RESEARCH ARTICLE

A new direction for regional university campuses: catalyzing innovation in place

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Ideas about the importance of knowledge and innovation in the global economy have implications for the changing role of universities – but so too do ideas about the role of place-based knowledge in generating competitive advantage and innovation at the regional scale. As the concern to structure effective innovation systems intersects with the growing interest in distinctive, place-based knowledge, an opportunity emerges to reconsider the role of universities in regions. As institutions specialized in knowledge creation and knowledge transfer, regional university campuses are in a key position to catalyze regional development outcomes by bringing together different forms of knowledge, including place-based knowledge, in new ways. In line with current thinking about open and user-generated innovation, it is arguable that this kind of approach to co-creating knowledge in place can catalyze regional development outcomes. Yet for university campuses to take on this catalyst role, they must move beyond the limitations of their current “engagement” approaches. This paper explores some of the limitations and conflicts in current regional engagement approaches, then considers how the meeting-point between universities and complex regions may be operationalized in practice.

Keywords: regional development; universities; regional campuses; regional engagement; place; regional innovation systems

Introduction

While universities have always played a key role in nations’ well-being and competitiveness, at no time has this been as critical as now. In the knowledge economy, prosperity relies on continuous innovation and capable, creative workforces. Cutler (2008) suggests there are three facets to innovation: knowledge production (the generation of new knowledge and ideas), knowledge application (the deployment of ideas in the real world context) and knowledge distribution and uptake. According to Cutler, the critical characteristic of an effective innovation system is that these elements combine to form an open-ended system of learning and responsiveness to new inputs and challenges. Knowledge and learning thus sit at the centre of innovation.

There is widespread agreement that the production and distribution of knowledge are increasingly significant processes in the determination of prosperity and well-being in the global knowledge economy. Governments have looked to universities, as institutions dedicated to learning, to support the creation of knowledge economies. As the traditional institutional framework for higher learning, research and development, universities are

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clearly a key component of innovation systems for nations – and indeed, for the regions within them (see e.g. Garlick 1998, Shoemaker et al. 2000, Benneworth and Charles 2005, Charles 2006). Within universities there has been a flurry of activity in response, with a range of examples in the UK (Benneworth and Charles 2005), Europe (Clark 1995, OECD, 2000) and the USA (W.K. Kellogg Foundation 2000).

While universities have an obvious role to play in knowledge production, application and diffusion, this role needs to be understood in the context of other key points about the relationship between knowledge and innovation. Specifically, two current trends are of particular importance: first, the shift towards networks of “open innovation” away from single, large in-house R&D; and second, the rise of user-generated innovation and demand-driven solutions (Cutler 2007, cited in Cutler 2008). Both of these trends emphasize the importance of networks and relationships in generating responsive, flexible, demand-driven innovation (which may ultimately be by, as well as for, the end user). Both trends, importantly, de-emphasize the relative importance of large-scale, expert-led, supply-driven R&D institutions. For universities, this raises serious questions about their traditional structure and role.

At the same time, another convergence of ideas is taking place: as ideas about knowledge and innovation in the global economy begin to intertwine with ideas about the role of particular kinds of place-based knowledge in generating competitive advantage and innovation. It is increasingly recognized that place-based attributes, relational assets and local knowledge systems can be leveraged to create advantages for regions in the global economy (e.g. Coleman 1988, Cooke and Morgan 1998, Portes 1998, Amin 1999, Staber 2007). Successful regions demonstrate how place-based knowledge, particularly uncodified (tacit) knowledge unique to a place, can generate innovative and distinctive solutions which benefit and profile the region (Amin 1999, p. 369, Rainnie and Grant 2005, pp. 11–12, Morgan 1997; see also Gertler 2003). While recognizing that knowledge and relationships traverse borders (see Amin 2004), a regional focus serves to re-contextualize innovation, embedding it back into the particular social, economic, and cultural contexts that give rise to it.

As the concern to structure effective innovation systems intersects with the growing interest in place-based knowledge, an opportunity emerges to reconsider the knowledge-economy role of universities. This intersection of ideas has important implications for the role that universities may play, not just at the level of national economies, but specifically and intentionally as catalysts for innovation at the regional scale. Following Charles’ (2006) discussion of the role of universities in regional innovation systems, we observe that knowledge (both tacit and codified) is an important development factor, and that universities as knowledge institutions can thus be seen as critical instruments for regional development and innovation. In this paper, we will push this argument out to explore the potential role of regional university campuses as innovation catalysts for their regions. Reflecting particularly on the Australian context, we explore regional university campuses’ current role and policy function, then consider the challenges and possibilities involved in re-conceptualizing university campuses as central players in regional innovation systems.

