and specifically identified in four recognised innovation steps: idea creation or inception; selection; development; and implementation. The whole process can be viewed as linear, however, it is well understood that an innovation is not linear and is better described as a spaghetti model of actions and interactions (Besant and Tidd, 2007) that creates a knowledge flow between individuals within a network. From this knowledge stream, idea creation, or the inception and the capture of ideas, is a perpetual process, which is often driven by individual creativity and inspiration, user needs and research breakthroughs (von Hippel, 2005). Idea creation relies on having astute individuals available that can identify and promote potential opportunities. Idea selection requires the contribution of individuals with a great deal of knowledge, skill and good judgment. As idea selection is based on the potential of an idea and precedes any investment in development and implementation, a sound knowledge of the business, social and cultural environment is extremely valuable. Idea development is where direct action and investment are required to bring an idea to an intended use. Idea development is identified as difficult as it requires resource allocation against a budget, in an environment that often has a high level of uncertainty. Idea implementation is crucial if the innovation process is to be recognised as complete. During the implementation stage,

ideas are generally transformed into new products, services, processes or practices.

Within recognised models of innovation, it is understood that innovation can occur anywhere (Bessant and Tidd, 2005). The traditional approach to innovation emphasises a 'present to future' orientation and focuses on a 'one-size-fits-all' model (Iammarino, 2006). This top-down approach assumes a defensive or follower posture, consistent with linear business planning models that seek inputs for the innovation process from traditional sources. This approach also tends to be hierarchical, may limit non-affiliated individuals, and may constrain creative thinking while adding an additional layer of institutional communication complexity to the network (Sotarauta, 2014). The more contemporary innovation approach starts with an 'end in mind' orientation and focuses on a 'longterm opportunity' model. A revolutionary posture is often assumed by individuals, communities and businesses; that emphasises the creation of a new competitive space that is generally driven by individuals from the bottom-up. This approach typically involves new entrepreneurial ventures and grassroots type innovations (Seyfang and Haxeltine, 2012; Morrison *et al.*, 2000), it is also most consistent with the IIC model concept.

Regardless of the approach or context, the process of innovation can be divided into divergent and convergent modes of thinking. The divergent mode of thinking focuses on the discovery and exploration of ideas, coupled with the enhancement of creative thinking within visionary aspects of the future (Rodriguez-Pose and Storper, 2009). Within this context, the potential opportunities and weaknesses of ideas generated are identified with emphasis on the discovery and exploration of potentially fruitful ideas, which are then targeted for expansion and implementation (Fuller *et al.*, 2006). Alternatively, the convergent mode of thinking calls for the evaluation of potential opportunities and subsequent implementation of the most promising ideas. With reference to the IIC innovation phases, the divergent mode aligns closely with the idea generation phase and the convergent mode with idea selection and idea implementation phases.

In the context of the current study, innovation research and particularly regional context based innovation research has gained considerable attention over the past three decades. The rationale for this focus has been the pursuance of a competitive advantage and promotion and formulation of new policies that might embrace and capitalise on the value of regional cultural diversity while addressing inequalities. The present study aimed

to gain an understanding of the current endemic regional innovation frameworks of the Northern Inland region and identify the key opportunities and barriers to innovation and innovations within the region. To achieve this, the concept of Intentional Innovation Communities (IICs) was introduced to Northern Inland region communities in order to enhance and promote regional prosperity by stimulating the potential for individuals, businesses and government to collaborate, co-create and innovate.

2. LITERATURE SYNTHESSES

There is a link between innovation and economic development which is critical in supporting innovation processes. The emerging concept of new regionalism has connected local and global opportunities, micro with macro perspectives and exogenous with endogenous development ideas (Soja, 2009). Within this concept regional innovation frameworks have logically focused on three development stages; resource development, welfare processes and entrepreneurial regionalisation. These stages link the conceptualisations of the regional and economic growth theoretical frameworks (Soja, 2009). Innovation process development also lies within main stream linear economic models, whereby basic and applied research, result in inventions that are developed and evolve into innovations that ultimately result in greater growth (Komminaki, 2015). Evolutionary economics has been related to systems of innovation and particularly those with an emphasis on institutional networks, as these are identified as being critical for the social and structural conditions that facilitate the development of innovations (Zhou *et al.*, 2012). Here the concept involves two main bodies of theory: systems of innovation, focusing on evolutionary economics theories and technological change that embraces collective learning and external collaboration; and regional science, with emphasis on the socio-institutional environment, which outlines rules, conventions and norms (Storper, 1997). Within this theoretical framework, it can then be understood that regional innovation systems are underpinned by key interactions between different actors within innovation processes, that are influenced by policy development and are inextricably connected to the role of institutions.

In general, innovation is recognised as the creation of new product categories and / or the development of new service processes or service delivery. This includes the generation of new business or organisation models that strategically enhance the value perceptions of individuals and businesses involved. A number of dynamic forces are currently creating

exciting new opportunities for individuals at global, local and regional levels (Smith, 2005). These include; technological advancements, increased globalisation and global financial turmoil, new ways of connecting people, economies of scale, a dynamic political landscape, and the emergence of new business models. As a result, individuals businesses and communities are either trying out new innovative solutions, or applying old solutions in new ways, to solve problems at hand (Fuller *et al.*, 2006). In this way, many individuals and businesses, including those in regional areas, are identifying innovations within their own distinct operational context that have demonstrable potential to yield more sustainable benefits (Rodriguez-Pose and Crescenzi, 2008). Evidence of restructuring, open-sourcing, and collaborating activities, suggests that business and government organisations are responding to this situation. Nevertheless the full potential of many community-based innovations are either never realised or their transformative capacity is never achieved (Chu and Chan, 2009). This situation suggests that perhaps a different approach is needed in order to initiate and develop the type of innovations that actually benefit regional communities.

Although region as a locus of innovation has attracted significant attention from researchers, the results obtained from studies are largely inconclusive (Doloreaux and Parto, 2005). Despite the evident theoretical connections, a practical approach to a regional innovation system framework remains ambiguous; apparently lost within the challenge of identification of what is regional, the role of institutions and the conditions required for innovation systems to prevail (Doloreux and Parto, 2005). However it is recognised that regional communities have a distinct pattern of operational linkages that are network-based and function by addressing issues through organisations, legitimised by informal 'networks of power' (Selsky, 1991). Individuals within these legitimised organisations, are decision-makers, and are able to direct resources and determine the way community-based problems will be resolved (Selsky, 1991). Thus viable regional communities have an internal drive that directs their coalition of members towards an institutionally legitimised form of unity. This is however most often operating on a backdrop resource shortage and often involves several functionally similar organisations operating in a distinct task environment (Wendelken *et al.*, 2014). A lack of understanding of this environment, its internal norms, prevailing myths, and inherent ambiguity of interaction patterns, may result in constraining the community focus and collective problem solving activities.

The concept of the IIC looks past many of the understood constraints to innovation and allows change to start at the grass roots. The aim of the IIC is, through a system construct, to intentionally improve the quantity and quality of deal flow for reward. In the face of the identified challenging regional context, the plasticity of the IIC model is its strength. It could just as easily be applied to a business institution context in place of a regional community context, and in both cases, navigate around the power structures and differentials that often result in community disaffection (Bridger and Luloff, 2003). The model promotes enhancement of the knowledge creation process, by liaising with the experts within the community and making necessary connections with experts outside the community in order to draw in needed expertise.

In the present study the innovation process was opened up to the public. The IIC model is intended to facilitate regional collaboration within self-created and designed communication collaboration places and spaces that would build stronger networks in the community and initiate the development of multi-stakeholder partnerships. The IIC model was also intended to be positioned to act as a public information and knowledge repository, thereby capable of intentionally feeding and facilitating the processing of community-based innovations.

In the present study context, it was proposed that innovation could be intentional and that communities could identify, exploit and drive opportunities with the potential to enhance a region's prosperity. It was also proposed that an IIC, created for a specific region or community and populated by individuals from that community, would not necessarily be constrained by existing contextual organisational or institutional structures. The core idea of the IIC concept, focuses on and functions to, reduce organisational and institutional constraints, acknowledge and avoid the likelihood of latent path dependency, and provide opportunity for the construct of a customised system that might provide support for ongoing collaborative action and creative thinking.

3. METHOD

Workshops that were held across the Northern Inland region, included Armidale, Tamworth, Moree, Bingara and Narrabri. A case study approach (Yin, 2009), was applied to each of the places. Participants were recruited to the workshops through the release and distribution of a flyer across available networks, including: the State Government Business Development unit; the local and NSW Chambers of Commerce: the Regional Development Corporation, Tamworth and the Cotton

Catchment Communities Cooperative Research Centre, Narrabri. A total of 137 participants attended the workshops; 44 in Armidale, 18 in Bingara, 3 in Moree, 26 in Narrabri and 32 in Tamworth (Table 1). In addition 14 participants attended a whole-of-region meeting held in Bingara that followed the place based workshops held in the towns. Workshop registrations were monitored and managed by the Cotton Catchment Communities Cooperative Research Centre, Narrabri. The aim of the workshops was to inform participants of the associated merits and demerits of engaging in an innovation process, stimulate innovation activities and assess the potential for co-creating IICs. To facilitate the proposed IIC framework, a participatory action research model (Lewin, 1946) was overlaid across all cases, with observations and communications continually subject to informal evaluations and judgements (McGarvey, 2007). At each of the identified regional locations initial and follow-up workshops were carried out, with a week to 10 days separating the two events. The developmental direction of an IIC was derived from observation and listening, evaluation, and the critical reflection of the engagement with and between workshop participants. At the conclusion of each workshop a simple participant survey was carried out that gathered participants' demographic data.