In Australia, as elsewhere, regional university campuses have been used as a policy instrument for regional development. Given the metropolitan bias of settlement patterns in Australia, “regional” in this context has been used to refer specifically to campuses located in non-metropolitan regions. While the regional university campus in Australia has been a reasonably recent phenomenon, by 2000, nearly a third of all publicly-funded Australian university campuses were located in non-metropolitan regions (Garlick 2000, p. 9). In their paper on the changing role of regional campuses in Australia, Dudley and Longley (2004),
p. 72) note that “the power of regional campuses as social and economic engines within their regional communities is suddenly being recognized both by the communities and by the universities themselves.” There has been increasing interest in the “engagement” between universities and regions: for instance, courses designed to reflect local industry and regional activities, civic engagement, shared community facilities, a range of learning pathways, and R&D framed around local issues and the regional economy (Garlick 1998, Keane and Allison 1999, Allison and Keane 2001, Charles 2006; cf. Shoemaker et al. 2000).

There is ample evidence of the success of these initiatives and a range of spin-off activities and enterprises that benefit Australia’s regions. However, given that it is now recognized that knowledge is much more than information and that innovation is somehow connected to distinctive, place-based knowledge systems and social networks, there is reason to suggest that the current approach is inadequate. If the goal of regional development is to build the capabilities of local actors (individuals, communities and industries) to mobilize their place-based assets for the regeneration and transformation of their regions, then many aspects of the academic enterprise have a potentially significant role to play. Yet typically university institutions respond with additive solutions: a new course, a new research partnership, a new outreach activity that generates some useful results in a particular sector but does not drive innovation or catalyze transformation. Even best-practice regional university campuses are engaged yet not integrated into the region, engaged but not embedded in place, engaged yet limited by difficult governance and business models.

Clearly there is an argument for a more innovative approach to the regional campus model – one that in turn can catalyze innovation in particular places. In this paper we examine the emerging opportunities for universities to move beyond surface engagement with regions towards an embedded, place-based model, and how this in turn promises a way forward for universities to take on a new kind of role as innovation catalysts. We propose that the current models of regional university campuses employ a range of different forms of engagement, often with effective outcomes – yet also with important limitations. In the sections to follow we consider both place and university as development catalysts, in an effort to describe a new way of looking at the role of universities in regions. Finally we put forward a framework for a place-based university campus.

**Old school, new school**

The ways by which universities work within a regional context vary, both in Australia and abroad. In post-World War II Australia specifically, the funding of regional universities has been a key component of governments’ decentralization policies. Similarly, some Australian regional campuses have been established in response to demographic growth in specific areas and political momentum to ensure access to tertiary education (for example, the University of the Sunshine Coast). As a consequence of these different policies there are several types of regional campuses in Australia.

Many universities in Australia are deemed regional simply because they are located outside the nation’s metropolitan centres. Charles Sturt University, with its multiple campuses, for instance, is a “regional university”, as is the University of Ballarat. Yet the use of the label “regional” may be disputed due to its tendency to lump very different kinds of universities together (see e.g. Harding 2007a), with “regional” having strong connotations of second-class (Harding 2007b, for instance, describes James Cook University as “regionally-based” but “world-class”).
A second type of regional campus is one which, like the University of Western Sydney, was established particularly to serve a particular geographic region. The mandate of these universities is to be “regional”, even within major metropolitan areas. They more closely parallel the European understanding of a regional university.

A third form of “regional engagement” is the metropolitan university which supports a non-metropolitan campus (e.g. La Trobe in Bendigo or Monash in Gippsland). In some cases, these campuses were directly established as an outreach by the university in question (e.g. the University of Western Australia in Albany or the University of Tasmania in Burnie); in others they represent a merger of an existing institution with the university (e.g. Warrnambool Institute of Advanced Education became Deakin’s Warrnambool campus, and the Tasmanian State Institute of Technology became the University of Tasmania’s Launceston Campus). Similar kinds of “satellite” campuses established in peri-urban areas (such as RMIT University’s Bundoora campus) occupy a conceptual gray area: not entirely “regional” (in the Australian sense of “non-metropolitan”), yet often with a place-specific mandate and outreach role.

Just as the types of regional campuses vary, so too there is diversity in the expectations of regional campuses, as well as in types of their regional engagement and impact. Charles (2007) outlines how in the UK and Europe, there has been significant funding to support universities to generate local economic impact. In the American context, different groupings of universities (e.g. the land grant universities) have sought to rethink their role in society and “the nature of the contract between themselves and civil society” (Charles 2007, p. 3). Burton Clark (1995) documents exceptional entrepreneurial examples of regional universities in Finland and the Netherlands.

In the Australian context, Charles (2006), Garlick (1998), Allison and Keane (1999, 2001) and Winter et al. (2006) all illustrate ways in which regional universities have sought to engage with their regions. These include engagement through shared facilities (e.g. Sunshine Coast), courses well integrated with regional activities (e.g. Charles Sturt and Inland Zoo), curricula designed to meet local needs (e.g. health care in rural areas), and workplace and service learning arrangements. In addition, universities engage with their regions through R&D linked to the regional economy (Ballarat and Ford Motor Company), or to key regional issues (water research, social issues, neighbourhood renewal, etc.). As an illustration of the former, Sandra Harding cites examples of innovative agriculture, forestry, and engineering research at Australian regional universities, often drawing from key industries in their region (e.g. tropical agriculture at Charles Darwin University) and creating international impact (such as the University of New England’s Breedplan for beef cattle, used in 14 countries; Harding 2007c). These examples, along with Clark’s examples from the European context, would serve to support the argument that universities are important contributors to regional innovation systems (Garlick 1998).

Around the world, regional campuses have been established as policy instruments for regional development (Charles 2007). At the same time, this relationship between campuses and regions is far from unproblematic. There are four main issues that can be identified in the Australian context specifically. These revolve around the status of regional university campuses, their viability, their perceived relevance to the regional community, and their lack of institutional flexibility.

First, in Australia regional campuses tend to have a lower status than their metropolitan counterparts (see e.g. Harding 2007b). There is an expectation that universities based outside the metropolitan areas will focus on regional needs while receiving lower funding for research (Charles 2007, p. 4). Such a policy approach has led to a growing divide between regional and metropolitan university campuses in Australia.
Metropolitan campuses house the high-status research activity, while regional campuses are portrayed largely as “poor cousins”, a second-choice option for both students and academic staff.

Next, these perceptions are only reinforced when regional campuses – particularly those in non-metropolitan regions – struggle to be financially viable. There are a number of issues affecting the financial and operational viability of regional campuses. Low student numbers, finances, and attracting and retaining staff are all common issues, closely tied to lower population densities and yet also reflecting certain cultural preferences – for regional young people to spread their wings in the city (at those “better” urban universities or campuses) and for staff more prestigious appointments at the same. However the kinds of issues which affect campus viability extend beyond the numbers. They often relate to things such as:

- A lack of underlying rationale or coherence in the course offerings on regional campuses. Courses and programs of study are internally coherent, yet the combinations on offer in the region (often in online or distance mode from the metropolitan campus) often lack an underlying rationale.
- Feelings of dislocation among staff located on the regional campus. Staff are often committed to the logic of providing university services, but without the underlying rubric. They are challenged to reconcile community needs with complex university systems, often from a marginal position within the latter (see e.g. Eversole and Scholfield, 2006).
- Difficult governance arrangements. These are often the result of importing standard university institutional arrangements such as faculty structures into complex regional settings. Difficult governance arrangements become barriers and impediments to action.

A third issue is the extent to which regional communities even see universities as relevant to their needs. In their discussion of engagement between universities and regional communities, Garlick and Langworthy (2004, p. 21) note that “the community and the (university) organization” are “divergent and potentially incongruous forces”. To work together, they must first understand each other. While Garlick and Pryor (2002) argue for the importance of having an agreed purpose (in writing) and demonstrated commitment, these formal engagement approaches are of limited use in achieving day-to-day understanding between complex university organizations and complex regional communities. High community expectations generated by the presence of a university campus must often remain unmet in the face of the demographic realities of many regional areas.