The purpose of assessing the capacity for the perpetuation of innovation process and specific innovations through the IIC framework was necessarily underpinned by the aims of promoting communication, creative thinking, idea generation and an understanding of the innovation process itself. In the pursuit of these aims, participants at each place were introduced to key innovation concepts. They were then asked to identify local issues as well as opportunities and barriers around these issues, in order to assess the possibility of the development of a group strategy for creating advantage from identified issues and ideas. In order to direct participants towards the opportunity of co-identifying local ideas for innovation, through an open discussion platform, participants were introduced to the concepts of co-learning, innovative culture, institutional boundaries and path dependency.

The concept of innovation as a process that holds the possibility of taking ideas to action was promoted and through participants contributing their perspectives on innovation process and the incremental introduction of the concept of intentional collective innovation, a common vision was formed. The initial workshops started with the question 'who are we?' - asked for the purpose of initiating a focus on the development of a group identity. In order to stimulate positive interactions an environment of

“participative safety” (West and Farr, 1996) was promoted. Along this path, participants were encouraged to de-emphasise their existing institutional roles within their community. The discussion then moved to identifying local issues as threats to the community’s sustainability and prosperity. This exchange fuelled the identification and development of ideas or project opportunities as well as establishing and reinforcing innovation principles put forward by the group. Within this activity, a focus on the actuality of creating a collective action group structure that might support ongoing and localised innovation was continually introduced, in order to support the idea of an IIC.

The follow-up workshops involved continued discussions about regional innovations but with a greater emphasis on the clarification of a design construct of the IIC. In the follow-up workshops, concepts and project idea developments that had emerged from the initial workshop were also revisited. In line with this, further refinement of identified place based ideas, issues and opportunities was pursued, with emerging projects directed towards idea development and innovation activity. The emergent projects were noted and then discussed again, with more focused reference to the development of an IIC design structure.

In the current investigation, qualitative data analysis was a continuous and iterative process involving the manually transcribed responses obtained from the workshops. Data obtained was systematically assessed for thematically similar words and phrases. Following each initial and follow-up workshop a more formal reductive thematic qualitative data analysis was carried out (Creswell, 1998), in order to identify the emerging directions and conclusions of participants’ from the discussions on innovation and the idea of an IIC construct. The purpose here was to select, focus, simplify, abstract and transform collected information into themes (Miles and Huberman, 1994), and extrapolate meaning from noted themes, patterns, regularities and explanations within the context of the workshop objectives. These deductions then formed the basis of a discussion of the overall process, and formed a body of support for the platform for the follow-up workshops in each place

The analysis process within the workshops was combined with continuous management of the open discussion; directed towards identifying and recording a mutually defined and agreed set of goals. This approach was intended to reveal the potential for achieving innovation in the communities of the region through the ‘view’ of the participants, while they remained in the biophysical and socioeconomic context of their community (Creswell, 1998). The approach created an opportunity

for engaging and establishing a rapport with members of the communities of the region. The current study focused on capturing the full diversity of responses and ideas expressed in the workshops. Qualitative data obtained from the workshops often-elicited new information about the topics discussed, and following Jackson and Trochim (2002); permitted exploration of different dimensions of the participant's experiences. In line with Doloreaux (2004), this type of approach provided a narrative on the region that included an overview of the region's economic development, processes of collaboration and insight into the influence of policy and the possibilities for change. Comparative analyses of the workshops outputs assisted researchers with the identification of any development trends and generalities and particularities that might exist within a place and the region. Noted by Benner (2003) and by the authors here, this approach provided greater insights and understanding of the innovative activities within each place in the region and the nature of interactions amongst different actors of those places.

The Places - Northern Inland Region

The Northern Inland Region covers the geographical area of New England and North West New South Wales (NSW). At the time of the study the region contained thirteen local government areas including Armidale Dumaresq, Glen Innes Severn, Gunnedah, Guyra, Gwydir, Inverell, Liverpool Plains, Moree Plains, Narrabri, Tamworth Regional, Tenterfield, Uralla and Walcha Councils. The Region has a population of approximately 184 822, within an area of 98 606 square kilometres.

Workshop places were selected in consultation with NSW Trade and Investment by drawing on the network of contacts built over time through the consultation and engagement of the business development officers in the region (NSW Business Sector Growth Plan, 2010). The places, Armidale, Tamworth, Moree, Bingara and Narrabri were considered appropriate venues for the workshops, in that they all appeared to have a common prevailing town-centric culture. They also represented the region's vast community diversity within the prevailing demographics, a shared dependence on agriculture and a similar makeup of manufacturing and retail sectors. The workshops were scheduled and promoted with the aim of attracting individuals from diverse backgrounds (Table 1), thus providing a potentially valuable insight into the strengths, issues and challenges, within these places of the region.

Table 1. Profile of the Workshops Participants.

<i>Place</i>	<i>Time</i>	<i>Total</i>	<i>N</i>	<i>%</i>	<i>Community</i> ¹	<i>Business</i> ²	<i>Government</i> ³	<i>< 35</i> ⁴
Armidale	1st	Male	13	41	2	7	4	1
		Female	9	59	0	5	4	
		Total	22		9%	64%	27%	
	2nd	Male	7	53	1	4	2	1
		Female	8	47	0	4	4	
		Total	15		7%	53%	40%	
Tamworth	1st	Male	10	50	1	5	3	
		Female	10	50	3	4	4	
		Total	20		20%	45%	35%	
	2nd	Male	6	50	1	3	2	
		Female	6	50	2	2	2	
		Total	12		25%	42%	33%	
Bingara	1st	Male	4	57	2	2	0	
		Female	3	43	2	1	0	
		Total	7		57%	43%	0%	
	2nd	Male	6	55	2	3	1	1
		Female	5	45	2	1	2	
		Total	11		36%	36%	27%	
Moree	1st	Male	0		0	0	0	0
		Female	3	100	2	1	0	
		Total	3		67%	33%	0%	
Narrabri	1st	Male	5	30	2	2	1	
		Female	12	71	6	4	2	3
		Total	17		47%	35%	18%	
	2nd	Male	0	0	0	0	0	
		Female	9	100	4	4	1	
		Total	9		44%	44%	11%	
¹ Member of the community or community group								
² Member of a business and Chamber of Commerce								
³ Government organisations (Local and State)								
⁴ Derived from observation only								

Source: the Authors.

4. RESULTS

The results obtained from the initial and follow-up workshops conducted within the region are presented below:

Armidale

Armidale is located midway between Sydney and Brisbane and is identified as the centre of the New England Tablelands. Armidale Dumaresq Council covers 4 235 square kilometres and at the time of this investigation had a population of 24 000 (RDANI Regional Plan, 2011). The initial and follow-up workshops were conducted in Armidale within eight days of one another. Workshop participants came from diverse backgrounds with individuals from the University of New England, local businesses, government departments, research centres and the wider community. Some of the individuals, who attended the initial workshop, did not attend the follow-up workshop. However the follow-up workshop attracted new individuals. In Armidale 22 participants attended the initial workshop and a total of 15 participants attended the follow-up workshop (Table 1).

Armidale participants viewed innovation as a process of creative change, risk management and change management. Development values that emerged during the workshop, revealed a desire to know more about the community's strengths and opportunities and a need to act in a more effective, efficient and focused manner, as a community. Most participants acknowledged that regional change was inevitable and identified and highlighted the need for developing a community collective, a regional strategy for addressing change, and a strategy to make better use of existing available assets. Several local opportunities were identified and recognised as having potential for further development through locally available entrepreneurial skills and the existence of institutional support. Identified opportunities were embedded in themes that included: managing efficiency through technology (water and energy use); building better local institutional collaborations; improving local commitments to one another's ideas; environmental sustainability; effective use of human capital; and securing opportunities around NBN/broadband connections.

A predominant and over-arching emergent theme was the need for the redirection of 'momentum' and focus towards the strengthening of the town as a place. The consensus on how to achieve this final thematic

category was to reverse educated youth migration from Armidale. Ideas identified as most appropriate for innovation focused on developing human capacity and business diversity, technology-led ideas, and environmental based initiatives. Maintaining the momentum of the group, identifying initiative leaders and defining individual participant roles, were tasks identified as critical for promoting a sustained regional innovation process.