Reflections on the characteristics of successful engagement between universities and regional communities (e.g. Garlick and Pryor 2002, Scholfield 2005) draw attention to the quality and content of relationships between universities and communities (is there trust? is there respect? is there an agreed purpose?). Yet while these points are important, so is the question of how university structures are positioned to respond to opportunities and new ideas. How flexibly can the university alter its systems? How easily can potential innovators access the information, resources, and assistance that they need? Is the institutional emphasis on fitting into the mold (existing systems, procedures and structures) or casting new ones? The lack of institutional flexibility is clearly a challenge to developing the relationship between university campuses and regions.
Garlick (1998, p. 70) suggests that the solution lies in better “management systems” to operationalize connectivity with regional communities; however Watson’s (2003) comments suggest that the challenges are deeper:

In terms of community it [engagement] presents a challenge to universities to be of and not just in the community; not simply to engage in “knowledge-transfer” but to establish a dialogue across the boundary between university and its community which is open-ended, fluid and experimental. (Watson 2003, p. 16)

The institutional question is about more than simply “embedding” regional engagement in the university by ensuring that it is part of the institution’s vision and operational plans. It is about organizing the systems and processes of the university to be responsive rather than rigid, to accommodate new ways of doing things and to facilitate the uptake of opportunities. It is about recognizing that knowledge production, knowledge application and knowledge distribution and uptake are core university business and central to regional (as well as national) innovation systems. Yet to be effective, these elements need to combine in an open cycle of learning and responsiveness to new inputs and challenges, so that the university institution has the ability to work across cultural divides and genuinely understand and respond to the needs and opportunities in the region.

Yet universities have not traditionally worked in this way. They tend to be closed rather than open institutions, supply-driven rather than demand-driven, directive rather than responsive. Knowledge flow is still largely one-way (from universities out to the community, via courses, research results or trained students), despite some attempts to make research and learning more inclusive of others’ knowledge. Meanwhile, the institutional boundaries of the university are thick (rather than permeable), providing a limited range of ways in which “community” and “university” can interact (e.g. formal enrolment in a course, a student internship, a formal research partnership or contract, and occasionally, a public lecture or event). While universities now work “for” and even to some extent “with” regional communities, this work is limited to providing specific inputs (research, training) in specific ways.

Thus, universities in the regions continue to work along largely traditional lines, acting as holders, creators and diffusers of knowledge – not as mobilizers and catalysts of knowledge.

Meanwhile, their structures also make flexibility and responsiveness difficult. Most regional campus models in Australia involve the adoption of a campus manager/pro-vice chancellor with campus oversight and a range of staff from different faculties who seek to simultaneously meet demands and obligations from the region, and respond to the sectoral requirements of faculties in the traditional university structure. Given these conflicting demands and expectations it is not surprising that some regional campuses struggle – especially those which are seen as peripheral poor cousins of metropolitan core institutions.

Overall, regional engagement in Australia has largely been seen as the bailiwick of regional campuses located outside the large metropolitan areas (and thus often viewed as teaching-first and research-second institutions). The alternative view is to see engagement with region and place as relevant to all universities, a key part of the process of rethinking the role and relevance of higher education in changing contexts. Charles (2007, p. 5) cites Delanty’s (2002) discussion of four “revolutions” that have affected the nature of universities, culminating in the idea of the “entrepreneurial university” (Clark, 1998).
The entrepreneurial university is often characterized by a focus on innovation, and thus we would suggest that as the entrepreneurial model of the university matures, mutates, and adapts, place and region will become increasingly important as a way to generate a unique “value add” for each institution. For example, the emergence of the University of Queensland as a leader in biotechnology is in no small way connected to the critical role of Queensland’s Smart State initiatives in developing a regional innovation system to capitalize on the region’s resources and place-based advantages.

While the issues facing regional campuses are real, much of the difficulty lies in the fact that universities are still trapped in “old school” understandings of the role and nature of universities. Beyond seeing universities as a knowledge-holding institution with a civic role; even beyond seeing them as a knowledge-generating institution with an economic or social development role, we posit a need for universities to be knowledge co-creating institutions, working with their regions in a catalyst role to form open-ended and responsive learning cycles to stimulate regional innovation. Many of the difficulties that we have charted in the relationships between universities and regional communities can be understood in light of the lack of embeddedness of regional campuses in their regions, particularly in terms of their inability to interact with and mobilize local knowledge systems and other place-based assets in a responsive, flexible way. In the following sections we argue that shifts in the nature of knowledge and innovation, social responsibility, and global/regional competitiveness challenge the traditional role and view of universities, and will require all universities to reorient themselves to the regional context of their work.