Within the follow-up workshops, the need for creating IIC was tabled, discussed and debated. This exchange eventually rested on the consensus that a virtual discussion forum for sharing ideas was necessary, in concert with regular face-to-face meetings. It was also determined that any discussion forums established should facilitate non-judgmental, non-hierarchical, collaborative idea exchange and development. It was also anticipated that the group would necessarily link the discussion forums to potential investors and relevant funding organisations. The importance of intellectual property awareness, the need for ethical conduct guidelines, the authenticity of data bank management, the relevance of networking and promotional strategy and the role of intellectual stimulation amongst the participants, were also identified as critically important aspects of IIC development.

Tamworth

Tamworth is located in the junction of the New England and Oxley Highways. At the time of this study, Tamworth had a population of 47 595 with an indigenous population accounting for 6.9 per cent (RDANI Regional Plan, 2011). Tamworth initial and follow-up workshops were conducted within two weeks of one another. Tamworth workshops were well represented by individuals from local businesses, government bodies, the business chamber, the local council and the general community. Twenty participants attended the initial workshop and 12 attended the follow-up workshop (Table 1).

Within the initial workshop participants viewed innovation as relating to economic uptake, population growth, sustainability, marketplace opportunities and as being a “from the ground-up” process. Innovation was also identified as a business or economic activity, and not necessarily something that aligns with community development or social work. The Tamworth workshop participants identified several idea opportunities including: environmental sustainability; town-based Wi-Fi, and a hands-on community and/or cultural centre; English as a Second Language (ESL) service provision; centralised regional community interaction

websites; a regionalised zero-waste recycling centre; and NBN/broadband technology development initiatives. The focus of the participants in the initial workshop was mainly on idea development, project realisation and execution, rather than group structure or governance.

The follow-up workshop began by re-focusing on the ideas generated from the initial workshop. In Tamworth individual participants tended to claim idea ownership and individuals championed their ideas, thus making the idea selection process difficult. A vigorous discussion eventually resulted in a narrowing of the list of ideas, to include: a performing arts centre and artist incubator concept; a zero-waste recycling and sustainable community centre; a hands-on community centre offering ESL classes; and a town-based Wi-Fi for Tamworth's central business district, paired with an interactive centre for promoting internet technology.

With some consensus on what project to focus on achieved, the development of an IIC structure was introduced as a possible and credible mechanism to manage the diverse array of ideas that had emerged. In order to assist in maintaining the collective vision of the group, a 'Four P's' model approach was suggested for capturing opportunities. This approach focused on "place" (Tamworth and the Northern Inland region, and a global web presence); "people" (covering IIC workshop participants and potential strategic partners); "process" (individuals fostering strategic discussions); and "promotion" (development of a rationale and marketing strategy).

The idea to use the social media site 'Facebook' or to use 'face-to-face' contacts as a common platform to share and develop IIC process was also debated intensely and to a point where it became a conflict issue. The resolution of this issue was eventually achieved through a commitment by the group to keep the agreed ideas alive and continue to meet for further discussions when possible. Alternatively, but not exclusively some participants agreed to utilise a social media site for continued engagement and idea advancement.

Bingara

Bingara is located in an area called Fossickers Way, situated on the Gwydir River in the North West of NSW. Bingara has a population of 1 300 with Anglo-Celtic background (Bingara and District Vision 2020, 2011). People aged 55years and above constitute for 49.9 per cent and the representation of the indigenous population is around 2.4 per cent (ABS,

2011). Initial and follow-up workshops were conducted in Bingara within two weeks of one another and were attended by individuals from local businesses, government departments, local council (Gwydir Shire), and the wider community. Seven participants attended the initial workshop and 11 attended the follow-up workshop. The Bingara workshops were aligned with Bingara's 'Vision 2020' initiative.

Key themes of the Vision 2020 initiative were introduced as opportunities for developing regional connections and growth for Bingara. These included the local "Roxy" theatre redevelopment, regenerative agriculture and solar power initiatives. The workshop then focused on developing innovative ways to accelerate and expand the Vision 2020 program as a regional development initiative, and thereby achieve a broader reach of their ideas into the region. There was a general appreciation of the value of the application of innovation as a process and concept, to aspects of their established vision for the future. Building on this, various strengths and opportunities within the region were identified and discussed throughout the workshop, including issues relating to change management and efficiency gains, building networks, commitment to support each other, and embracing risk. The development of academic culture, technological enhancement, increasing network capabilities, promoting connectivity to land, and expansion of arts culture were identified as ways to achieve prosperity for Bingara as a part of the region.