Rethinking regions

One impact of globalization has meant that in recent years there has been a growing awareness of the importance of the regional or sub-national scale. The region has been recovered as an important source of competitive advantage. This is because regional or place-based attributes are seen as increasingly important in generating distinctiveness, and potentially, advantages in the global economy. At the same time, assets-based approaches to regional development draw attention to the resources within a region which might be harnessed and mobilized for development. These place-based attributes or resources would seem to coalesce around three main types: (1) attributes drawn from the physical environment and features of place; (2) attributes associated with local knowledge and local technical know-how; and (3) attributes associated with social capital / relational assets or “know-who” knowledge.

Beyond physical attributes such as distinctive landscapes and liveable environments, recent thinking on regional development stresses the role of knowledge as an important development factor, often raising it to a level of importance akin to traditional factors such as labour and capital (Charles 2006, p. 117). In addition to more traditional forms of knowledge, locality-specific knowledge is argued to form a distinctive set of attributes which can be configured and reconfigured to generate new ideas and a regional distinctiveness. What is particularly important is that these attributes rooted in relations of proximity cannot be easily or quickly replicated – hence generating a competitive advantage (Amin 1999, p. 369). As non-mobile (place-based) and soft factors specific to place, they cannot be easily acquired or matched (Charles 2006).

More often than not, these forms of place-based knowledge derive from the experiences of particular places and their distinctive attributes, particularly their social, cultural and relational assets. For example:
multiplication of critical linkages which reduce transaction costs; proximity becomes an asset;
- localized advantage – frequent personal interchange creating a common understanding;
- social networks which build trust and shared norms; these constitute a “public good” and yield better exchange of information and access to resources;
- the ability to address problems collectively; able to shape network typologies not just pathways.

The strength of relational assets is claimed to have a direct impact on a region’s competitive potential in so far as these assets constitute part of the learning environment for firms and people along value chains. These networks are sources of reciprocity, shared know-how, spill over expertise and strong enterprise support systems and sources of learning, facilitated through such advantages as enhanced mutuality within relationships of interdependence (Amin 1999, p. 369). These relational assets are given distinctiveness by the manner in which they are valued, interact with and respond to global processes and are mobilized to meet unmet needs and resolve problems. Successful regions demonstrate how place-based knowledge can generate innovative and distinctive solutions which benefit and profile the region.

This interest in regions brings with it some attendant issues, however. Regions are inherently spatial entities with a highly complex interweaving of business, government, and community interests. They comprise layers of multiple actors and multiple systems located in geographical and social space. Relationships are clearly important, but they are also incredibly complex and multi-faceted. Moreover, their role and significance can be interpreted from a range of different perspectives. Thus, while a focus on regions affords an opportunity to look at issues surrounding development in a more holistic and contextualized way, a critical concern is how best to engage with this complexity.

First, it is necessary to begin by acknowledging the existence of multiple perspective and stakeholders in “regions”. As Lynn (2005, p. 190) succinctly put it, “The problem for many bureaucrats, even at a regional level, is that they expect to speak with ‘representatives’”. Universities are not immune from the temptation to engage with a simplified regional reality, in which two or three individuals are asked to “represent” regional interests.

Next, there is the need to find ways to work coherently with the diverse and competing interests and needs in a region. This means not just understanding them, or trying to work eclectically with a range of them (our business outreach, our underprivileged youth outreach, etc.), but actually finding meaningful ways to bring all the interests and layers together. Partnerships and creative associations are important tools to do this, but they depend upon the presence of good governance arrangements.

Governance thus emerges as a central concern. Attention to regions and their assets inevitably raises the question of what governance arrangements can enable a plurality of institutions, firms, communities and individuals in the region to leverage their assets to meet their (diverse) goals. It is clear that traditional hierarchical administrative structures are likely to be inadequate to administer place-based development approaches (OECD 2006, p. 106); they are too segmented by sector, and too vertically prescriptive. One response is to create an intermediary organizational structure that can marshal and coordinate resources within a locality, moving across sectoral boundaries to achieve a more integrated, strategic and inclusive approach to issues and opportunities. In practice, however, it is questionable to what extent real-world regional organizations actually move
beyond sectoral interests (such as economic development, local government administration, or natural resource management) to achieve high levels of either strategic effectiveness or democratic inclusion.