The Bingara follow-up workshop was convened with the participant-driven goal of developing a business plan around a regenerative agriculture initiative. Specific facets of the then current regenerative agriculture project were discussed, with the intention of incorporating innovative principles into future planning. The principles of the Vision 2020 initiative and those of IIC's were discussed in an open conversation format and the participants identified need and opportunity to progress their regenerative agriculture theme through IIC process. Tension also surfaced within the group about the role of UNE as the regional university, and of the IIC groups role in producing innovative strategies and if established, how that might be resourced and supported. This meeting and the preceding workshops, had involved collaboration with visiting academics from Penn State University. As a result, there was strong interest and vigorous discussion regarding the way that university/community relationships could be managed, including a suggestion to utilise Penn State University's experience in community engagement and development. This idea was tabled and discussed within

the idea to develop community engagement strategies within a group model.

From this point, the discussion remained focused around who would exercise agency in IIC development, the long-term role and involvement of UNE and the involvement of local place based IIC actors. Reference was made to the management issue of how to maintain an IIC over time. Workshops participants exhibited strong support for developing more regional partnerships and connections, particularly those that could potentially broaden scope and provide resources that could benefit Bingara. Also noted was a strong desire among the workshop participants to strengthen the relationship between Vision 2020 and higher education institutions. This higher education connection was seen by the group as a way of improving the profile of the local projects and as a means to gain access to research and teaching resources.

Moree

Moree is on the Mehi River within the Moree Plains Shire (ABS, 2011). Moree has a population of 14 185 with 19.3 per cent being indigenous. The initial workshop conducted in Moree was attended by three participants; one from the government department, one from the Moree business chamber and one from the community college (Table 1). This workshop had no representation from the local indigenous population despite concerted effort made to engage with this group. Due to the low attendance at the initial workshop a follow-up workshop was not scheduled for Moree. However, a specific invitation was extended to the participants who had attended the initial workshop, to attend the workshop held in Bingara or Narrabri, both towns being approximately one hour drive from Moree. The decision not to run another workshop within Moree was based on the low attendance, the limited resources of the project and the need to establish a useful quorum.

As the initial workshop at Moree attracted only three participants it was conducted in an informal manner, yet one that maintained the general workshop structure and was therefore consistent with the other IIC workshops conducted. Moree workshop participants instantly identified innovation as something important for Moree and the surrounding region. They expressed their recognition of a critical need for innovation and specifically in the areas of cultural, family and juvenile issues which included the need for business and entrepreneurship skills. This was reinforced through an identified need for a more positive engagement

with the local indigenous community, and the establishment of broader mentoring opportunities for businesses/innovators within and across the community.

Issues relating to change management and efficiency gains, the building networks and commitment to support one another, embracing risk and the need for collective innovation and idea sharing, were raised by the participants. They also identified strengths and opportunities within the region that related to local economic matters. These included a need for business expansion and enhanced technological advancements, the improvement of local small business management skills and a more coordinated community effort in these areas.

Narrabri

Narrabri is set in the Namoi valley in North West NSW (ABS, 2011). The main industry in Narrabri is agriculture alongside mining activities, including coal gas seams (CRC, 2011) that had recently attracted people to the area. Initial and follow-up workshops were conducted in Narrabri within two weeks of one another. Both of these workshops were attended by individuals from government departments, local council, local businesses, the Cotton Communities Centre (CRC) and the wider community. Seventeen participants attended the initial workshop and nine attended the follow-up workshop (Table 1).

The initial IIC workshop in Narrabri identified the core issue of a need to enhance educational and community engagement skills among local stakeholders. More specifically the participants identified the need for a better focus on inter-institutional synergy and collaboration and strategies for attracting youth to the area in combination with enhancing youth opportunities. The need for increasing indigenous involvement in community and business was noted, along with the need for promoting and coordination of appropriate support across the community, particularly in a bid to reverse youth out-migration. Specifically around the IIC concept, the need to improve change management capacity and improve local service efficiency, while embracing the risk perceived to be associated with this type of collective action and idea sharing was noted. With reference to these issues and opportunities, the Narrabri participants highlighted the need to identify and utilise leadership styles that could balance innovation with the competition that is inherent and embedded in local interests and opportunities.

It was noted that nobody from Moree responded to the invitation to attend the follow-up workshop in Narrabri. The reasons for this may have

been the specific nature of the focus of issues and opportunities in Moree which were mainly concerned with Moree youth and specifically indigenous youth.

The follow-up workshop in Narrabri reintroduced important IIC concepts that fostered discussion about community models existing elsewhere, including Bingara's Vision 2020 collective strategy. The most important ideas revived from the initial workshop centred on managing change collectively, strategies to combat youth migration from the area, potential opportunities around mining and renewable energy, coordination of different organisations with similar goals and issues surrounding IIC's structure and process. The participants again recognised the need to identify leadership styles capable of operating within innovation and competition.

The participants came to a consensus that they would interact regularly, both in person and online around IIC creation. They were enthusiastic, optimistic and excited about the goal of overcoming challenges collectively and identified that the IIC structure would serve them well as a forum for further discussions and actions. Discussions led to a call for Narrabri's IIC group to liaise with UNE and Penn State so as to focus on the potential for the development of international opportunities in community-based innovations. In line with this, the planned Cotton Community CRC conference was explored as a possible venue for developing further international collaborations. However, it became evident that the IIC concept was a distinct initiative and separate from the activities of the Cotton CRC, and should have an independent innovation focus and culture. Here again, there was ongoing tension regarding whether discussion forums for an IIC should be physical or virtual. The participants did reach an agreement that the 'innovation space' must include both physical and online interactions. Ultimately it was also agreed that the new IIC initiative would be called 'Building Better Communities' (BBC) and BBC's initial development could come under current funding model of the CRC.

Regional Meeting: Tamworth and Armidale

At the request of the workshop participants from Armidale and Tamworth, a joint meeting was convened at UNE's campus in Armidale. The innovation 'space' identified by the Armidale workshop participants was called the 'New England Innovation Factory'. This IIC identified space was envisaged to be serviced by virtual and face to face

communication and would house and facilitate non-judgmental, non-hierarchical and collaborative discussions, idea exchange and idea development. The IIC 'space' was noted as being linked conceptually to the business angels model and from this, intense discussion that related to intellectual property awareness, ethical conduct, data bank management, networking strategy promotion, and intellectual stimulation ensued.

Tamworth identified their innovation space as a 'Business Incubator' that would facilitate discussions and foster the achievement of the core issues of the IIC. The identified business incubator was seen to function as a conduit to innovation around data bank management, networking strategy and intellectual stimulation. A Facebook page was launched on behalf of the workshop participants to facilitate online networking and ongoing communication with the intention of furthering project idea development. Workshops conducted in both locations that had identified ideas relevant to the towns and region had also revealed a clear understanding that a process and structure to house the innovation initiative would be necessary. In both towns, tension about how to reconcile progress between physical and virtual meeting spaces, and how to best deal with parochial issues of local power and path dependency were evident and ongoing. A clear appreciation of opportunity the IIC concept presented and enthusiasm for applying innovation to a collective effort to find solutions to local and regional issues, had also emerged.

Regional Meeting – All Towns

A regional meeting in Bingara was conducted to convene participants from all IIC workshops as a collective push for action and as an opportunity to continue to share ideas and innovations across the region. The meeting was convened largely due to the enthusiasm of the workshops participants and their desire to build regional connections around innovation. An exploration of possible entity and business structures for IICs were presented and discussed, alongside possible funding opportunities. The direction of this meeting was towards the development of structures and processes in each community, the development of a virtual innovation space project, strategies for possible key developments and the maintenance of continued engagement strategies for local community issues within a regional view. A major barrier to moving forward, which might be created within the now conceptualised and understood IIC framework, was identified as an inability to determine the ownership governance and the source of resources to support an entity.

5. DISCUSSION

The rationale behind this research was to create a community based innovation structure based on the premise that innovation does not just happen accidentally or emerge from the existing civic structures, that is, it can happen intentionally. Specifically investigated was the feasibility of innovations being intentionally created within regional communities in NSW. This was achieved by examining the application of a prototype IIC that might encapsulate current innovation theory and practice and be co-created through direct engagement with individuals in the community.

Regional Australian innovation is identified as neglected within existing research (Kinnear *et al.*, 2012), possibly due to a number of reasons. These may include, a lack of integrated policies, frameworks and the absence of innovation infrastructure (Vitaras *et al.*, 2013) and a context complexity fed by dynamic changes to competitive advantage, globalization and technological advances (Dahlstrom *et al.*, 2012). Within this environment, a major emphasis when encouraging innovation is to offer place based solutions that strengthen the regions (Isaksen and Karlsen, 2013).

The emphasis within the current research was clearly place based and focused on exploring the need and opportunity for a consistent and reliable generation of intentional innovations within regional communities. The approach taken was to draw out, identify and record the ideas, tools, methods, processes and value statements of participants from innovation workshops. Regional innovation systems have traditionally focused on existing regional development processes and the inherent innovations that emerge from this context. However, this approach fails to acknowledge the diversity of indigenous skill and potential for innovation within regional situations and between actors (Uyarra and Flanagan, 2010). In contrast, the approach of the current research was specifically focused on tapping the expertise of the people of the communities engaged. It is well understood that regional Australia is subject to competitive pressures that are apparent within the existing free trade environment which is coupled to regulatory trade barriers. There is also growing market complexity associated with an increasingly exercised consumer preference. This situation is compounded by a scenario where vital industries are now generally contracting, regional employment opportunities are shrinking and youth migration is a reality. All these in combination create a picture of a challenging future for regional areas.