These points raise particular issues and opportunities for universities:

- First, there is a call to focus on the spatial scale of universities’ “engagement” activities, given the recognized importance of regions in the knowledge economy, and the concurrent need to understand the broader contexts in which knowledge is generated and mobilized to create real-world outcomes.
- Second, universities as the key traditional repositories of knowledge will need to rethink their role in regards to “new” (newly recognized) forms of knowledge, particularly tacit and relational knowledge, and what opportunities or indeed, imperatives, exist to engage with diverse “knowledges” beyond the traditional limits of academia.
- Finally, universities need to grapple with the implications of their own structures and understandings of “regional engagement” in light of these issues.

The university as regional development catalyst

Place-based attributes at the regional scale, and especially locality-specific knowledge, have emerged as critical components influencing the development trajectories of regions. Yet for universities, the concept of region has particular challenges. Universities are highly sectoralized and hierarchical institutions. Disciplines, grouped into schools and faculties, are the basic building-blocks of the university. “Knowledge” in universities is codified knowledge, often highly specialized. Delivery of courses and R&D into a region, in turn, is often discipline-based. Regions, on the other hand, are complex, multidimensional landscapes. Tacit and relational forms of knowledge are hard to see. Multiple perspectives jostle for prominence. Academic expertise is needed, but to be effective it must have an appreciation of spatiality and interconnectedness.

There is thus an essential disjuncture between “the region” and “the university”. Their approaches to knowledge production, application, and distribution are essentially different. Nevertheless, we posit that universities have enormous potential to take a leading role in regional development processes. Despite tensions and issues to be resolved, universities possess a range of institutional features and characteristics that position them well to act as regional development catalysts. Most centrally, these revolve around their identity as knowledge-mobilizing institutions. As institutions specialized in knowledge creation and diffusion (research) and knowledge transfer (teaching), universities are well placed to “join up” and mobilize complex knowledge in specific geographical settings (regions) to achieve desired outcomes.

This is particularly important in the context of emergent concepts about the nature of knowledge and learning (ideas such as learning to learn, voice, participation, adaptive learning, and the interplay between codified and tacit knowledge). These concepts highlight the importance of being able to acquire, make sense of, and strategically apply knowledge across sectors and social contexts. In the context of regional development, they raise the challenge of linking the tacit and local knowledge held by different actors in a region, with opportunities and knowledge from further afield, including (but not limited to) formally codified knowledge. As the need for knowledge-brokering across diverse forms of socially and culturally situated knowledge becomes increasingly obvious, an opportunity
becomes apparent for universities. Can they take on this knowledge-linking and knowledge-mobilizing role in particular places? We suggest that they can, for three reasons.

First, universities are already recognized as a core component of national and regional innovation systems (see e.g. Garlick, 1998, Charles 2006). Universities clearly provide frameworks and human capital for research and development as well as for learning. Yet beyond the specifics of human capital and physical infrastructure, the work of universities also constructs and builds social capital through projects and initiatives which create and build confidence, capability, trust, participation and social infrastructure. Given the central importance of relational assets in regional development processes, the importance of universities’ social-infrastructure-building role should not be underestimated. Most notably, by multiplying and strengthening relationships with individuals, communities and institutions across the regional landscape (as well as further afield), the university positions itself to gain access to and engage with a range of knowledge sets – including, importantly, the knowledge of less powerful and less visible groups.

Second, and following on from the first, universities as institutions are specialized in generating and transferring knowledge, and so have the potential to be key institutions in shaping new patterns of learning and knowledge generation. University campuses already have a range of infrastructure and systems associated with learning and R&D in place. And while they have traditionally dealt in formal “know-what” and “know-why” knowledge, tacit knowledges around the “know-how” and “know-who” have emerged as critical for managing change, adaptability, value chains and innovation. As noted above, the existence of multiple and diverse knowledges raises a challenge for universities. But it also highlights an important opportunity, for it is arguable that the university which actively engages with both codified and tacit knowledge might well have the basis for a very distinctive approach to knowledge-generation and learning – one which may ultimately characterize the next iteration of the entrepreneurial university.

The third advantage for universities relates to shifts in thinking about the kinds of institutional arrangements which best support regional development, particularly in terms of the current policy interest in mobilizing place-based relationships to generate more appropriate and responsive policy. As noted above, there has been an acknowledgement that hierarchical administrative structures are often inadequate to facilitate a place-based approach, and there has been an interest in exploring the potential for intermediary organizations to facilitate regional development, yet with little success to date.