Acknowledging that this situation exists; the current research targeted and profiled the opportunities that exist within this changing environment. For example regional NSW has an increasingly rich cultural and social complexity, with contributions from industry, farming community, new immigrants and the indigenous population (ABS, 2011). From this diverse base, it is evident that there is a need for the underlying adaptive potential of regional areas in Australia to be identified, tapped and deployed with purpose. The task of creating a prosperous and sustainable future for regional areas of Australia undoubtedly requires sustained leadership, creativity, motivation and determination. Therefore it is most important that this silo of talent be combined within a concerted effort to identify and create ideas to be developed and implemented for the benefit of regional communities. The need for an appropriate community based structure to support and facilitate this activity is clear.

Not surprisingly, through our engagement with communities we revealed a social sector rich in creativity and contextually relevant ideas. Further these specific ideas held a strong purpose, specific to the community's standpoint and portrayed an inherent high potential for success. Although the emergent innovations were generally small scale, there was considerable overlap between the ideas and projects of the towns of the region and therefore the potential for inter-town collaboration could be identified. For example regionally, technological advancements in information and communications were seen as important and in need of development investment. This finding is significant and in line with the finding of Korsching and Allen (2004), who noted that that modern communications could provide new options for connecting communities and sharing relevant information more easily.

It was evident that in Armidale, Tamworth and Narrabri, innovation initiation processes would likely be agency driven and emerge out of established institutions. This traditional approach (Bergek *et al.*, 2008), best described as a 'top-down' approach, does not well align to the IIC model as it tends to be hierarchical and have a propensity to limit or exclude the participation of non-affiliated individuals representing the community. Additionally the possibility of inherent bureaucracy noted by Sotarauta (2014), may then add a layer of institutional complexity that would possibly encumber innovation processes.

In contrast the Bingara workshops provided evidence of a different dimension and approach to the aforementioned. The innovation processes operating in Bingara were noted as directly aligned with those underlying principles of IIC. A majority of these initiatives were community driven

and taken up from the interests that arose from the individuals operating within the community. The operating innovation model was clearly based on a contemporary approach and evident within their 'Vision 2020' plan. This plan had emerged from the output of the collective strategies devised and driven by the interested individuals within the community. In this bottom-up approach (McCann and Ortega-Argiles, 2013), community driven projects had secured funding from the state and federal government bodies. Innovative ideas that were put forward by the Bingara community clearly focused on long-term goals of creating a sustainable future, nurturing the community and enabling collaborative creative thinking. Here the ideas and issues were evidently discussed amongst interested individuals of the community, within informal structured meetings that focused on achieving collective consent, prior to actions. It also appeared that the influence of organisations on the community decision making was minimal. As observed here and noted by Asheim *et al.*, (2011) this model of interaction appears likely to be the result of prevailing attributes of cooperativeness, collaboration, creativity and the passion of the core personnel involved.

Through the identified opportunities and barriers and the existence of overlap of certain initiatives across the towns of the region, the need for an IIC framework that might support and facilitate the ongoing community based activity was clear. The capacity of such a structure to bolster prosperity and the sustainability from within the region was noted to be highly context specific and embedded within the civic structures of the towns visited. As noted by Vitaras *et al.* (2013) there is undoubtedly a real need for, and potential to develop integrated policies, frameworks and governance infrastructure to support innovation.

6. CONCLUSION

The IIC concept underlies the innovation process and facilitates investigation of the balancing point between agency and community driven approaches. In this study the IIC concept was acknowledged as providing a potential opportunity for the creation of a safe space for the deconstruction of institutional type barriers to innovation in these regional locations. Thus the concept of IIC focused on intentionally setting the conditions that would cultivate a culture, conducive to and supportive of, the continuous generation and development of ideas that might foster the ongoing prosperity of the regional communities.

Within a co-created understanding of what innovation means, and with direct reference to the drawn out place-based opportunities and issues that emerged from these workshops, the concept of the IIC was generally embraced. Based on the overlap of issues and opportunities of each place across the region, there was strong evidence to support further investment in collective community based intentional innovation. From this investigation a model for an IIC or IICs in this region would very likely facilitate ongoing knowledge creation, information dissemination, collaborative potential, creative thinking and idea development. It is clear that an IIC governance framework and the management of the individuals involved in innovations being developed, would need to be drawn from and specifically tailored to, the socioeconomic characteristics and identified priorities of the communities participating and wherever possible, the region as a whole.

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