In this policy environment, universities are in a key strategic position, because university campuses are ideally suited to this kind of intermediary regional-development role. There are several reasons why:

- universities have established infrastructure, institutional frameworks, and organizational systems already in place, so there is no need to create a new organization;
- universities are specialized in learning, knowledge creation, and knowledge management, seen as central to development processes; their core elements (academic enterprise, courses, etc.) can drive a range of initiatives;
- given their knowledge-transfer and diffusion role, universities are ideally suited to building capabilities in a region;
- they are already recognized as playing a key role in regional innovation systems;
- their various discipline areas, when taken together, form a broad knowledge base that crosses the boundaries of narrow sectoral interests, with the potential to play important integrative and facilitating roles.
The new regional campus

Regional development policy has shifted away from externally-driven models to view the region itself as a key locus of activity, capable of driving both innovation and effective governance. Similarly, the review of the current National Innovation System in Australia heralds other policy shifts (not limited to Australia) towards networks of open innovation, user-generated innovation and demand-driven searches for applicable knowledge and solutions. These shifts afford opportunities and challenges for universities. Given the recognized importance of knowledge, particularly place-based knowledge embedded in regions, there is enormous policy interest in institutional frameworks that are able to mobilize knowledge and learning within regions to achieve development outcomes. Universities have the potential to play this kind of catalyst role, and particular opportunities emerge for regional campuses. Specifically, these policy shifts provide a rubric and underlying rationale for the regional campus, well beyond the engagement and delivery models established to date.

Regional campuses thus find themselves with not only a clearer rationale for their own work, but also in a position to provide broader leadership on the changing nature and role of universities. In response to an academic and policy environment that is beginning to recognize the importance of the socio-cultural context of knowledge creation, transfer, diffusion, and mobilization, regional campuses working in particular places can offer a window into these processes, as well as a framework for mobilizing them. As universities-in-place, regional campuses have the potential to take the idea of the “entrepreneurial university” to the next level: toward a university that is not only innovative in orientation, but which is capable of harnessing different kinds of knowledge and relationships, innovating according to the particular attributes of particular places.

In this section of the paper, we explore the key issues and challenges involved in actually operationalizing, on the ground, the potential of the place-based university, and particularly the regional campus as manifestation of university-in-place. We explore the intersection of region with campus and what the relationship between region and campus might look like in the future. Specifically, we draw out the difference between the way regional campuses have been constructed to date, and the model which we propose, which integrates region with campus. This requires attention to the challenges thrown up both by the internal structures of universities, and the external relationships linking universities with complex regions.

First, many of the internal structures within universities work against a place-based model. Charles (2006) raises key questions: how are universities are to configure themselves to be a crucial part of a region’s knowledge and innovation systems? How can a university’s existing learning, knowledge and research and development systems be mobilized to identify and enable relational assets in a region? And finally, how can big-picture questions of knowledge ownership be addressed? Clearly these questions challenge some of the institutional structures and frameworks long held within universities. For instance, while attention to relational assets points to partnerships and shared resources, discipline-based approaches and faculty-based governance mitigate against integrative and interconnected value chains. Emergent concepts such as place-traversing institutions (Charles 2007), communities of practice (Wenger et al. 2002, Charles 2007), and demand-driven (rather than university-driven) services begin to suggest alternative orientations for universities, but they have yet to find their way into mainstream university systems.

Next, the relationships between a university and a region are, as we have seen, often problematic. Regions are complex, layered landscapes, comprising multiple actors and
multiple perspectives. It is increasingly recognized that learning and problem-solving involve both codified and tacit knowledges, often from multiple stakeholders, and that informal "sites" of knowledge exchange are important. Yet universities tend to engage only on their own terms. They enter the region as an additional institutional player, rather than as a catalyst capable of bringing diverse players together. While universities’ core business is, and must remain, the three central areas of teaching and learning, research and development, and service, the assumptions underlying these three categories are all open to question. Is research only something that "experts" do? Must learning involve classroom teaching? Is service essentially different from our broader learning and knowledge-mobilizing agenda?

The matrix in Figure 1 seeks to summarize in broad terms the kinds of scenarios that can emerge when campus and region intersect. The horizontal axis represents the core business of the university – teaching and learning, research and development, and service.

<table>
<thead>
<tr>
<th>The Region</th>
<th>The University</th>
<th>R&amp;D</th>
<th>Service</th>
</tr>
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</table>
| Complex systems | • Multi-disciplinary problem solving  
• Integrative approaches  
• Innovation and leadership skills  
• Social justice  
• Multi-way learning | • Multi-disciplinary teams  
• Contextualized R&D  
• Practitioner and participatory research  
• Focus on innovation | • Empowerment of communities  
• Tools to understand and lead change  
• "Learning regions"  
• Enhanced social inclusion  
• Expanded set of opportunities |
| Locality-specific knowledge | • Demand-driven courses  
• Workplace and service learning  
• Integrative knowledge (bridging theory/practice)  
• Adult learners | • New forms of knowledge/ Mode 2 science  
• User-generated innovation  
• Demand-driven searches for applicable knowledge and solutions  
• Action research  
• Practitioner and participatory research  
• Ground truthing  
• Unique insights and outcomes | • Community participation programs  
• Responsive (demand-driven) products  
• A new image for “university”? |
| Multiple institutions | • Dual or even multiple delivery systems  
• Multiple articulation pathways  
• Workplace and service learning  
• Learning to understand the institutional context | • Creative R&D partnerships  
• Networks of open innovation  
• R&D across sectors/ new synergies  
• Integrating multiple perspectives  
• Unique insights and outcomes | • Creative partnerships  
• New governance arrangements  
• Enhanced coordination  
• University as knowledge catalyst for the region |

Figure 1. Operationalizing the place-based university.
The vertical axis represents three key characteristics of regions: their complexity, their locality-specific knowledge, and the multiplicity of institutions that interact in the regional space. Where university and region meet in a place-based model, the results may look something like this.

A framework for a place-based university that is capable of catalyzing regional development outcomes must, in our view, be capable of understanding, generating, and mobilizing place-based advantage and providing leadership in the knowledge-generating and knowledge-distributing processes. Specifically, this involves:

- **a new approach to knowledge and learning**, characterized by interaction, participation, and inclusivity; capable of mobilizing both formal and informal knowledge together across traditional boundaries; capable of being user-generated and demand-driven;
- **a new approach to regional relationships**, characterized by mutuality, integration, and embeddedness in place; able to foster and support networks of open innovation;
- **a new approach to regional development**, characterized by strategic capability-building and brokering, to enable innovation within and across institutions.

These new approaches require, in turn, a rethink of a university’s internal characteristics. Specifically, in order to simultaneously fulfil its core business and catalyze regional development outcomes, a place-based university must be characterized by:

- flexible, efficient and quality-assuring internal institutional structures;
- devolved and responsive governance arrangements;
- demand-driven, creative and collaborative organizational culture; and
- a resilient and sustainable resourcing model.

**A final note – catalyzing innovation in place**

While there are immediate issues to be resolved as outlined above, we can nevertheless discern opportunities emerging for a new “place-based” university: one that, in the course of carrying out its core business, is capable of catalyzing innovative and inclusive regional development outcomes. We see that this approach provides a new rationale and vision for regional campuses charged with serving their region and stimulating regional development, as well as for the broader university sector that is seeking to understand its relevance and direction for the future.

We have suggested that there are now key drivers to facilitate this process. One is the recognition of the importance of place-based attributes in generating regional productivity and competitiveness. It is now understood that it is possible to create value by doing things differently, utilizing localized know-how to create distinctive, innovative solutions. The second driver is the recognition of the role of universities in innovation systems, via their core business of knowledge production, knowledge application and knowledge distribution. In this paper we argue that, when these two drivers of change are brought together, they create new opportunities for regional campuses to recast their role.

The scale of activities on a university campus, and the intermediary and resilient nature of university institutional arrangements, create the institutional space for networks of open innovation. Specifically, a regional campus, as university-in-place, is a knowledge-driven organization with regionally-grounded systems. These systems, both being about knowledge and located in a particular place, have the inherent potential to respond to the complex demands of multiple players in the regional landscape. Given that the specific
attributes of place (relational assets and local knowledge systems) are what can give distinctive competitive advantage to a region, we argue that the regional campus, as university-in-place, is in a key position to drive regional innovation systems.

Thus, we suggest a new direction for regional university campuses: to reposition themselves as universities embedded in their place, and so to explore their potential to catalyze innovation. In our ongoing research, we are seeking to test to what extent these approaches and characteristics can be operationalized on-the-ground – in a real university, in a real region – and what kinds of regional development outcomes may result.

References


